The Effects of Auditors and Regulators on Bank Financial Reporting: Evidence from Loan Loss Provisions

Allison Nicoletti*
Fisher College of Business
Ohio State University
2100 Neil Avenue
Columbus, OH 43210
nicoletti.4@osu.edu

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Abstract

This paper examines how bank regulators and external auditors affect financial reporting decisions. Both groups serve an important role in the financial reporting process given their access to internal bank information, but they have different objectives and incentives affecting their influence on financial reporting. To provide insight into their roles, I examine loan loss provision timeliness, an accounting choice associated with significant managerial discretion, important economic consequences, and a potential conflict between regulators and auditors. Using a matched sample and control group, I find that unaudited banks subject to lower scrutiny from regulators recognize less timely loan loss provisions. External audits and greater regulatory scrutiny each have a counteracting effect as they are positively associated with loan loss provision timeliness, suggesting that different objectives and incentives dominate for these groups. However, I further show that an external audit constrains loan loss provision timeliness in the presence of greater regulatory scrutiny. This effect is strongest when loss rates increase relative to historical experience, consistent with regulator concerns following the financial crisis. This paper contributes to our understanding of involvement by both bank regulators and auditors in the financial reporting process and demonstrates how their objectives and incentives may differentially influence financial reporting outcomes.

Keywords: Bank Supervision, Auditors, Loan Loss Provisions

JEL Classifications: G21, G28, M41, M42

1. Introduction

This paper investigates the role of bank regulators and external auditors in the financial reporting process. Both groups examine financial reports during on-site safety and soundness examinations or financial statement audits and serve an important monitoring role given their access to internal bank information. However, regulators and auditors have different objectives and incentives that affect reporting decisions (Singh 2013; Balla et al. 2012). Anecdotal evidence suggests that these distinctions affect bank financial reporting and create a potential conflict between regulators and auditors, but this has been relatively unexplored by prior literature (Black 1990; Wall and Koch 2000; Dugan 2009). Therefore, this paper examines how the net effect of auditor and regulator objectives and incentives affects financial reporting decisions, an area that both groups examine and have influence over.

To investigate the effect of regulators and auditors on bank financial reporting, I focus on the loan loss provision. The loan loss provision is the largest accrual, is an important indicator of performance, and requires significant managerial discretion in arriving at an appropriate estimate (Beatty and Liao 2014; FSF 2009).[1] In addition, regulators and auditors both spend considerable time evaluating the loan loss provision, although this focus is driven by their different objectives (Balla et al. 2012; Wall and Koch 2000). For regulators, the loan loss provision serves a critical role because it provides a buffer against incurred losses in the loan portfolio and has implications for bank lending, opacity, and systemic risk (Beatty and Liao 2011; Bushman and Williams 2012, 2015; Iannotta and Kwan 2014). The auditor focus is driven by the potential for misstatement given the high inherent risk associated with the loan loss provision estimate (AICPA 2007).

I specifically focus on loan loss provision timeliness, with provisions considered to be more timely if losses are recognized concurrently with or in advance of loans becoming non-performing (Nichols et al. 2009; Beatty and Liao 2011), for two primary reasons.[2] First, anecdotal evidence

[1] Under current GAAP, loan losses are recognized using an incurred loss model, which requires recognition when it is probable that a loss has been incurred as of the financial statement date. The specific guidance is Statement of Financial Accounting Standards (SFAS) 5 [codified under Accounting Standards Codification (ASC) 450-20] with further guidance for individually impaired loans provided by SFAS 114 [ASC 310-10-35].

[2] An important distinction is between recognizing *timely* loan loss provisions and recognizing *larger* loan loss provisions. The former represents the mapping from changes in non-performing loans (that can be positive or negative), which

following the financial crisis suggests a potential conflict between regulators and auditors in the timing of loss recognition. Specifically, former Comptroller of the Currency John Dugan argues that auditors restrict the use of judgmental information in justifying loan loss provisions due to a strict interpretation of loan loss accounting standards and earnings management concerns, which results in delayed loss recognition (Dugan 2009). In addition, *Independent Banker* states that some banks struggle to balance the conflicting advice given by regulators and auditors by explaining that, "community bankers feel caught between examiners telling them to pour more money into loan loss reserves and auditors telling them they shouldn't (Gamble 2008)." Second, prior literature documents variation in the timing with which banks recognize loan losses as well as significant economic consequences for banks that delay loss recognition, including less discipline over bank-risk taking, greater pro-cyclical lending, and greater contributions to systemic risk (Beatty and Liao 2011; Bushman and Williams 2012, 2015).

The effect of regulators and auditors on loan loss provision timeliness depends on each group's objective and incentives. Regulators are charged with protection of consumer and depositor interests as well as the stability of the financial system (Spong 2000). During on-site examinations, they determine whether banks are operating in a safe and sound manner and can influence financial reporting to conform with this objective. Timely loan loss recognition is consistent with broad regulatory objectives given that it is emphasized in regulatory guidance and is associated with lower pro-cyclical lending and contributions to systemic risk (OCC 2012; Beatty and Liao 2011; Bushman and Williams 2015). However, regulators can use their discretion during an examination to behave in a way that maximizes their own utility (Rosen 2003). Even though the prompt corrective action mandate (PCA) of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires timely intervention at problem banks, regulators may not impose accounting choices that signal poor performance if it indicates they did not properly monitor risk-taking (Mishkin 2000). Timely loss recognition may reveal this issue to outsiders or prevent regulators from engaging in forbearance (Gallemore 2013). Regulators also may not enforce timely loss recognition due to lax

are taken as a relatively non-discretionary measure of underlying loan quality, to the loan loss provision, while the latter represents an increase in the loan loss provision regardless of underlying loan quality. An example of the latter is dynamic provisioning models for which loan loss provisions are built up during good times when loans are not necessarily in non-performing status (Balla and McKenna 2009).

oversight resulting from competition among regulatory agencies (Weinberg 2002).

The auditor objective is to express an opinion as to whether the financial statements present fairly in accordance with Generally Accepted Accounting Principles (GAAP). This involves determining whether the financial statements appropriately reflect the underlying transactions, and auditors can influence the timing with which banks recognize loan losses in order to achieve this objective (DeFond and Zhang 2014). However, auditors may not affect loan loss provision timeliness due to client retention concerns as managers have the ability to change audit firms to obtain more favorable accounting treatment (DeFond and Subramanyam 1998). Further, auditors are subject to reviews during which their procedures are scrutinized and deficiencies are identified for inappropriate reliance on managerial assumptions (AICPA 2015). This may lead auditors to constrain the use of subjective adjustment factors due to earnings management concerns or to the need for concrete information in determining whether a loss has been incurred, resulting in delayed loss recognition (Dugan 2009).

To capture the effect of auditors and regulators on loan loss provision timeliness, I examine financial reports filed with regulators for a sample of banks exhibiting variation in external audit status and regulatory scrutiny between 1997 and 2005.[3] I restrict the sample to private banks with assets below $500 million, the FDICIA mandated audit threshold, in order to obtain variation in external audit status while maintaining relative homogeneity across banks both in their operations and size. Since audits are largely voluntary for this group, I create a matched sample of audited and unaudited banks prior to conducting the analyses in order to mitigate concerns related to observable differences. To capture variation in scrutiny by bank regulators, I rely on the state-level regulatory index constructed by Agarwal et al. (2014) given that information regarding on-site safety and soundness examination dates or results is not publicly available. Agarwal et al. (2014) take advantage of access to private Federal Reserve Board data and exploit the fact that state-chartered banks are examined in alternating fashion by their federal and state regulator. Specifically, their state-level measure captures the average difference in CAMELS ratings assigned by federal

[3] The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires that regulatory reports follow GAAP, although it grants regulators the power to write alternative accounting guidance provided it is no less stringent than GAAP.

regulators compared to the state regulator in each state and is publicly available.[4] This allows for construction of two groups of state-chartered banks that are subject to lower regulatory scrutiny ("lenient" regulators) and greater regulatory scrutiny ("strict" regulators), respectively. National banks operating in the same area provide a control group to identify the effect of regulators as they are affected by local economic conditions but not the regulatory index.

I first examine the net effect of greater regulatory scrutiny on loan loss provision timeliness at unaudited banks. The baseline result indicates that state-chartered banks subject to lower regulatory scrutiny recognize less timely loan losses relative to the control group of national banks. However, greater regulatory scrutiny has a positive incremental effect on loan loss provision timeliness at state-chartered banks relative to the control group. This is consistent with broad regulatory objectives given the system-wide benefits of timely loan loss recognition and indicates that other incentives do not fully attenuate this effect. I next examine the net effect of an external audit on loan loss provision timeliness in the presence of lower regulatory scrutiny. I find that receiving an external audit increases loan loss provision timeliness at state-chartered banks relative to the control group of national banks. This suggests that the potential ramifications of an audit failure from financial statements that do not present fairly within GAAP outweigh additional incentives. Together, these results indicate that external audits and greater regulatory scrutiny each counteract the less timely loan loss provisions at unaudited banks subject to lower regulatory scrutiny.

To provide insight into the interaction between strict regulators and auditors, I investigate whether timeliness is different for state-chartered banks subject to both an external audit *and* greater regulatory scrutiny compared to banks subject to an external audit *or* greater regulatory scrutiny. I focus on these comparisons since the observed effect when both groups are present is a joint outcome, making it challenging to disentangle the relative effect of each group. Thus, I draw inferences based on whether strict regulators and auditors have similar or conflicting effects. I find that loan loss provision timeliness is not significantly different at audited state banks subject to

[4] The CAMELS rating refers to capital adequacy (C), asset quality (A), management (M), earnings (E), liquidity (L) and sensitivity to market risk (S). The rating is assigned on a scale from 1 through 5 with 1 representing the lowest regulatory concern and 5 the greatest. Supervisors assign a composite CAMELS rating for the institution as a whole as well as for each of the six components. The composite rating provides the basis for the Agarwal et al. (2014) regulatory index measure.

lower versus greater regulatory scrutiny, relative to the control group of national banks. However, I document that audited banks subject to greater regulatory scrutiny are less timely than unaudited state banks compared to the control group. This suggests that an external audit constrains timely loan loss recognition in the presence of greater scrutiny from bank regulators.

To corroborate this result, I examine whether the interaction between strict regulators and external auditors differs when loss rates on the current loan portfolio increase relative to historical experience. I expect any conflict between regulators and auditors to be greatest in this scenario due to regulatory concerns over safety and soundness resulting from lower loan quality (Spong 2000). Further, insufficient testing of subjective components of the loan loss provision is a frequently cited issue during peer review of bank audits (AICPA 2015). Regulators argue that auditors interpret the incurred loss model strictly and require objective information, suggesting that auditors do not respond to changing conditions on a timely basis (Dugan 2009). I find that for banks subject to greater regulatory scrutiny, audited banks are less timely relative to unaudited banks when loss rates on the current loan portfolio are higher relative to historical loss rates. This further solidifies the interpretation that an external audit constrains the ability of strict regulators to require timely loan loss recognition.

My inferences rely on the similarity of groups across the charter type partition (national vs. state) and the audit partition (audited vs. unaudited). To mitigate concerns related to observable differences, I create a matched sample of audited and unaudited banks based on the most critical characteristics for my design: size, location, and charter type. I further show that the empirical model covariates are similar across the charter type and audit partitions. However, my analysis may be confounded if there are unobservable differences associated with discretionary accounting choices and the audit or charter decision. I argue that if banks that choose to receive an audit (or to obtain a certain charter) have inherently different accounting practices, I would expect these differences to arise in other discretionary choices. One such choice that involves discretion but is unaffected by regulators and auditors is the timing of securities gains/losses since asset sales are a "real" action (e.g., Beatty and Harris 1998). The results do not reveal a significant effect of regulators or auditors on the timing of asset sales to manage earnings, suggesting that the documented results

are unlikely to be driven by unobservable characteristics. Further, I compare loan loss provision timeliness for my sample audited banks to banks receiving a mandatory audit and do not detect a significant difference in timeliness between these two groups. This is consistent with the audit process driving the effect on loan loss provision timeliness rather than unobservable characteristics associated with the audit choice and accounting discretion (Barton et al. 2014).

This paper contributes to the literature on the role of bank supervision in the financial reporting process and in particular, on the interaction between the supervision and external auditing functions. Relatively little is known about how auditors and regulators affect accounting choices, which is particularly important given that regulation is a central feature of the banking industry and that these groups are both involved in the reporting process (Beatty and Liao 2014; Armstrong et al. 2015). I also contribute to the literature on the determinants of loan loss provision timeliness. Although significant variation in the timing with which banks recognize loan losses has been documented, relatively little is known about the determinants of this behavior (Bushman 2014). This paper provides insight into how the objectives and incentives of monitoring parties influence the timing of loss recognition.

This paper is also related to a growing literature investigating the effects of different regulators on bank-level outcomes. Agarwal et al. (2014) identify heterogeneity within bank regulators by showing that federal regulators assign higher (worse) CAMELS ratings relative to state regulators and Costello et al. (2015) conclude that stricter state regulators increase the transparency of bank financial reporting by enforcing income-decreasing restatements. More related to the current study, Bischof et al. (2015) use an international setting to examine how banking and securities regulators differ in the enforcement of risk disclosure requirements under International Financial Reporting Standard (IFRS) 7 and Basel II. I complement this paper by examining the role of bank regulators and auditors in implementing loan loss accounting under GAAP at private U.S. banks. This setting and associated cross-sectional variation allow for examination of separate auditor and regulator effects as well as the interaction between the two monitoring parties. In addition, focusing on U.S. bank loan loss provisions ensures that both groups oversee implementation of the same accounting rules and reduces concerns related to cross-country differences.

The remainder of the paper is organized as follows. Section 2 discusses background and prior literature and Section 3 develops the hypotheses. Section 4 describes the research design and sample selection. Section 5 provides results and section 6 concludes.

2. Background and Related Literature

2.1. Institutional Background

2.1.1. On-site Safety and Soundness Examinations

Regulators monitor bank financial condition through on-site safety and soundness examinations and off-site monitoring systems, such as the filing of periodic regulatory reports. Commercial banks are required to file the Report of Condition and Income (Call report) on a quarterly basis, regardless of their size, independent audit status, or trading status. The Call report follows GAAP and provides a balance sheet, income statement, and multiple detailed financial schedules, but very limited qualitative disclosure such as footnotes or Management Discussion and Analysis (MD&A) (Badertscher et al. 2015). On-site examinations typically occur on an annual basis although banks meeting certain criteria are permitted to be examined at least once every 18 months.[5] The culmination of the examination is a written report and assignment of CAMELS ratings, which are shared only with bank management.

The type of bank charter determines the agency primarily responsible for supervision and on-site examinations. The Federal Reserve supervises bank holding companies and relies on the examinations performed by the primary supervisor of each subsidiary bank in their evaluation of the consolidated entity (Federal Reserve 2005). National banks are supervised by the Office of the Comptroller of the Currency (OCC). State-chartered banks are supervised both by their state regulator and their federal regulator, which is the Federal Reserve for state-member banks and

[5] On-site examinations can occur in any of the four fiscal quarters, although the specific dates are not publicly disclosed. During my sample period, banks must meet the following criteria to be eligible for the 18 month cycle: (1) assets below $250 million, (2) CAMELS ratings of 1 or 2, (3) well-capitalized, (4) well-managed, (5) not operating under a formal enforcement action and (6) has not experienced a change in control in the previous 12 months. The Financial Services Regulatory Relief Act of 2006 increased the asset threshold to $500 million. Although CAMELS ratings are not publicly available, the FDIC notes that between January 1, 1997 and December 31, 2006, approximately 95% of banks were well-capitalized and had a CAMELS rating of 1 or 2 (see https://www.fdic.gov/deposit/insurance/assessments/priorperiod.html for more details).

the Federal Deposit Insurance Corporation (FDIC) for state non-member banks. As specified by the Riegle Community Development and Regulatory Improvement Act of 1994, state-chartered banks are examined on an alternating basis by their respective state and federal regulators.[6] This institutional feature provides the basis for the analysis in Agarwal et al. (2014) and is central to my design. Although banks choose their charter type, differences in operations between national and state banks have decreased significantly in recent years (Blair and Kushmeider 2006). Further, I examine whether the state and national banks in my sample are similar on observable dimensions (Section 5.1) and perform additional analyses to ascertain whether unobservable differences are likely to be driving the results (Section 5.3).

2.1.2. Independent Audit Requirements

All publicly traded banks are required to receive an independent audit of the financial statements, but there are different requirements for audits of privately held institutions. The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) and subsequently issued inter-agency regulatory guidance require banks with assets greater than $500 million to receive an independent audit of the financial statements. Banks that are subsidiaries of a holding company can meet this requirement at the holding company level.[7] Newly-insured or newly-chartered banks are typically required to receive an external audit for the first three years. For these requirements, the appropriate regulatory agency can grant exemptions for subsidiaries of bank holding companies that receive an audit. Regulators also have the ability to require audits for any safety and soundness reason (Dahl et al. 1998).

The above discussion suggests that the majority of private banks with assets below the $500 million threshold are receiving an audit on a voluntary basis. Various factors potentially affect the audit choice, but prior literature primarily discusses demand for an audit arising from external

[6] To be eligible for the alternating exams, banks must have a CAMELS rating of 1 or 2 and not have experienced a change in control in the past 12 months. State non-member banks with assets greater than $250 million are also subject to the alternating examinations but the state and federal regulator typically conduct joint examinations with the lead agency alternating each year (Agarwal et al. 2014). Approximately 6% of the sample observations are state non-member banks exceeding this threshold and results are robust to excluding these observations.

[7] For fiscal years ending after June 15, 2010, this requirement can be met at the holding company level provided that the consolidated assets of all subsidiary banks comprise at least 75% of the holding company's assets.

parties such as debtholders or other shareholders in more widely held firms or from the desire for accounting expertise (Lo 2015; Barton et al. 2014; Kohlbeck 2005). These papers also identify bank size as the most significant determinant of audit choice. Thus, I create a size-matched sample of banks prior to conducting the main tests in order to mitigate observable differences. I also perform analyses in Section 5.3 to determine whether unobservable differences appear to be driving the results given that bank audit status is likely endogenously determined.

2.1.3. Loan Loss Accounting

U.S. GAAP requires recognition of loan losses when, based on current information and events, it is probable that the bank will be unable to collect all contractual cash flows per the loan agreement. Loans reserved for at the pool level are governed by Statement of Financial Accounting Standards (SFAS) 5, which provides guidance for all loss contingencies. The standard specifies that losses are not recognized unless the loss is probable as of the financial statement date using information available prior to financial statement issuance and the loss can be reasonably estimated. SFAS 114 provides guidance for loans reserved for individually and requires recognition when it is probable that all interest and principal payments will not be received. The accounting for loan losses is referred to as the "incurred loss model" because losses are not recognized unless they have been incurred as of the financial statement date. The standards do not provide guidance on how to assess whether a loan is impaired, leading to the need for discretion in determining whether a loss should be recognized (FSF 2009).

An extensive literature focuses on the loan loss provision due to its role as the largest accrual and the extent of managerial discretion afforded under the incurred loss model (Beatty and Liao 2014). Several prior papers examine whether bank managers use discretion in the loan loss provision for earnings management, capital management, or signaling (e.g., Kanagaretnam et al. 2004; Ahmed et al. 1999; Kim and Kross 1998; Collins et al. 1995; Beatty et al. 1995). Collectively, this literature suggests that managers may use discretion to achieve different reporting benchmarks. The focus of this paper and a more recent stream of papers is loan loss provision timeliness, where provisions are considered more timely if losses are recognized concurrently with or in advance of loans becoming

non-performing (i.e., Nichols et al. 2009). This literature finds that delayed loan loss recognition is associated with greater opacity, pro-cyclical lending, and contribution to systemic risk (Iannotta and Kwan 2014; Beatty and Liao 2011; Bushman and Williams 2012, 2015).

2.2. Related Literature

Prior literature provides some insight into the effects of auditors and regulators on financial reporting although relatively few studies consider both groups simultaneously. One stream of papers investigates more extreme outcomes of the auditing or examination process. Curry et al. (1999) examine enforcement actions and downgrades in CAMELS ratings and find that banks respond to these actions by increasing their loan loss provisions. Gunther and Moore (2003) find that supervisory examinations and external audits are positively associated with Call report restatements that result in an upward revision of the loan loss provision. In a related study, Costello et al. (2015) investigate the effect of regulatory leniency, as measured by the regulatory index generated in Agarwal et al. (2014), on the likelihood of an income-decreasing restatement. They find that greater regulatory leniency is associated with lower likelihood of an income-decreasing restatement but fail to find an effect associated with the level of external audit work.[8] In contrast to these studies, I examine the effects of both regulators and auditors as well as an accounting choice that occurs on a more continuous basis rather than a relatively infrequent outcome of the reporting process.

More related to the current study are papers that examine the ongoing effects of regulators and auditors on financial reporting through their influence on loan loss provisions. On the audit side, Kanagaretnam et al. (2010) document a negative relationship between abnormal audit fees and discretionary loan loss provisions but only for banks not subject to the internal control provisions of FDICIA or the Sarbanes-Oxley Act (SOX). They interpret these findings as evidence that auditor independence is compromised when auditors receive large unexpected fees and banks are not subject to the internal control provisions of SOX or FDICIA. Chen et al. (2014) confirm the Kanagaretnam et al. (2010) finding in the post-crisis period but find a positive association between abnormal fees

[8] Although not a focus of their study, the Costello et al. (2015) finding related to auditors is different from that in Gunther and Moore (2003). This may be attributable to Gunther and Moore's focus on restatements specifically related to the loan loss provision or narrow time period examined.

and discretionary provisions during the crisis, which they interpret as greater auditor conservatism. This paper examines how auditor presence affects the timing of loan loss recognition, rather than loan loss provision outcomes conditional on receiving an audit, as well as the interaction between regulators and auditors.

On the regulator side, Rezende and Wu (2014) investigate changes in on-site examination frequency and find that more frequent regulatory exams are associated with lower loan loss provisions, fewer non-performing loans, and lower charge-offs, which they interpret as bank supervision disciplining risk-taking. Dahl et al. (1998) conclude that regulators increase commercial loan charge-offs but do not significantly affect loan loss provisions, while auditors increase loan loss provisions. The differing results of these studies may be attributable to differences in the sample period or identification strategy. Altamuro and Beatty (2010) examine the effects of the internal control provisions of FDICIA on bank accounting quality. They find that banks with assets greater than $500 million experience increased loan loss provision validity and earnings persistence as well as decreased benchmark-beating and conservatism relative to banks not subject to the internal control provisions. My paper contributes to this literature by considering the interaction between regulators and auditors, separating the effects of these two groups from regulation as a whole, and investigating a different accounting choice.

3. Hypothesis Development

The initial hypotheses examine the effect of lower regulatory scrutiny or greater regulatory scrutiny on loan loss provision timeliness at unaudited banks. Through the supervision function, regulators perform on-site examinations during which they determine whether banks are in compliance with regulations, including those targeted at meeting credit demands of the local community, and evaluate whether loans have been properly reserved for based on available information (Gilbert 1993; OCC 2012). Timely loan loss recognition is consistent with both the guidance provided in regulatory handbooks and the system-wide benefits documented in prior literature including less pro-cyclical lending and lower contributions to systemic risk (OCC 2012; Beatty and Liao 2011; Bushman and Williams 2015). Further, more timely loan loss provisions allow for greater discipline

over bank risk-taking from outside parties compared to other forward-looking provisioning practices, such as income smoothing (Bushman and Williams 2012).

However, regulators have some flexibility in conducting examinations that may allow them to maximize their own utility (Rosen 2003). Mishkin (2000) argues that despite the prompt corrective action (PCA) mandate of FDICIA, regulators still have flexibility to engage in forbearance and may do so in the hopes of avoiding blame for bank failure by allowing the bank time to recover. Gallemore (2013) argues that delayed loss recognition allows regulators to engage in forbearance as the bank is more opaque to outsiders, suggesting that regulators may not impose timely loss recognition in order to conceal poor bank performance. An additional factor is regulatory competition, which may result in more lax supervision policies and less timely loss recognition (Weinberg 2002). This discussion leads to the first two hypotheses, which examine the effect of lower or greater regulatory scrutiny at unaudited banks given that the net effect of regulator objectives and incentives may differ for these two groups. The hypotheses are stated in null form as follows:

Hypothesis 1 *At unaudited banks, lower regulatory scrutiny is not associated with loan loss provision timeliness.*

Hypothesis 2a *At unaudited banks, loan loss provision timeliness is not different for banks subject to greater regulatory scrutiny compared to lower regulatory scrutiny.*

The next hypothesis examines the effect of an external audit on loan loss provision timeliness in the presence of lower regulatory scrutiny. Auditors also spend considerable time investigating the loan loss reserve given that it is associated with high inherent risk for misstatement, but they approach this estimate with a different objective (AICPA 2007; Balla et al. 2012; Wall and Koch 2000). The objective of auditors is to determine whether financial statements are presented fairly, in all material respects, in accordance with GAAP, which includes determining whether the financial statements appropriately reflect the economics of the underlying transactions (DeFond and Zhang 2014). Thus, the effect of an external audit on loan loss provision timeliness is partially driven by reputation or litigation concerns resulting from an audit failure over financial statements that do not present fairly within GAAP. This suggests that an audit may have either a positive effect on timeliness to the extent that more timely loan loss provisions appropriately reflect the underlying losses on the loan portfolio or a limited effect if timely loan losses are inconsistent with the auditor

interpretation of GAAP (Dugan 2009).

Auditor behavior is also affected by continuing client concerns (i.e., Reynolds and Francis 2001). Thus, an external audit may not affect loan loss recognition as firms can change auditors to obtain more favorable outcomes (DeFond and Subramanyam 1998). In addition, the American Institute of Certified Public Accountants (AICPA) states that insufficient testing of subjective components of the loan loss provision is a common problem area in bank audits (AICPA 2015). Negative consequences occur from peer review findings, indicating that auditors may be hesitant to allow the use of subjective adjustment factors in supporting the loan loss provision estimate (Hilary and Lennox 2005).[9] This is also consistent with Dugan (2009) who argues that auditors delay loss recognition until concrete information is available due to a strict interpretation of the incurred loss model and earnings management concerns. The next hypothesis relates to the net effect of the above described objectives and incentives in the presence of lower regulatory scrutiny and is stated in null form as follows:

Hypothesis 2b *At banks subject to lower regulatory scrutiny, loan loss provision timeliness is not different for audited banks compared to unaudited banks.*

The next set of hypotheses examines the interaction between an external audit and greater regulatory scrutiny. More specifically, I compare loan loss provision timeliness at banks subject to greater regulatory scrutiny *and* an external audit to banks subject to greater regulatory scrutiny *only* (H3a) or to an external audit *only* (H3b). These comparisons determine whether strict regulators and auditors have similar or conflicting effects on loan loss provision timeliness.

One possibility is that strict regulators have a stronger net effect on timeliness relative to auditors, which occurs if regulatory objectives and incentives for timeliness dominate those of the auditor. In this case, audited banks are less timely relative to unaudited banks when regulatory scrutiny is greater (H3b), but there is not necessarily a difference between audited banks subject to lower versus greater regulatory scrutiny (H3a). A second possibility is that auditor objectives and incentives for timeliness are stronger relative to those of regulators. In this case, audited banks

[9] Historical loss experience is the typical starting point in determining the SFAS 5 component of the loan loss provision, but banks are required to adjust the historical loss rate for subjective factors. Specific examples of subjective adjustment factors include changes in bank lending practices, changes in national or local economic conditions, and changes in the trend of volume or severity of past due loans.

subject to greater regulatory scrutiny are less timely relative to audited banks subject to lower regulatory scrutiny (H3a), but there is not a significant difference between audited and unaudited banks subject to greater regulatory scrutiny (H3b). The final possibility is that regulator and auditor objectives and incentives have a similar net effect on loan loss provision timeliness. In this case, I expect that banks subject to both greater regulatory scrutiny and an audit are more timely or as timely as banks where only one of these groups is present (H3a and H3b).[10] Given these possibilities, the next set of hypotheses is stated in null form:

Hypothesis 3a *At audited banks, loan loss provision timeliness is not different for banks subject to greater regulatory scrutiny compared to lower regulatory scrutiny.*

Hypothesis 3b *At banks subject to greater regulatory scrutiny, loan loss provision timeliness is not different for audited banks compared to unaudited banks.*

A conflict between strict regulators and auditors is most likely to arise prior to deteriorating economic conditions when loss rates on the current loan portfolio are higher relative to historical experience for two primary reasons. First, the regulatory objective of safety and soundness indicates that regulators are particularly concerned when loan portfolio quality decreases (Spong 2000). Second, the AICPA (2015) documents that inadequate testing of "subjective, qualitative components" of the loan loss provision is one of the most commonly identified issues during peer reviews of bank audits. Regulators are not subject to these concerns, indicating they are more likely to require adjustments in deteriorating economic conditions (OCC 2012). This is consistent with regulator arguments suggesting that auditors are sensitive to the information used to justify loan loss provisions, which arises from strict interpretation of an incurred loss or concerns over earnings management, and leads to delayed loss recognition (Benston and Wall 2005; Dugan 2009).

However, there are additional factors that indicate auditors and regulators will not conflict when loss rates increase. Prior literature suggests that ex-post assessments by non-auditors take into account negative information that has materialized and that an optimal response by auditors is to require more timely recognition (Kinney and Nelson 1996). In addition, forbearance incentives may

[10] In this case, I cannot identify the work allocation between regulators and auditors but acknowledge that the following are possible interpretations: (1) regulators and auditors coordinate their activities when both are present, which allows them to examine different aspects of the loan portfolio (BCBS 2008), (2) regulators rely on auditors when they are present and perform less work themselves (BCBS 2002), (3) the presence of the other party results in greater effort by the auditor and/or regulator, or (4) regulators and auditors independently examine the provision and come to similar conclusions.

be stronger in times of declining economic conditions, resulting in less timely recognition enforced by regulators (Gallemore 2013). This leads to the final set of hypotheses, stated in null form:

Hypothesis 4a *At audited banks, loan loss provision timeliness is not different for banks subject to greater regulatory scrutiny compared to lower regulatory scrutiny when loss rates increase relative to historical experience.*

Hypothesis 4b *At banks subject to greater regulatory scrutiny, loan loss provision timeliness is not different for audited banks compared to unaudited banks when loss rates increase relative to historical experience.*

4. Research Design and Sample

4.1. Main Empirical Measures

A critical aspect of the incurred loss model is determining when a loan is impaired and should be provided for in the loan loss reserve. Bank regulatory handbooks provide guidance regarding loan impairment through the classification of nonaccrual loans, which are typically viewed as a relatively non-discretionary measure of loan portfolio quality. More specifically, the OCC (2012) states that: "...some banks consider a loan impaired if it would be reported as a nonaccrual loan on the report of condition and income. This is a reasonable and appropriate application of the standard." The guide also states: "Many banks consider coverage of one year's losses an appropriate benchmark of an adequate reserve for most pools of loans." This guidance is consistent with prior papers that consider banks to be more timely if losses are recognized concurrently with or in advance of loans becoming non-performing (Nichols et al. 2009; Beatty and Liao 2011; Bushman and Williams 2015). Thus, I use the recognition of concurrent (year t) and future (year $t+1$) non-performing loans in the loan loss provision to capture timeliness.[11]

Prior literature utilizes either a pooled approach or time-series approach in estimating discretionary loan loss provisions (i.e., Nichols et al. 2009 and Beatty and Liao 2011, respectively). The bank-specific measure has the advantage of providing a more powerful measure when documenting cross-sectional differences but requires a certain number of observations and may increase measurement

[11] Regulators and auditors have access to information on non-performing loans for the current time period (year t), suggesting that disagreements between them are more likely to arise over recognition of future non-performing loans (year $t+1$). However, even if both groups have access to non-performing loan information for year t, differences may still arise regarding the amount of loss to accrue. Further, results are largely similar if I perform inferences using only the change in non-performing loans in year $t+1$, but I discuss instances where the results are inconsistent.

error. Conversely, the pooled model does not impose the data constraints of the bank-level measure but restricts the regression coefficients cross-sectionally. My hypotheses involve cross-sectional comparisons of banks based on regulatory scrutiny and audit status. To mitigate data concerns related to the bank-specific measure but allow for cross-sectional differences, I estimate a pooled model with interactions between the cross-sectional variables and changes in non-performing loans.

Beatty and Liao (2014) compare several loan loss provision determinants models and find that the residual term of a base model including changes in non-performing loans, the change in total loans, bank size, and macroeconomic factors has the highest predictive power with respect to future comment letters and restatements related to the loan loss provision. The model used to test my hypotheses is based on this analysis and begins with the following:

$$LLP_{i,t} = \mu_t + \beta_1 \Delta NPL_{i,t+1} + \beta_2 \Delta NPL_{i,t} + \beta_3 \Delta NPL_{i,t-1} + \beta_4 \Delta NPL_{i,t-2} + \beta_5 EBLLP_{i,t} + \beta_6 Tier1_{i,t-1} + \beta_7 Size_{i,t-1} + \beta_8 \Delta Loans_{i,t} + \epsilon_{i,t} \quad (1)$$

where subscript i indexes the bank, t indexes the year and variables are defined as follows:

LLP = loan loss provision scaled by lagged total loans
ΔNPL = change in non-performing loans scaled by lagged total loans
$EBLLP$ = earnings before the loan loss provision and taxes scaled by lagged total loans
$Tier1$ = Tier 1 risk-based capital ratio
$Size$ = log of total assets
$\Delta Loans$ = change in total loans scaled by lagged total loans

ΔNPL captures changes in the quality of the underlying loan portfolio and $\Delta Loans$ controls for changes in the size of a bank's loan portfolio. I include year fixed effects, μ_t, to control for time effects (i.e. macroeconomic related) common to all banks in a particular year. I augment the model by including the level of earnings before the loan loss provision and taxes ($EBLLP$) to capture earnings smoothing and the Tier 1 risk-based capital ratio ($Tier1$) to capture capital management (e.g., Ahmed et al. 1999; Collins et al. 1995; Beatty et al. 1995). My hypotheses involve examining differences in β_1 and β_2 across banks based on regulatory scrutiny and external audit status. However, I also allow β_3 and β_4 to vary with these variables but do not explicitly examine them as part of my hypotheses.

I use external audit status to capture the effect of auditors on loan loss provision timeliness. Specifically, $Audit$ is equal to one if the bank receives an external audit or if the bank is a member of

a one-bank holding company that receives an external audit and zero otherwise. Capturing regulatory scrutiny is more challenging given that information regarding the specific dates and results of on-site examinations is not publicly available. I rely on a measure constructed in Agarwal et al. (2014) that utilizes a proprietary dataset from the Federal Reserve Board. Their empirical approach is based on the fact that the majority of state-chartered banks are examined on an alternating basis by their state and federal regulator. They find that federal regulators assign higher (worse) CAMELS ratings compared to state regulators, indicating that federal regulators are "stricter" than state supervisors on average. In supplementary analyses, they develop a state-level version of this measure, which involves estimating the difference in CAMELS ratings assigned by federal versus state regulators in each state ("regulatory index").[12] This measure is publicly available and provides variation in the extent of regulatory scrutiny at state-chartered banks.

I define $Strict$ as an indicator variable equal to one if the bank is located in a state where the regulatory index from Agarwal et al. (2014) is below the median for the region (i.e., stricter state regulators) and zero otherwise, which is based on the fact that bank supervision is conducted on a regional basis.[13] The four regions are defined based on those used by the OCC in supervision and are illustrated in Figure 1. Given that federal regulators are stricter on average, I interpret banks in states with smaller differences between federal and state regulators as subject to greater regulatory scrutiny relative to states with larger differences between the two. More specifically, state-chartered banks located in states where $Strict = 0$ ("lenient" states) are subject to lower regulatory scrutiny while banks in states where $Strict = 1$ ("strict" states) are subject to greater regulatory scrutiny. Agarwal et al. (2014) examine potential reasons for differences across states given that the regulatory requirements are held constant and conclude that the primary factor driving state regulator leniency is the ramifications of a bank failure to the local economy. This is consistent with regulator incentives to practice forbearance and to conceal information regarding poor performance.

[12] To aid in the interpretation of this measure, they examine the association between the regulatory index and measures of state distress. They find that larger values of the regulatory index (state regulators more lenient compared to federal regulators) are associated with higher bank failure rates, higher problem bank rates, larger asset sale discounts, and lower Troubled Asset Relief Program (TARP) repayment rates.

[13] Results are similar if $Strict$ is defined based on the national median. I also find similar results for the regulator hypotheses using the continuous measure of the regulatory index.

4.2. Research Design

An inherent difficulty for my analysis is disentangling discretionary accounting choices from the underlying economic activity. One approach to mitigating this issue is through the use of national banks as a control group (i.e., Costello et al. 2015). State-chartered banks are examined on an alternating basis by their federal and state regulator while nationally-chartered banks are examined solely by their federal regulator (OCC).[14] Thus, $Strict$ should relate solely to regulatory effects at state-chartered banks, but both state and national banks operating in the same region should be similarly affected by local economic conditions. To use national banks as a control group, I define $StateCharter$ as an indicator variable equal to one if the bank is chartered by the state and zero otherwise.

The first two hypotheses relate to the effect of lower or greater regulatory scrutiny on loan loss provision timeliness at unaudited banks. I use the following model to test these hypotheses:

$$\begin{aligned} LLP_{i,t} = {} & \mu_t + \phi_s + \alpha_1 StateCharter_{i,t} + \alpha_2 StateCharter_{i,t} * Strict_s + \alpha_3 \Delta NPL_{i,t+1} \\ & + \alpha_4 Strict_s * \Delta NPL_{i,t+1} + \alpha_5 StateCharter_{i,t} * \Delta NPL_{i,t+1} \\ & + \alpha_6 Strict_s * StateCharter_{i,t} * \Delta NPL_{i,t+1} + \alpha_7 \Delta NPL_{i,t} + \alpha_8 Strict_s * \Delta NPL_{i,t} \\ & + \alpha_9 StateCharter_{i,t} * \Delta NPL_{i,t} + \alpha_{10} Strict_s * StateCharter_{i,t} * \Delta NPL_{i,t} \\ & + \alpha_{11} \Delta NPL_{i,t-1} + \alpha_{12} \Delta NPL_{i,t-2} + \sum_{i=13}^{18} \alpha_i Interactions + \alpha_{19} EBLLP_{i,t} \\ & + \alpha_{20} Tier1_{i,t-1} + \alpha_{21} Size_{i,t-1} + \alpha_{22} \Delta Loans_{i,t} + \epsilon_{i,t} \end{aligned} \tag{2}$$

This model modifies equation (1) by interacting the variables of interest, ΔNPL_{t+1} and ΔNPL_t, with the indicator variables $Strict$ and $StateCharter$.[15] Further, two-way and three-way interactions ($Interactions$) between the indicator variables and ΔNPL_{t-1} and ΔNPL_{t-2} are also included but are suppressed for brevity. State fixed effects, ϕ_s, are included to capture time invariant state-specific characteristics. Continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers and standard errors are clustered by bank due to the firm-specific, persistent nature of loan loss provisions and regulator/audit status (Petersen 2009).

[14] The pooled nature of the model implicitly assumes that national bank supervision by the OCC is similar across all states. I test the plausibility of this assumption in a sensitivity test.

[15] The inclusion of state fixed effects results in the inability to estimate the main effect of $Strict$, although interactions with $Strict$ can be estimated.

To test Hypothesis 1 and Hypothesis 2a, I estimate equation (2) for the subsample of unaudited banks.[16] Timeliness for national banks in states with lenient state regulators is captured by α_3 and α_7 with the incremental timeliness for state-chartered banks in those states captured by the interactions with $StateCharter$. Thus, Hypothesis 1 relates to α_5 and α_9 and indicates that these coefficients will be negative if lenient regulators allow less timely loan loss provisions and insignificant otherwise. To test Hypothesis 2a, the model compares the difference between state banks in strict and lenient states to a similarly calculated difference for the control group of national banks, which should capture the effects of local economic conditions on loan loss provision timeliness. If the objectives and incentives of strict regulators are associated with more timely loan loss provisions, α_6 and α_{10} are predicted to be positive.

The next hypothesis examines the effect of external audits on loan loss provision timeliness at banks subject to lower regulatory scrutiny and is tested using the following model:

$$\begin{aligned} LLP_{i,t} = {} & \mu_t + \phi_s + \delta_1 Audit_{i,t} + \delta_2 StateCharter_{i,t} + \delta_3 StateCharter_{i,t} * Audit_{i,t} \\ & + \delta_4 \Delta NPL_{i,t+1} + \delta_5 Audit_{i,t} * \Delta NPL_{i,t+1} + \delta_6 StateCharter_{i,t} * \Delta NPL_{i,t+1} \\ & + \delta_7 Audit_{i,t} * StateCharter_{i,t} * \Delta NPL_{i,t+1} + \delta_8 \Delta NPL_{i,t} + \delta_9 Audit_{i,t} * \Delta NPL_{i,t} \\ & + \delta_{10} StateCharter_{i,t} * \Delta NPL_{i,t} + \delta_{11} Audit_{i,t} * StateCharter_{i,t} * \Delta NPL_{i,t} \\ & + \sum_{i=12}^{23} \delta_i Interactions \ \& \ Controls + \epsilon_{i,t} \end{aligned} \tag{3}$$

This model builds on equation (1) by interacting the variables of interest, ΔNPL_{t+1} and ΔNPL_t, with the indicator variables $Audit$ and $StateCharter$. As previously discussed, the model also allows ΔNPL_{t-1} and ΔNPL_{t-2} to vary cross-sectionally with these variables and includes all previously described control variables.

To test Hypothesis 2b, I estimate equation (3) for the subsample of banks subject to lower regulatory scrutiny. Similar to the previous hypothesis, the model first compares timeliness between audited and unaudited national banks (δ_5 and δ_9), which captures the effect of an audit in lenient states. This difference is then compared to a similarly calculated difference for state-chartered banks, with δ_7 and δ_{11} capturing the incremental effect of an audit due to the lenient regulators at state-chartered banks. If the net effect of auditor incentives and objectives increases loan loss

[16] Appendix B summarizes the subgroups involved in Hypothesis 2 and Hypothesis 3.

provision timeliness, δ_7 and δ_{11} will be positive and jointly different from zero. Alternatively, if concerns related to client retention or peer review interpretation dominate, δ_7 and δ_{11} will be negative or insignificantly different from zero.

The third hypothesis investigates the interaction between greater regulatory scrutiny and an external audit. Hypothesis 3a compares timeliness at audited banks subject to lower versus greater regulatory scrutiny and is tested by estimating equation (2) for the audited bank subsample. Loan loss provision timeliness at banks subject to lower regulatory scrutiny reveals the net effect of audit objectives and incentives in the presence of lenient regulators. Thus, if auditors and regulators conflict, α_6 and α_{10} will be jointly negative. However, if both groups have similar objectives and incentives for timeliness, these coefficients will be insignificant or positive. To test Hypothesis 3b, I estimate equation (3) for the subsample of banks subject to greater regulatory scrutiny. Similar to the previous hypothesis, timeliness at unaudited banks in this subsample reveals the net effect of regulatory objectives and incentives in the absence of an audit constraint or interaction. If auditors and strict regulators do not conflict, δ_7 and δ_{11} will be insignificant or positive.

The final set of hypotheses examines whether the strict regulator/auditor interaction differs when loss rates increase relative to historical experience. The starting point in assessing the loan loss provision is historical loss rates, although regulatory guidance identifies several subjective adjustment factors that should be considered (OCC 2012). Changes in lending practices are identified as a subjective adjustment factor because incurred losses on the current portfolio are likely to differ from historical experience. Specifically, ceteris paribus, banks lend to less credit-worthy borrowers and realized loss rates increase when lending standards are loosened (Dell'Ariccia and Marquez 2006).[17] I use information on credit standards from the Federal Reserve Board's Senior Loan Officer Opinion Survey to capture this aspect. This allows for construction of a measure based on when banks likely began issuing lower quality loans and utilizes loan portfolio characteristics. Figure 2 shows variation in the net percentage of banks tightening (loosening) their credit standards

[17] To provide support for this assumption, I examine differences in the ratio of charge-offs to non-performing loans for time periods following loosening of credit standards compared to tightening of credit standards. An implicit assumption in this calculation is that the timing of charge-offs is relatively non-discretionary and does not vary significantly in times of tightened versus loosened credit standards. I find that this ratio is significantly larger following times of loosened standards relative to tightened standards, consistent with an increase in realized loss rates.

over my sample period for three different loan types (C&I, consumer, and real estate).

I measure exposure to loans for which standards were loosened by multiplying the average net percentage of banks reporting loosened standards for each loan category over the current and previous year by the change in non-performing loans for that category. ΔNPL_Loosen is the sum of these products for each of the three loan categories. To determine whether changes in credit standards affect the regulator and auditor influence on loan loss provision timeliness, I modify equations (2) and (3) by adding the variable ΔNPL_Loosen along with interactions between $StateCharter$ and $Audit$ or $Strict$. I estimate the modified equation (2) for the subsample of audited banks and modified equation (3) for the subsample of banks subject to greater regulatory scrutiny. If a conflict exists, I expect interactions between the indicator variables of interest ($StateCharter$ and $Audit$ or $Strict$) and ΔNPL_Loosen_t and ΔNPL_Loosen_{t+1} to be significantly negative.[18]

4.3. Sample Selection

The sample selection process is detailed in Table 1 and begins with all banks filing annual Call reports between 1997 and 2005 with positive total assets. The sample begins in 1997 after several changes to on-site examinations took effect and ends in 2005 (because one year ahead of data is required) prior to the beginning of the financial crisis. The analyses are performed at the bank level rather than the bank holding company level for the following reasons. First, data on audit status at the bank holding company level is not available in the consolidated financial statements filed with the Federal Reserve (FR Y-9C) until 2005. Second, bank holding companies with assets less than $150 million ($500 million) are not required to file the FR Y-9C before (after) March 2006. While bank holding companies below this threshold are required to file parent stand-alone financial statements (FR Y-9), there are limited financial schedules and data on non-performing loans is not

[18] I expect regulators to incorporate information regarding *loosened* standards to a greater extent given that this results in a *higher* realized loss rate compared to tightened standards. This suggests that the conflict between regulators and auditors will arise primarily when standards are loosened and is the focus of my analysis. To examine this prediction, I construct an analogous measure, $\Delta NPL\_Tighten$, measured similarly to ΔNPL_Loosen but using the net percentage of banks reporting *tightened* standards. In untabulated analysis, I find that regulators incorporate changes in non-performing loans for loans with tightened standards on a less timely basis relative to other loans and do not detect an incremental difference for audited banks. These results are consistent with the prediction that regulators are primarily focused on *increases* in loss rates relative to historical experience and therefore, auditors and regulators do not conflict in the absence of increasing loss rates.

available. This yields 81,615 possible bank-year observations. The remaining sample selection procedures aim to remove banks that are required to receive an external audit or those that likely receive special examination procedures from regulators.

The majority of banks are held by holding companies and are affected by audit procedures occurring at the holding company level. However, restricting the sample to stand-alone banks would substantially reduce the sample size (Lo 2015). To reduce concerns related to audit procedures performed over subsidiary banks of multi-bank holding companies but maintain sample size, I remove banks belonging to a holding company with more than one depository institution. The remaining sample comprises stand-alone banks that are not members of a holding company and one-bank holding companies for which the subsidiary bank typically comprises the vast majority of the consolidated entity's assets.[19] To obtain variation in audit status, I remove publicly traded banks (including subsidiaries of public banks) as well as banks with assets greater than $500 million. This allows me to examine a group of smaller private banks that are more likely to have similar business models and be more comparable on observable dimensions. It also allows me to separate other factors that are associated with mandatory audits, such as the effects of publicly traded securities. However, this does introduce a potential endogeneity issue that I discuss in further detail in Section 5.3. These data screens reduce the sample to 51,798 bank-year observations.

I next remove banks that are subject to different supervision from regulators or that do not engage in typical domestic deposit-taking and lending activities. This ensures that banks across audit or charter type partitions have relatively similar business models. Banks in this group include those that were recently chartered (within the previous 3 years), credit card banks (more than 50% of total loans are credit card loans), industrial banks, and Edge corporations. Further, troubled banks and recently acquired banks typically receive special supervision from regulators and may be required to receive an external audit. Thus, I remove banks that are subject to a formal enforcement action, that do not meet the criteria to be considered well-capitalized, or that were acquired in the previous two years. This further reduces that sample to 42,118 bank-year observations.

[19] Consistent with this, the mean (median) bank total assets as a percentage of bank holding company total assets is 99.5% (99.9%) for the subsample of banks that are part of a one-bank holding company. Further, I find similar effects of an audit at stand-alone banks compared to the effect at banks that are part of a one-bank holding company.

The final sample selection step creates a matched sample in order to mitigate observable differences between audited and unaudited banks given that the sample banks are likely receiving an audit on a voluntary basis. I match each audited bank to an unaudited bank with the same charter type (National or State), in the same year, in the same state, closest in asset size.[20] This ensures that audited and unaudited banks face similar regulatory scrutiny and local economic conditions. Further, prior literature documents that bank size is the most significant determinant of audit status (Lo 2015; Barton et al. 2014) and untabulated analysis reveals that audited banks in my pre-matched sample are significantly larger than unaudited banks. Thus, finding a similarly-sized matched bank controls for both the direct effect of size and additional characteristics that are likely correlated with size.[21] These requirements result in a final sample of 37,924 bank-year observations.

5. Descriptive Statistics and Results

5.1. Descriptive Statistics

Table 2, Panel A provides descriptive statistics for the pooled sample. The table shows that 77.7% of the observations are state-chartered banks, which indicates that approximately 22% are national banks. By construction, half of the observations receive an external audit, which is similar to the percentage of observations receiving an audit in the pre-matched sample (53%). Panel B of Table 2 provides Pearson and Spearman correlations. The table reveals that the matching procedures reduce the Pearson correlation between $Audit$ and $Size$ (0.41 prior to matching and 0.04 after). The correlation between $Strict$ and $StateCharter$ is -0.16 indicating that state-chartered banks

[20] The Northeastern region comprises many states with relatively few observations per state compared to the other three OCC regions (see Figure 1). To maintain sample size, I match Northeastern banks in states with a large proportion of observations (New York, Pennsylvania and Massachusetts) to a bank in the same state. For the remaining observations, I match each audited bank to an unaudited bank following the same guidelines but only require the control bank to be located in the same region and to have the same value of $Strict$. However, results are similar if I also match all audited observations in the Northeastern region to an unaudited observation in the same state.

[21] An alternative to my matching procedure is propensity score matching, which allows for matching on a large number of covariates as it solves the dimensionality problem. However, King et al. (2011) state that while propensity score matching helps with dimensionality, it may result in poor matches since it collapses the matching parameter to one dimension, increasing the imbalance for any one covariate. Given that charter type, location and bank size are the most critical characteristics for my design, I choose to match on them directly rather than employ alternative matching techniques.

are located in states with more lenient state supervisors compared to national banks.[22]

To assess whether audited and unaudited as well as national and state banks are similar on observable dimensions, I compute normalized differences for all covariates as well as for the fraction of the loan portfolio comprised of commercial and industrial loans (CI_Loans), real estate loans (RE_Loans), and consumer loans ($Cons\_Loans$). The normalized difference is a means of assessing covariate overlap between groups and differences greater than 0.25 may be indicative of specification sensitivity in the linear regression model (Imbens and Wooldridge 2009; Wooldridge 2011). Panel A of Table 3 provides descriptive statistics separately for national and state-chartered banks, partitioned by regulatory scrutiny. The table reveals that all differences within each $Strict$ subsample are below the 0.25 threshold, indicating that national banks are a reasonable control group. Panel B provides a similar comparison for audited and unaudited banks. The table indicates that all differences are below the 0.25 threshold, suggesting that the matching procedures mitigate observable differences between audited and unaudited banks.

5.2. Main Results

The first hypotheses examine the effect of lower or greater regulatory scrutiny on loan loss provision timeliness at unaudited banks. The results of estimating equation (2) for unaudited banks are located in Table 4, Panel A. Column (1) provides coefficient estimates while robust standard errors clustered by bank are provided in column (2). Panel B provides F-tests of the joint significance of ΔNPL_{t+1} and ΔNPL_t across the different subgroups. The table indicates that state-chartered banks in states with lenient state regulators are significantly less timely compared to national banks as $StateCharter * \Delta NPL_{t+1}$ and $StateCharter * \Delta NPL_t$ are negative and jointly different from zero (p-value = 0.08).[23] This rejects the null Hypothesis 1, that lower regulatory scrutiny is not associated with loan loss provision timeliness, and is consistent with the Agarwal et al. (2014) interpretation that lenient state regulators are concerned with the potential ramifications of bank

[22] To verify that an imbalance between national and state banks within each $Strict$ subsample is not driving the results, I perform a sensitivity test where the sample is restricted to states where at least 5% or 10% of the observations are nationally-chartered and find similar results.

[23] The coefficient on $StateCharter * \Delta NPL_{t+1}$ is not individually significantly different from zero (p-value = 0.22). Thus, the results of this hypothesis are sensitive to examination of ΔNPL in both $t+1$ and t versus only $t+1$ as discussed in Section 4.1 (footnote 11).

closure on the local economy and do not enforce certain actions.[24] The formal test of Hypothesis 2a indicates that banks subject to greater regulatory scrutiny recognize more timely loan loss provisions as evidenced by the positive and significant coefficients on $Strict * StateCharter * \Delta NPL_t$ and $Strict * StateCharter * \Delta NPL_{t+1}$ (p-value = 0.01). These results reject the null hypothesis that loan loss provision timeliness is not different for banks subject to lower versus greater regulatory scrutiny and indicate that incentives and objectives related to safety and soundness outweigh incentives related to regulatory competition or poor performance concealment.

Hypothesis 2b involves the effect of an external audit on loan loss provision timeliness at banks subject to lower regulatory scrutiny. Regression results are presented in Panel A of Table 5 and joint F-tests of subgroup comparisons are provided in Panel B. The coefficients capturing the incremental effect of an audit at state-chartered banks relative to national banks, $Audit * StateCharter * \Delta NPL_{t+1}$ and $Audit * StateCharter * \Delta NPL_t$, are positive and jointly different from zero (p-value = 0.07).[25] These results reject the null hypothesis that loan loss provision timeliness is not different for audited versus unaudited banks in the presence of lower scrutiny by regulators, suggesting that auditor objectives and incentives for timely loan loss provisions dominate other incentives. An F-test also reveals that timeliness is not different between state and national audited banks (p-value = 0.80), which indicates that the difference between them attenuates at audited banks. Overall, Tables 4 and 5 suggest that the objectives and incentives of auditors and strict regulators are positively associated with loan loss provision timeliness and counteract the less timely loan loss provisions at unaudited banks subject to lower regulatory scrutiny.

The next set of hypotheses examines the interaction effect between greater regulatory scrutiny and an external audit. Specifically, Hypothesis 3a tests whether the joint effect of an audit and greater regulatory scrutiny is different from the effect of an audit at banks subject to lower regulatory

[24] Panel B of Table 4 also indicates that national banks located in strict states are less timely relative to national banks in lenient states (p-value = 0.05). I interpret this difference as the effect of location differences on loan loss provision timeliness. One possible explanation for the negative difference is related to loan portfolio composition. Bhat et al. (2014) examine loan loss provision timeliness by loan type and find that C&I loans are the most timely, followed by real estate loans and consumer loans. Consistent with this, the loan portfolios of banks in strict states have a larger proportion of consumer loans relative to banks in lenient states. Importantly, this difference is similar for national and state banks, but I also perform a robustness test in Section 5.4 examining whether differences in loan portfolio composition appear to be driving the results.

[25] The coefficient on $Audit * StateCharter * \Delta NPL_{t+1}$ is not individually different from zero (p-value = 0.21).

scrutiny. To test this hypothesis, I estimate equation (2) for the subsample of audited banks. The results presented in Table 6 do not reveal a significant difference between national and state banks in either $Strict$ partition (p-values of 0.79 and 0.70). The formal test of Hypothesis 3a shows that the coefficients for $Strict * StateCharter * \Delta NPL_{t+1}$ and $Strict * StateCharter * \Delta NPL_t$ are insignificantly different from zero (p-value = 0.99), indicating that there is not a difference in timeliness between banks subject to lower versus greater regulatory scrutiny in the presence of an external audit.

Hypothesis 3b examines whether the joint effect of an audit and greater regulatory scrutiny is different from the effect of greater regulatory regulatory scrutiny at unaudited banks. Table 7 presents the results and indicates that state-chartered banks in strict states are more timely relative to national banks (p-value = 0.09), which is consistent with the findings in Table 4. The coefficients on $Audit * \Delta NPL_{t+1}$ and $Audit * \Delta NPL_t$ are positive and jointly significant (p-value = 0.00), indicating that auditors counteract the lower timeliness at national banks in strict states. Compared to the audit effect at national banks, there is an incremental negative effect at state-chartered banks as evidenced by the coefficients on $Audit * StateCharter * \Delta NPL_{t+1}$ and $Audit * StateCharter * \Delta NPL_t$ (p-value = 0.07). This suggests that the presence of an audit reduces timeliness at banks subject to greater scrutiny from regulators. To corroborate this interpretation, the final hypotheses examine whether this result is strongest when the conflict between auditors and strict regulators is expected to be greatest, which is when loss rates *increase* relative to historical experience.

Table 8 provides results of estimating the modified equation (2) to test Hypothesis 4a. $Strict * StateCharter * \Delta NPL\_Loosen_{t+1}$ and $Strict * StateCharter * \Delta NPL\_Loosen_t$ are not jointly different from zero (p-value = 0.20), indicating that the null hypothesis of no difference between audited banks subject to lower versus greater regulatory scrutiny cannot be rejected. Table 9 provides the results of testing Hypothesis 4b by estimating a modified equation (3) for the subsample of banks subject to greater regulatory scrutiny. $Audit * StateCharter * \Delta NPL\_Loosen_{t+1}$ and $Audit * StateCharter * \Delta NPL\_Loosen_t$ are negative and jointly significant (p-value = 0.03), and audited state banks are less timely relative to unaudited state banks (p-value = 0.06). This is

consistent with auditors restricting the ability of regulators to require timely loan loss recognition and with regulator concerns following the financial crisis (Dugan 2009). Overall, Tables 6 – 9 indicate that an audit constrains loan loss provision timeliness in the presence of greater scrutiny from regulators and particularly when loss rates increase relative to historical experience.

5.3. Falsification Tests Related to the Audit or Charter Choice

For my sample banks, the charter type and external audit status are bank decisions. Table 3 indicates that the sample banks are similar on the observable characteristics included in my empirical model across the audit and charter type partitions. However, my study may suffer from an omitted correlated variables problem if there are unobservable characteristics associated with both the charter type or audit decision and discretionary accounting choices (Roberts and Whited 2013). I argue that if banks that choose to receive an audit or to obtain a specific charter type have inherently different discretionary accounting choices, I would expect these difference to arise in other decisions. One area that provides discretion but is unlikely to be influenced by auditors or regulators is the timing of securities gains/losses since this is a "real" action (Beatty and Harris 1998). If my results are purely driven by unobservable characteristics, I would expect to observe a significant association between the timing of asset sales for earnings management purposes and regulatory scrutiny or audit status.[26] However, if the results are driven by regulator and auditor influence as I hypothesize, I would not expect to observe a significant association between regulatory scrutiny or audit status and the realization of securities gains/losses.

To investigate this, I estimate the following models that capture the determinants of realized securities gains/losses:

$$\begin{aligned} RealSGL_{i,t} = {} & \mu_t + \phi_s + \gamma_1 StateCharter_{i,t} + \gamma_2 Strict_s * StateCharter_{i,t} + \gamma_3 EBSGL_{i,t} \\ & + \gamma_4 Strict_s * EBSGL_{i,t} + \gamma_5 StateCharter_{i,t} * EBSGL_{i,t} \\ & + \gamma_6 Strict_s * StateCharter_{i,t} * EBSGL_{i,t} + \gamma_7 Tier1SGL_{i,t} + \gamma_8 UnrSGL_{i,t-1} \\ & + \gamma_9 Securities_{i,t-1} + \gamma_{10} IntInc_{i,t-1} + \sum_{i=11}^{22} \gamma_i Interactions + \gamma_{23} Liq_{i,t-1} + \gamma_{24} Size_{i,t-1} + \epsilon_{i,t} \end{aligned} \tag{4a}$$

[26] An implicit assumption in this test is that there is an association between the extent of loan loss provision timeliness and earnings management through the loan loss provision.

$$RealSGL_{i,t} = \mu_t + \phi_s + \lambda_1 Audit_{i,t} + \lambda_2 StateCharter_{i,t} + \lambda_3 Audit_{i,t} * StateCharter_{i,t}$$
$$+ \lambda_4 EBSGL_{i,t} + \lambda_5 Audit_{i,t} * EBSGL_{i,t} + \lambda_6 StateCharter_{i,t} * EBSGL_{i,t}$$
$$+ \lambda_7 Audit_{i,t} * StateCharter_{i,t} * EBSGL_{i,t} + \sum_i \lambda_i \textit{ Controls \& Interactions} + \epsilon_{i,t} \quad (4b)$$

where variables are defined as follows:

$RealSGL$ = realized securities gains/(losses) scaled by total assets
$EBSGL$ = earnings before securities gains/(losses) scaled by total assets
$Tier1SGL$ = Tier 1 capital before securities gains/(losses) scaled by total assets
$Securities$ = available-for-sale securities scaled by total assets
$UnrSGL$ = unrealized securities gains/(losses) scaled by total assets
$IntInc$ = interest income scaled by total assets
Liq = total loans scaled by total deposits

$EBSGL$ and $Tier1SGL$ are included to capture incentives to manage earnings and capital, respectively. $Securities$ and $UnrSGL$ are included as banks with a larger proportion of securities or greater amount of unrealized gains/(losses) have a greater ability to manage earnings through asset sales. $IntInc$ captures income received from loans and securities while Liq captures bank liquidity needs. The $Interactions$ summation captures two-way and three-way interactions between $StateCharter$ and $Strict$ or $StateCharter$ and $Audit$ with $Tier1SGL$, $Securities$, $UnrSGL$, and $IntInc$. The coefficients of interest are those related to earnings management incentives.[27] Specifically, if the positive effects documented in Tables 4 and 5 are driven by unobservable bank characteristics, I would expect to find significant coefficients for γ_5, γ_6, and λ_7.

The results of estimating equations (4a) and (4b) are presented in Table 10. Panel A includes results related to the regulator hypotheses (Hypothesis 1 & 2a) and Panel B presents results related to the audit hypothesis (Hypothesis 2b). The table reveals insignificant coefficients on $StateCharter * EBSGL$ and $Strict * StateCharter * EBSGL$ in Panel A and $Audit * StateCharter * EBSGL$ in Panel B. Overall, the results from this test indicate that regulatory scrutiny and audit status are not significantly associated with the timing of asset sales for earnings management purposes. This provides some evidence that the documented differences in loan loss provision timeliness are attributable to regulator and auditor effects rather than bank characteristics associated with the audit or charter type decision.

As an additional falsification test assessing endogeneity in the audit choice, I compare

[27] All results reported below are similar for capital management incentives ($Tier1SGL$).

loan loss provision timeliness for my sample audited banks (that voluntarily receive an audit) to banks receiving a mandatory audit. If loan loss provision timeliness is similar between these groups, this suggests that the audit process itself influences loan loss provision timeliness rather than unobservable bank characteristics associated with both the audit and loan loss recognition decisions. Specifically, I estimate equation (1) for the audit subsample as well as banks with assets between $500 million and $1 billion, which are required to receive an audit under FDICIA. I include interactions between the ΔNPL variables and an indicator variable, $Mandatory$, which is equal to one if the bank is required to receive an audit and zero otherwise. The results in Table 11 show that loan loss provision timeliness is not different for banks receiving an audit on a mandatory versus voluntary basis (joint p-value = 0.32). Thus, the results documented in Table 5 are more likely to be driven by the audit process itself rather than unobservable bank characteristics associated with the decision to receive an audit.

5.4. Additional Robustness Tests

I perform two additional sample selection modifications related to the charter and audit choice. First, charter changes are relatively rare but could confound the results if certain bank types switch charters in order to take advantage of differences in regulatory leniency. To address this concern, I remove banks that change their charter anytime during the five year period prior to the start of the sample period or during the sample period (1992 - 2005). Second, bank size is a significant determinant of the audit choice and may be associated with other characteristics affecting loan loss provision discretion (Lo 2015; Barton et al. 2014). Although Table 3 shows that audited and unaudited banks are similar along observable dimensions including size, I take the additional step of requiring the unaudited bank asset size to be within 25% of the audited bank's assets. Results using both of these modified samples are similar to those reported in the main tests.

To the extent that differences across states or groups are associated with differences in loan portfolio composition, this may influence timeliness as Bhat et al. (2014) show that loan type is important in explaining loan loss provisions. Specifically, they show that provisions for commercial and industrial loans are more timely while provisions for real estate or consumer loans are less

timely.[28] I repeat the main tests controlling for loan composition as well as interactions between the three loan categories (CI_Loans, $Cons\_Loans$ and RE_Loans) and the indicator variables of interest ($Audit$ or $StateCharter$ and $Strict$). All results continue to hold, suggesting that loan portfolio differences between national and state banks or between audited and unaudited banks are not driving the results.

The main analysis implicitly assumes that national bank supervision is similar across the country. Therefore, I repeat the analysis in Table 4 separately for each of the four OCC supervisory regions. The results show that $StateCharter * \Delta NPL_{t+1}$ and $Strict * StateCharter * \Delta NPL_t$ are jointly significant in two of the regions while $Strict * StateCharter * \Delta NPL_{t+1}$ and $Strict * StateCharter * \Delta NPL_t$ are jointly significant in all four region unaudited subsamples.[29] Thus, although there is some heterogeneity in the documented effects across the four regions, performing the analysis on a pooled basis does not alter the main inferences.

It is also possible that there is heterogeneity in the effect of auditors (i.e., Big 4 vs. non-Big 4) on loan loss provision timeliness. Although information on the audit firm is not available in the Call report, this item was added to the consolidated bank holding company report (FR Y-9C) in 2005. Thus, for the subsample of banks that are part of a one-bank holding company, I obtain the audit firm used by the bank holding company in 2005 and assume that this is the same auditor used at the subsidiary bank. This analysis reveals that only 2% of banks with available data are audited by a Big 4 firm and results are robust to excluding these banks. Results are also robust to excluding banks audited by the larger regional firms that audit at least 5% of the sample banks in 2005, which are McGladrey, BKD and Crowe Horwath (Crowe Chizek).

6. Conclusion

This paper examines the effect of bank regulators and auditors on financial reporting by investigating their influence on loan loss provision timeliness. The results indicate that greater

[28] An analysis of loan loss provisions by type is not possible for my sample banks because this information is obtained from SEC filings (Bhat et al. 2014). A schedule including disaggregated loan loss provision data was recently added to the Call report beginning in March 2013, although it is only required for banks with at least $1 billion in total assets.

[29] Only two of the four regions indicate significance on $Strict * StateCharter * \Delta NPL_{t+1}$ individually.

regulatory scrutiny and external audits are each positively associated with loan loss provision timeliness, counteracting the less timely loan loss provisions at unaudited banks with lenient regulators. I next document evidence consistent with a conflict between auditors and strict regulators as external audits constrain loan loss provision timeliness in the presence of greater regulatory scrutiny. I further corroborate this interpretation by showing that this result is strongest when loss rates on the loan portfolio increase relative to historical experience, consistent with regulator concerns following the financial crisis (Dugan 2009). It is important to point out that these results rely on a matched sample of audited and unaudited banks as well as a control group of national banks to identify the effects of an external audit and regulatory scrutiny. To ascertain whether unobservable characteristics appear to be driving my results, I perform falsification tests examining the timing of asset sales to manage earnings and comparing loan loss provision timeliness between banks receiving voluntary versus mandatory audits. Both of these tests suggest that unobservable characteristics associated with both the charter or audit decision and discretionary accounting choices do not appear to explain my results, although I cannot definitively rule out this possibility.

The findings in this paper contribute to our understanding of the role of regulators and auditors in the bank financial reporting process and how their different objectives and incentives affect accounting choices. Further, this paper should be of interest to bank regulators, auditors, and managers as the results indicate that different parties involved in bank monitoring influence how accounting guidance is applied. In particular, my focus on loan loss provision timeliness provides insight into the debate following the financial crisis regarding differences in implementation of the incurred loss model. An important caveat is that I focus on smaller, private banks in order to obtain variation in audit status and that the results may not generalize to publicly traded institutions.

References

Agarwal, S., D. Lucca, A. Seru and F. Trebbi. 2014. Inconsistent Regulators: Evidence from Banking. *The Quarterly Journal of Economics*, 129(2): 889–938.

Ahmed, A., S. Thomas, and C. Takeda. 1999. Bank Loan Loss Provisions: A Reexamination of Capital Management, Earnings Management, and Signaling Effects. *Journal of Accounting and Economics*, 28: 1–26.

Altamuro, J. and A. Beatty. 2010. How does internal control regulation affect financial reporting? *Journal of Accounting and Economics*, 49(1–2): 58–74.

American Institute of Certified Public Accountants (AICPA). 2007. Depository and Lending Institutions: Banks and Savings Institutions, Credit Unions, Finance Companies and Mortgage Companies Audit and Accounting Guide. AICPA, New York, NY.

American Institute of Certified Public Accountants (AICPA). 2015. Avoid Potholes for a Smooth Ride to Peer Review.

Armstrong, C., W. Guay, H. Mehran and J. Weber. 2015. The Role of Information and Financial Reporting in Corporate Governance: A Review of the Evidence and the Implications for Banking Firms and the Financial Services Industry. *Federal Reserve Bank of New York Economic Policy Review*, forthcoming.

Badertscher, B., J. Burks and P. Easton. 2015. Day 30: The Tacit Quarterly Information Event in the Banking Industry. Working Paper, University of Notre Dame.

Balla, E. and A. McKenna. 2009. Dynamic Provisioning: A Countercyclical Tool for Loan Loss Reserves. *Federal Reserve Bank of Richmond Economic Quarterly*, 95(4): 383–418.

Balla, E., M. Rose and J. Romero. 2012. Loan Loss Reserve Accounting and Bank Behavior. *Federal Reserve Bank of Richmond Economic Brief*, 12-03: 1-4.

Barton, J., L. Hodder and M. Shepardson. 2014. Voluntary Audits and Bank Failure: Do financial statement audits constrain excessive risk taking? Working paper, Indiana University.

Basel Committee on Banking Supervision (BCBS). 2002. The relationship between banking supervisors and banks' external auditors. http://www.bis.org/publ/bcbs87.htm

Basel Committee on Banking Supervision (BCBS). 2008. External audit quality and banking supervision. http://www.bis.org/publ/bcbs146.htm

Beatty, A., S. Chamberlain and J. Magliolo. 1995. Managing Financial Reports of Commercial Banks: The Influence of Taxes, Regulatory Capital, and Earnings. *Journal of Accounting Research*, 22: 231–261.

Beatty, A. and D. Harris. 1998. The Effects of Taxes, Agency Costs and Information Asymmetry on Earnings Management: A Comparison of Public and Private Firms. *Review of Accounting Studies*, 4(3–4): 299–326.

Beatty, A. and S. Liao. 2011. Do delays in expected loss recognition affect banks willingness to lend? *Journal of Accounting and Economics*, 52(1): 1-20.

Beatty, A. and S. Liao. 2014. Financial Accounting in the Banking Industry: A review of the empirical literature. *Journal of Accounting and Economics*, 58(2–3): 339 – 383.

Benston, G. and L. Wall. 2005. How should banks account for loan losses. *Journal of Accounting and Public Policy*, 24(2): 81–100.

Bhat, G., J. Lee and S. Ryan. 2014. Using Loan Loss Indicators by Loan Type to Sharpen the Evaluation of the Determinants and Implications of Banks' Loan Loss Accruals. Working paper, Southern Methodist University, Florida State University and New York University.

Bischof, J., H. Daske, F. Elfers and L. Hail. 2015. A Tale of Two Regulators: Risk Disclosures, Liquidity and Enforcement in the Banking Sector. Working paper, Goethe University, University of Mannheim and University of Pennsylvania.

Black, R. 1990. Auditors and Bank Examiners: A New Era of Cooperation. *Journal of Accountancy*, 170(3): 77-82.

Blair, C. and R. Kushmeider. 2006. Challenges to the Dual Banking System: The Funding of Bank Supervision. *FDIC Banking Review*, 18(1): 1-20.

Bushman, R. 2014. Thoughts on financial accounting and the banking industry. *Journal of Accounting and Economics*, 58(2–3): 384–395.

Bushman, R. and C. Williams. 2012. Accounting discretion, loan loss provisioning, and discipline of banks risk-taking. *Journal of Accounting and Economics*, 54(1): 1-18.

Bushman, R. and C. Williams. 2015. Delayed Expected Loss Recognition and the Risk Profile of Banks. *Journal of Accounting Research*, 53(3): 511 - 553.

Chen, F., K. Lam, W. Smieliauskas and M. Ye. 2014. Auditor Conservatism and Banks' Measurement Uncertainty during the Financial Crisis. Working paper, University of Toronto and Chinese University of Hong Kong.

Collins, J., D. Shackelford, and J. Wahlen. 1995. Bank Differences in the Coordination of Regulatory Capital, Earnings, and Taxes. *Journal of Accounting Research*, 33: 263–291.

Costello, A., J. Granja and J. Weber. 2015. Do Strict Regulators Increase the Transparency of the Banking System? Working paper, Massachusetts Institute of Technology.

Curry, T., J. O'Keefe, J. Coburn and L. Montgomery. 1999. Financially distressed banks: how effective are enforcement actions in the supervisory process? *FDIC Banking Review*, 12: 1–18.

Dahl, D., J. O' Keefe and G. Hanweck. 1998. The Influence of Examiners and Auditors on Loan-Loss Recognition. *FDIC Banking Review*, 11(4): 10-25.

DeFond, M. and K.R. Subramanyam. 1998. Auditor changes and discretionary accruals. *Journal of Accounting and Economics*, 25(1): 35–67.

DeFond, M. and J. Zhang. 2014. A Review of Archival Auditing Research. *Journal of Accounting and Economics*, 58(2–3): 275–326.

Dell'Ariccia, G. and R. Marquez. 2006. Lending Booms and Lending Standards. *Journal of Finance*, 61(5): 2511–2546.

Dugan, J. 2009. Loan Loss Provisioning and Pro-cyclicality. Remarks by John C. Dugan, Comptroller of the Currency, before the Institute of International Bankers. http://www.occ.gov/news-issuances/speeches/2009/pub-speech-2009-16.pdf

Federal Reserve. 2005. The Federal Reserve System: Purposes and Functions. http://www.federalreserve.gov/pf/pf.htm

Financial Stability Forum (FSF). 2009. Report of the financial stability forum on addressing pro-cyclicality in the financial system. http://www.financialstabilityboard.org/wp-content/uploads/r_0904a.pdf

Gallemore, J. 2013. Does bank opacity enable regulatory forbearance? Working paper, University of Chicago.

Gamble, R. 2008. Caught in the Middle. *ICBA Independent Banker.* https://www.icba.org/files/ICBASites/PDFs/feature0908.pdf

Gilbert, R.A. 1993. Implications of Annual Examinations for the Bank Insurance Fund. *Federal Reserve Bank of St. Louis Review*, 75(1): 35–52.

Gunther, J. and R. Moore. 2003. Loss underreporting and the auditing role of bank exams. *Journal of Financial Intermediation*, 12(2): 153-177.

Hilary, G. and C. Lennox. 2005. The credibility of self-regulation: Evidence from the accounting profession's peer review program. *Journal of Accounting and Economics*, 40(1–3): 211–229.

Iannotta, G. and S. Kwan. 2014. The Impact of Reserve Practices on Bank Opacity. Working paper, Federal Reserve Bank of San Francisco.

Imbens, G. and J. Wooldridge. 2009. Recent Developments in the Econometrics of Program Evaluation. *Journal of Economic Literature*, 47(1): 5–86.

Kanagaretnam, K., G. Krishnan and G. Lobo. 2010. An Empirical Analysis of Auditor Independence in the Banking Industry. *The Accounting Review*, 85(6): 2011-2046.

Kanagaretnam, K., G. Lobo and D. Yang. 2004. Joint Tests of Signaling and Income Smoothing through Bank Loan Loss Provisions. *Contemporary Accounting Research*, 21(4): 843–884.

Kinney, W.R. and M.W. Nelson. 1996. Outcome Information and the "Expectation Gap": The Case of Loss Contingencies. *Journal of Accounting Research*, 34(2): 281–299.

Kohlbeck, M. 2005. The Demand for Private Company Audits: Evidence from Private Commercial Banks. Working paper, University of Wisconsin.

Kim, M. and W. Kross. 1998. The Impact of the 1989 Change in Bank Capital Standards on Loan Loss Provisions and Loan Write-Offs. *Journal of Accounting and Economics*, 25: 69–99.

King, G., R. Nielsen, C. Coberley and J. Pope. 2011. Comparative Effectiveness of Matching Methods for Causal Inference. Working paper, Harvard University.

Lo, A. 2015. Accounting Credibility and Liquidity Constraints: Evidence from Reactions of Small Banks to Monetary Tightening. *The Accounting Review*, 90(3): 1079 -1113.

Mishkin, F. 2000. Prudential Supervision: Why is it important and what are the issues? Working paper, NBER.

Nichols, C., J. Wahlen and M. Wieland. 2009. Publicly-traded versus Privately-held: Implications for bank profitability, growth risk and accounting conservatism. *Review of Accounting Studies*, 14(1): 88–122.

Office of the Comptroller of the Currency (OCC). 2012. Allowance for Loan and Lease Losses: Comptroller's Handbook. http://www.occ.gov/publications/publications-by-type/comptrollers-handbook/alll.pdf

Petersen, M.A. 2009. Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies*, 22(1): 435–480.

Reynolds, J.K. and J.R. Francis. 2001. Does size matter? The influence of large clients on office-level auditor reporting decisions. *Journal of Accounting and Economics*, 30(3): 375–400.

Rezende, M. and J. Wu. 2014. The Effects of Supervision on Bank Performance: Evidence from Discontinuous Examination Frequencies. Working paper, Federal Reserve Board.

Roberts, M. and Whited, T., 2013. Chapter 7 – Endogeneity in Empirical Corporate Finance. Handbook of the Economics of Finance 2(A), 493–572.

Rosen, R. 2003. Is Three a Crowd? Competition among Regulators in Banking. *Journal of Money, Credit and Banking*, 35(6): 967–998.

Singh, D. 2013. The Role of External Auditors in Bank Supervision: A Supervisory Gatekeeper? *The International Lawyer*, 47(3): 65 – 97.

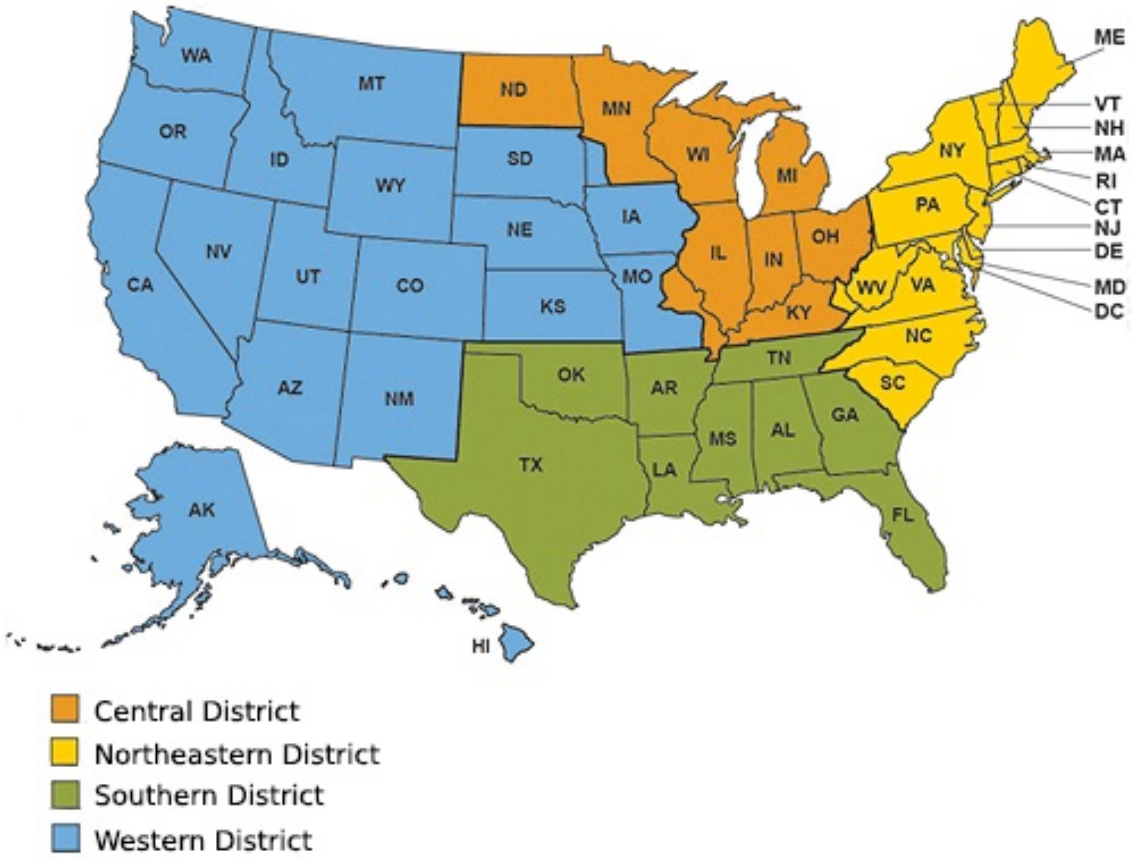
Spong, K. 2000. Banking Regulation: Its Purposes, Implementation, and Effects. *Federal Reserve Bank of Kansas City.* http://www.kc.frb.org/publicat/bankingregulation/RegsBook2000.pdf

Wall, L. and T. Koch. 2000. Bank Loan-Loss Accounting: A Review of Theoretical and Empirical Evidence. *Federal Reserve Bank of Atlanta Economic Review*, 85(2): 1-19.

Weinberg, J. 2002. Competition among Bank Regulators. *Federal Reserve Bank of Richmond Economic Quarterly*, 88(4): 19–36.

Wooldridge, J., 2011. Economic Analysis of Cross Section and Panel Data. MIT Press, Cambridge, MA.

Figure 1: OCC Supervisory Districts



This figure presents the four supervisory districts specified by the OCC for supervision purposes.*

* Source: http://www.occ.gov/about/who-we-are/district-and-field-offices/index-organization.html

Figure 2: Credit Standards Reported in the Federal Reserve Board's Senior Loan Officer Opinion Survey

This figure presents the net percentage of domestic banks reporting that they tightened (positive percentage) or loosened (negative percentage) their credit standards in the Federal Reserve Board's Senior Loan Officer Opinion Survey. The figure includes the percentage for consumer loans, commercial and industrial loans, and real estate loans.[†]

[†] Available at: http://www.federalreserve.gov/BoardDocs/snloansurvey/200701/default.htm

Table 1: Sample selection

		Sample Size
Banks filing year-end Call reports between 1997 - 2005 with positive total assets		81,615
Audit Screens:		
Multi-bank holding company observations	(18,985)	
Public banks, subsidiaries of public bank holding companies or bank holding company banks without ownership data	(7,709)	
Assets in year $t-1$ greater than \$500 million	(3,123)	
Subtotal		51,798
Regulatory Screens:		
Newly-chartered banks or banks with unique operations	(5,828)	
Subject to formal enforcement actions, acquired within the previous 2 years or not well-capitalized in year $t-1$	(3,852)	
Subtotal		42,118
Data Availability:		
Missing required financial statement data, audit status or regulatory index	(1,147)	
Observations without an available match	(3,047)	
Final Sample		37,924

This table details the sample selection process and is discussed in section 4.3. Multi-bank holding observations are identified as members of a holding company with more than one depository institution (RSSD9146 $>$ 1). Stand-alone public banks are identified using the link file provided by the Federal Reserve of New York at http://www.newyorkfed.org/research/banking_research/datasets.html. Subsidiaries of public holding companies are also removed and are identified as BHCs that file with the SEC (RSSD9056 = 1, 3 or 4). Newly-chartered banks are those with a charter year (from SNL Financial) within 3 years of the observation date. Banks with unique operations are those that do not engage primarily in taking deposits and lending or are not subject to similar regulatory oversight (i.e. credit card banks, industrial banks, Edge corporations). Formal enforcement action dates and merger information are obtained from SNL Financial. Banks are not well-capitalized if they meet any of the following: Tier 1 risk-based capital ratio $<$ 6%, leverage ratio $<$ 5% or total risk-based capital ratio $<$ 10%. The matching procedures involve matching each audited bank to an unaudited bank with the same charter type (National or State), in the same year, in the same state, closest in asset size. For Northeastern region banks not located in the three most populated states (MA, NY or PA), I match each audited bank to an unaudited bank following the same guidelines but only require the control bank to be located in the same region and to have the same value of $Strict$.

Table 2: Pooled sample descriptive statistics and correlations

Panel A: Descriptive statistics

Variable	N	Mean	Std Dev	10th Pctl	25th Pctl	Median	75th Pctl	90th Pctl
$Strict$	37,924	0.498	0.500	0.000	0.000	0.000	1.000	1.000
$StateCharter$	37,924	0.777	0.416	0.000	1.000	1.000	1.000	1.000
$Audit$	37,924	0.500	0.500	0.000	0.000	0.500	1.000	1.000
LLP	37,924	0.004	0.005	0.000	0.001	0.002	0.005	0.008
ΔNPL	37,924	0.000	0.007	-0.006	-0.002	0.000	0.002	0.007
$Size$	37,924	11.404	0.761	10.390	10.884	11.450	11.944	12.378
$Tier1$	37,924	0.184	0.090	0.104	0.123	0.157	0.214	0.293
$EBLLP$	37,924	0.033	0.019	0.016	0.022	0.030	0.039	0.051
$\Delta Loans$	37,924	0.098	0.134	-0.038	0.016	0.077	0.150	0.252
ΔNPL_Loosen	37,924	0.000	0.010	-0.005	-0.001	0.000	0.000	0.004

This table provides descriptive statistics for the pooled sample of banks between 1997 and 2005. All variables are defined in Appendix A. Continuous variables are winsorized at the 1st and 99th percentiles.

Panel B: Correlation matrix

	Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	$Strict$		**-0.16**	0.00	**-0.01**	-0.01	**0.02**	**-0.02**	**-0.02**	**-0.07**	**0.07**	**0.02**	**-0.04**
(2)	$StateCharter$	**-0.16**		0.00	0.01	0.00	0.01	0.00	0.01	**0.02**	**-0.05**	**-0.06**	**0.04**
(3)	$Audit$	0.00	0.00		**0.02**	0.00	**0.01**	0.00	0.00	**0.04**	**-0.13**	**-0.12**	**0.07**
(4)	LLP	**-0.02**	**0.01**	**0.03**		0.00	**0.12**	**0.11**	**0.07**	**-0.04**	**-0.11**	0.01	**0.07**
(5)	ΔNPL_{t+1}	0.00	0.01	0.00	**-0.02**		**-0.22**	**-0.05**	**-0.05**	0.00	**-0.02**	0.00	**0.08**
(6)	ΔNPL_{t}	**0.02**	**0.01**	**0.01**	**0.08**	**-0.21**		**-0.28**	**-0.06**	-0.01	**-0.04**	**-0.02**	**0.05**
(7)	ΔNPL_{t-1}	**-0.01**	0.01	0.00	**0.10**	**-0.06**	**-0.24**		**-0.26**	0.00	**-0.04**	**-0.02**	**-0.03**
(8)	ΔNPL_{t-2}	**-0.01**	**0.02**	0.00	**0.08**	**-0.03**	**-0.05**	**-0.23**		**0.01**	**-0.04**	**-0.02**	**-0.02**
(9)	$Size$	**-0.07**	**0.02**	**0.03**	**0.04**	**0.01**	-0.01	0.01	**0.02**		**-0.20**	-0.01	**0.06**
(10)	$Tier1$	**0.08**	**-0.03**	**-0.13**	**-0.26**	**-0.03**	**-0.05**	**-0.04**	**-0.04**	**-0.22**		**0.50**	**-0.15**
(11)	$EBLLP$	**0.01**	**-0.07**	**-0.12**	**0.07**	0.00	**-0.01**	-0.01	**-0.01**	**0.01**	**0.36**		0.00
(12)	$\Delta Loans$	**-0.05**	**0.03**	**0.07**	**0.11**	**0.08**	**0.05**	**-0.04**	**-0.03**	**0.10**	**-0.21**	**0.05**	

This table provides correlations for the pooled sample of banks between 1997 and 2005. Pearson (Spearman) correlations are presented above (below) the diagonal. Correlations in bold are significant at the 5% level or better. All variables are defined in the appendix. Continuous variables are winsorized at the 1st and 99th percentiles.

Table 3: Subsample descriptive statistics

Panel A: National vs. state-chartered banks

		National		State		
Strict = 0	**Variable**	**Mean**	**Std Dev**	**Mean**	**Std Dev**	**Normalized Diff**
	ΔNPL	0.000	0.008	0.000	0.007	-0.01
	$Size$	11.523	0.710	11.448	0.785	-0.07
	$Tier1$	0.162	0.070	0.180	0.089	0.17
	$EBLLP$	0.031	0.012	0.033	0.021	0.10
	$\Delta Loans$	0.097	0.126	0.105	0.138	0.04
	ΔNPL_Loosen	0.000	0.011	0.000	0.010	-0.02
	RE_Loans	0.635	0.163	0.680	0.191	0.18
	$Cons\_Loans$	0.115	0.082	0.117	0.099	0.02
	CI_Loans	0.154	0.099	0.140	0.109	-0.10

		National		State		
Strict = 1	**Variable**	**Mean**	**Std Dev**	**Mean**	**Std Dev**	**Normalized Diff**
	ΔNPL	0.000	0.007	0.001	0.007	0.03
	$Size$	11.305	0.705	11.365	0.758	0.06
	$Tier1$	0.208	0.111	0.183	0.084	-0.18
	$EBLLP$	0.038	0.022	0.032	0.017	-0.22
	$\Delta Loans$	0.085	0.130	0.095	0.133	0.05
	ΔNPL_Loosen	0.000	0.011	0.000	0.010	0.02
	RE_Loans	0.580	0.199	0.642	0.196	0.22
	$Cons\_Loans$	0.155	0.110	0.131	0.105	-0.16
	CI_Loans	0.155	0.100	0.139	0.101	-0.11

This table provides descriptive statistics separately for national and state-chartered banks, partitioned by $Strict$. All variables are defined in the appendix. Continuous variables are winsorized at the 1st and 99th percentiles. The last column presents the normalized difference to assess the covariate balance between the subsamples and is calculated as follows: $\frac{\bar{X}_{State} - \bar{X}_{Nat}}{\sqrt{s^2{}_{State} + s^2{}_{Nat}}}$ where $\bar{X}$ and s^2 are the sample mean and sample variance. All values are below the recommended 0.25 threshold (Imbens and Wooldridge 2009; Wooldridge 2011).

Panel B: Audited vs. unaudited banks

		Audit = 0		Audit = 1		
Strict = 0	**Variable**	**Mean**	**Std Dev**	**Mean**	**Std Dev**	**Normalized Diff**
	ΔNPL	0.000	0.007	0.000	0.008	0.05
	$Size$	11.430	0.759	11.489	0.789	0.05
	$Tier1$	0.187	0.094	0.168	0.077	-0.15
	$EBLLP$	0.035	0.023	0.030	0.015	-0.21
	$\Delta Loans$	0.093	0.129	0.115	0.143	0.11
	ΔNPL_Loosen	-0.001	0.010	0.000	0.010	0.05
	RE_Loans	0.667	0.185	0.679	0.190	0.04
	$Cons\_Loans$	0.123	0.095	0.111	0.097	-0.09
	CI_Loans	0.147	0.104	0.148	0.111	0.07
		Audit = 0		**Audit = 1**		
Strict = 1	**Variable**	**Mean**	**Std Dev**	**Mean**	**Std Dev**	**Normalized Diff**
	ΔNPL	0.001	0.007	0.000	0.007	-0.01
	$Size$	11.322	0.724	11.374	0.762	0.05
	$Tier1$	0.204	0.101	0.177	0.083	-0.21
	$EBLLP$	0.035	0.020	0.032	0.017	-0.14
	$\Delta Loans$	0.083	0.125	0.101	0.138	0.10
	ΔNPL_Loosen	0.000	0.010	0.000	0.010	0.00
	RE_Loans	0.614	0.208	0.634	0.190	0.07
	$Cons\_Loans$	0.140	0.111	0.136	0.103	-0.02
	CI_Loans	0.139	0.099	0.147	0.104	0.06

This table provides descriptive statistics separately for audited and unaudited banks, partitioned by $Strict$. All variables are defined in Appendix A. Continuous variables are winsorized at the 1st and 99th percentiles. The last column presents the normalized difference to assess the covariate balance between the subsamples and is calculated as follows: $\frac{\bar{X}_{Audit} - \bar{X}_{NoAud}}{\sqrt{s^2{}_{Aud} + s^2{}_{NoAud}}}$ where $\bar{X}$ and s^2 are the sample mean and sample variance. All values are below the recommended 0.25 threshold (Imbens and Wooldridge 2009; Wooldridge 2011).

Table 4: Difference in loan loss provision timeliness at *unaudited* banks subject to lower vs. greater regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
	(1)		(2)
Variables	Coeff		SE
$StateCharter_t$	0.000		(0.000)
$Strict_s$*$StateCharter_t$	0.001		(0.000)
ΔNPL_{t+1}	0.047		(0.040)
$Strict_s$*ΔNPL_{t+1}	-0.077	*	(0.045)
$StateCharter_t$*ΔNPL_{t+1}	**-0.067**		**(0.054)**
$Strict_s$*$StateCharter_t$*ΔNPL_{t+1}	**0.196**	**	**(0.079)**
ΔNPL_t	0.171	***	(0.042)
$Strict_s$*ΔNPL_t	-0.131	**	(0.054)
$StateCharter_t$*ΔNPL_t	**-0.109**	**	**(0.051)**
$Strict_s$*$StateCharter_t$*ΔNPL_t	**0.225**	***	**(0.081)**
ΔNPL_{t-1}	0.154	***	(0.038)
$Strict_s$*ΔNPL_{t-1}	-0.104	**	(0.047)
$StateCharter_t$*ΔNPL_{t-1}	-0.012		(0.050)
$Strict_s$*$StateCharter_t$*ΔNPL_{t-1}	0.078		(0.071)
ΔNPL_{t-2}	0.092	***	(0.026)
$Strict_s$*ΔNPL_{t-2}	-0.068	*	(0.039)
$StateCharter_t$*ΔNPL_{t-2}	0.021		(0.038)
$Strict_s$*$StateCharter_t$*ΔNPL_{t-2}	0.035		(0.052)
$EBLLP_t$	-0.001		(0.008)
$Tier1_{t-1}$	-0.005	***	(0.002)
$Size_{t-1}$	-0.000	**	(0.000)
$\Delta Loans_t$	0.000		(0.001)
Year & State Fixed Effects		Yes	
Observations		18,962	
R-squared		0.162	

Panel B: Joint F-tests for subgroup comparisons

	Strict = 0		Strict = 1				
	ΔNPL_{t+1}	ΔNPL_t	ΔNPL_{t+1}	ΔNPL_t	diff		p-value
National	0.047	0.171	-0.030	0.040	-0.077	-0.131	0.05
State	-0.020	0.062	0.099	0.156	0.119	0.094	0.20
diff	-0.067	-0.109	0.129	0.116	0.196	0.225	
p-value	0.08		0.09		0.01		

Panel A presents regression results from the estimation of equation (2), which examines the effect of greater regulatory scrutiny on loan loss provision timeliness at state-chartered banks relative to a control group of national banks. The sample includes unaudited banks ($Audit = 0$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. Panel B presents joint F-tests of the statistical significance of ΔNPL_{t+1} and ΔNPL_t between subgroups. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 5: Difference in loan loss provision timeliness at audited vs. unaudited banks subject to *lower* regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
Variables	(1) Coeff		(2) SE
$Audit_t$	0.000		(0.000)
$StateCharter_t$	0.000		(0.000)
$Audit_t$*$StateCharter_t$	0.000		(0.000)
ΔNPL_{t+1}	0.049		(0.040)
$Audit_t$*ΔNPL_{t+1}	-0.022		(0.045)
$StateCharter_t$*ΔNPL_{t+1}	-0.073		(0.054)
$Audit_t$*$StateCharter_t$*ΔNPL_{t+1}	**0.074**		**(0.059)**
ΔNPL_t	0.174	***	(0.043)
$Audit_t$*ΔNPL_t	-0.065		(0.050)
$StateCharter_t$*ΔNPL_t	-0.118	**	(0.051)
$Audit_t$*$StateCharter_t$*ΔNPL_t	**0.137**	**	**(0.060)**
ΔNPL_{t-1}	0.155	***	(0.038)
$Audit_t$*ΔNPL_{t-1}	-0.062		(0.044)
$StateCharter_t$*ΔNPL_{t-1}	-0.010		(0.049)
$Audit_t$*$StateCharter_t$*ΔNPL_{t-1}	0.042		(0.056)
ΔNPL_{t-2}	0.090	***	(0.025)
$Audit_t$*ΔNPL_{t-2}	-0.058	*	(0.032)
$StateCharter_t$*ΔNPL_{t-2}	0.024		(0.038)
$Audit_t$*$StateCharter_t$*ΔNPL_{t-2}	0.026		(0.044)
$EBLLP_t$	0.001		(0.006)
$Tier1_{t-1}$	-0.006	***	(0.001)
$Size_{t-1}$	-0.000	***	(0.000)
$\Delta Loans_t$	0.002	***	(0.001)
Year & State Fixed Effects		Yes	
Observations		19,054	
R-squared		0.165	

Panel B: Joint F-tests for subgroup comparisons

	Audit = 0		Audit = 1				
	ΔNPL_{t+1}	ΔNPL_t	ΔNPL_{t+1}	ΔNPL_t	diff		p-value
National	0.049	0.174	0.027	0.109	-0.022	-0.065	0.40
State	-0.024	0.056	0.028	0.128	0.052	0.072	0.09
diff	-0.073	-0.118	0.001	0.019	0.074	0.137	
p-value	0.06		0.80		0.07		

Panel A presents regression results from the estimation of equation (3), which examines the effect of auditors on loan loss provision timeliness at state-chartered banks relative to a control group of national banks. The sample includes banks subject to lower regulatory scrutiny ($Strict = 0$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. Panel B presents joint F-tests of the statistical significance of ΔNPL_{t+1} and ΔNPL_t between subgroups. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 6: Difference in loan loss provision timeliness at *audited* banks subject to lower vs. greater regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
	(1)		(2)
Variables	Coeff		SE
$StateCharter_t$	0.000	**	(0.000)
$Strict_s$*$StateCharter_t$	-0.000	*	(0.000)
ΔNPL_{t+1}	0.027		(0.020)
$Strict_s$*ΔNPL_{t+1}	0.014		(0.026)
$StateCharter_t$*ΔNPL_{t+1}	-0.001		(0.023)
$Strict_s$*$StateCharter_t$*ΔNPL_{t+1}	**0.003**		**(0.030)**
ΔNPL_t	0.108	***	(0.027)
$Strict_s$*ΔNPL_t	0.003		(0.033)
$StateCharter_t$*ΔNPL_t	0.019		(0.030)
$Strict_s$*$StateCharter_t$*ΔNPL_t	**0.000**		**(0.038)**
ΔNPL_{t-1}	0.093	***	(0.022)
$Strict_s$*ΔNPL_{t-1}	0.021		(0.028)
$StateCharter_t$*ΔNPL_{t-1}	0.032		(0.024)
$Strict_s$*$StateCharter_t$*ΔNPL_{t-1}	-0.004		(0.033)
ΔNPL_{t-2}	0.031		(0.019)
$Strict_s$*ΔNPL_{t-2}	0.045	*	(0.023)
$StateCharter_t$*ΔNPL_{t-2}	0.051	**	(0.022)
$Strict_s$*$StateCharter_t$*ΔNPL_{t-2}	-0.047	*	(0.028)
$EBLLP_t$	0.019	***	(0.006)
$Tier1_{t-1}$	-0.007	***	(0.001)
$Size_{t-1}$	-0.000	***	(0.000)
$\Delta Loans_t$	0.003	***	(0.000)
Year & State Fixed Effects		Yes	
Observations		18,962	
R-squared		0.140	

Panel B: Joint F-tests for subgroup comparisons

	Strict = 0		Strict = 1				
	ΔNPL_{t+1}	ΔNPL_t	ΔNPL_{t+1}	ΔNPL_t	diff		p-value
National	0.027	0.108	0.041	0.111	0.014	0.003	0.86
State	0.026	0.127	0.043	0.130	0.017	0.003	0.56
diff	-0.001	0.019	0.002	0.019	0.003	0.000	
p-value	0.79		0.70		0.99		

Panel A presents regression results from the estimation of equation (2), which examines the effect of greater regulatory scrutiny on loan loss provision timeliness at state-chartered banks relative to a control group of national banks. The sample includes audited banks ($Audit = 1$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. Panel B presents joint F-tests of the statistical significance of ΔNPL_{t+1} and ΔNPL_t between subgroups. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 7: Difference in loan loss provision timeliness at audited vs. unaudited banks subject to *greater* regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
Variables	(1) Coeff		(2) SE
Audit_t	0.000		(0.000)
StateCharter_t	0.000		(0.000)
Audit_t*StateCharter_t	-0.000		(0.000)
ΔNPL_{t+1}	-0.034	*	(0.020)
Audit_t*ΔNPL_{t+1}	0.080	***	(0.025)
StateCharter_t*ΔNPL_{t+1}	0.133	**	(0.062)
Audit_t*StateCharter_t*ΔNPL_{t+1}	**-0.130**	**	**(0.064)**
ΔNPL_t	0.038		(0.034)
Audit_t*ΔNPL_t	0.076	**	(0.039)
StateCharter_t*ΔNPL_t	0.119	*	(0.067)
Audit_t*StateCharter_t*ΔNPL_t	**-0.096**		**(0.071)**
ΔNPL_{t-1}	0.047	*	(0.027)
$\text{Audit}_t\Delta\text{NPL}_{t-1}$	0.066	**	(0.033)
StateCharter_t*ΔNPL_{t-1}	0.068		(0.051)
Audit_t*StateCharter_t*ΔNPL_{t-1}	-0.037		(0.055)
ΔNPL_{t-2}	0.023		(0.030)
Audit_t*ΔNPL_{t-2}	0.054	*	(0.032)
StateCharter_t*ΔNPL_{t-2}	0.055		(0.037)
Audit_t*StateCharter_t*ΔNPL_{t-2}	-0.050		(0.041)
EBLLP_t	0.017	**	(0.008)
Tier1_{t-1}	-0.006	***	(0.001)
Size_{t-1}	-0.000	**	(0.000)
ΔLoans_t	0.002	**	(0.001)
Year & State Fixed Effects		Yes	
Observations		18,870	
R-squared		0.123	

Panel B: Joint F-tests for subgroup comparisons

	Audit = 0		Audit = 1				
	ΔNPL_{t+1}	ΔNPL_t	ΔNPL_{t+1}	ΔNPL_t	diff		p-value
National	-0.034	0.038	0.046	0.114	0.080	0.076	0.00
State	0.099	0.157	0.049	0.137	-0.050	-0.020	0.48
diff	0.133	0.119	0.003	0.023	-0.130	-0.096	
p-value	0.09		0.60		0.07		

Panel A presents regression results from the estimation of equation (3), which examines the effect of auditors on loan loss provision timeliness at state-chartered banks relative to a control group of national banks. The sample includes banks subject to greater regulatory scrutiny ($Strict = 1$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. Panel B presents joint F-tests of the statistical significance of ΔNPL_{t+1} and ΔNPL_t between subgroups. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 8: Difference in incorporation of information regarding increased loss rates at audited banks subject to lower vs. greater regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
	(1)		(2)
Variables	Coeff		SE
$StateCharter_t$	0.000	***	(0.000)
$Strict_s$*$StateCharter_t$	0.000	*	(0.000)
ΔNPL_{t+1}	0.023		(0.025)
ΔNPL_Loosen_{t+1}	0.005		(0.010)
$Strict_s$*ΔNPL_{t+1}	0.011		(0.030)
$Strict_s$*ΔNPL_Loosen_{t+1}	0.005		(0.017)
$StateCharter_t$*ΔNPL_{t+1}	0.003		(0.028)
$StateCharter_t$*ΔNPL_Loosen_{t+1}	-0.004		(0.012)
$Strict_s$*$StateCharter_t$*ΔNPL_{t+1}	0.000		(0.036)
$Strict_s$*$StateCharter_t$*ΔNPL_Loosen_{t+1}	**0.003**		**(0.020)**
ΔNPL_t	0.112	***	(0.029)
ΔNPL_Loosen_t	-0.003		(0.014)
$Strict_s$*ΔNPL_t	-0.018		(0.034)
$Strict_s$*ΔNPL_Loosen_t	0.028		(0.019)
$StateCharter_t$*ΔNPL_t	0.017		(0.033)
$StateCharter_t$*ΔNPL_Loosen_t	0.000		(0.016)
$Strict_s$*$StateCharter_t$*ΔNPL_t	0.026		(0.041)
$Strict_s$*$StateCharter_t$*ΔNPL_Loosen_t	**-0.037**		**(0.023)**
Controls & Interactions	Yes		
Year & State Fixed Effects	Yes		
Observations	18,962		
R-squared	0.142		

Panel B: Joint F-tests for subgroup comparisons

	Strict = 0		Strict = 1				
	ΔNPL_Loosen_{t+1}	ΔNPL_Loosen_t	ΔNPL_Loosen_{t+1}	ΔNPL_Loosen_t	diff		p-value
National	0.005	-0.003	0.010	0.025	0.005	0.028	0.32
State	0.001	-0.003	0.009	-0.012	0.008	-0.009	0.49
diff	-0.004	0.000	-0.001	-0.037	0.003	-0.037	
p-value	0.93		0.18		0.20		

Panel A presents regression results from the estimation of the modified equation (2), which examines differences in loan loss provision timeliness when loss rates increase relative to historical experience (when credit standards are loosened). The sample includes audited banks ($Audit = 1$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. All additional interactions and controls are included but are suppressed for brevity. Panel B presents joint F-tests of the statistical significance of ΔNPL_Loosen_{t+1} and ΔNPL_Loosen_t between subgroups. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 9: Difference in incorporation of information regarding increased loss rates at audited vs. unaudited banks subject to greater regulatory scrutiny

Panel A: Regression results

	Dep Var = LLP_t		
	(1)		(2)
Variables	Coeff		SE
$Audit_t$	0.000		(0.000)
$StateCharter_t$	0.000		(0.000)
$Audit_t$*$StateCharter_t$	0.000		(0.000)
ΔNPL_{t+1}	-0.050	*	(0.026)
ΔNPL_Loosen_{t+1}	0.021		(0.014)
$Audit_t$*ΔNPL_{t+1}	0.087	***	(0.030)
$Audit_t$*ΔNPL_Loosen_{t+1}	-0.008		(0.019)
$StateCharter_t$*ΔNPL_{t+1}	0.069	**	(0.034)
$StateCharter_t$*ΔNPL_Loosen_{t+1}	0.054	*	(0.031)
$Audit_t$*$StateCharter_t$*ΔNPL_{t+1}	-0.062		(0.040)
$Audit_t$*$StateCharter_t$*ΔNPL_Loosen_{t+1}	**-0.059**	*	**(0.035)**
ΔNPL_t	0.042		(0.043)
ΔNPL_Loosen_t	-0.010		(0.021)
$Audit_t$*ΔNPL_t	0.053		(0.047)
$Audit_t$*ΔNPL_Loosen_t	0.038		(0.024)
$StateCharter_t$*ΔNPL_t	0.061		(0.053)
$StateCharter_t$*ΔNPL_Loosen_t	0.042		(0.030)
$Audit_t$*$StateCharter_t$*ΔNPL_t	-0.013		(0.059)
$Audit_t$*$StateCharter_t$*ΔNPL_Loosen_t	**-0.080**	**	**(0.034)**
Controls & Interactions		Yes	
Year & State Fixed Effects		Yes	
Observations		18,870	
R-squared		0.139	

Panel B: Joint F-tests for subgroup comparisons

	Audit = 0		Audit = 1				
	ΔNPL_Loosen_{t+1}	ΔNPL_Loosen_t	ΔNPL_Loosen_{t+1}	ΔNPL_Loosen_t	diff		p-value
National	0.021	-0.010	0.013	0.028	-0.008	0.038	0.28
State	0.075	0.032	0.008	-0.010	-0.067	-0.042	0.06
diff	0.054	0.042	-0.005	-0.038	-0.059	-0.080	
p-value	0.07		0.05		0.03		

Panel A presents regression results from the estimation of the modified equation (3), which examines differences in loan loss provision timeliness when loss rates increase relative to historical experience (when credit standards are loosened). The sample includes banks subject to greater regulatory scrutiny ($Strict = 1$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. All additional interactions and controls are included but are suppressed for brevity. Panel B presents joint F-tests of the statistical significance of ΔNPL_Loosen_{t+1} and ΔNPL_Loosen_t between subgroups. All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 10: Differences in the realization of securities gains and losses

Panel A: Effect of regulatory scrutiny at unaudited banks

	Dep Var = RealSGL$_t$		
	(1)		(2)
Variables	Coeff		SE
StateCharter$_t$	0.000		(0.001)
Strict$_s$*StateCharter$_t$	0.000		(0.002)
EBSGL$_t$	-0.073	***	(0.027)
Strict$_s$*EBSGL$_t$	0.013		(0.047)
StateCharter$_t$*EBSGL$_t$	**-0.003**		**(0.040)**
Strict$_s$*StateCharter$_t$*EBSGL$_t$	**-0.002**		**(0.065)**
Controls & Interactions	Yes		
Year & State Fixed Effects	Yes		
Observations	18,947		
R-squared	0.180		

Panel B: Effect of an external audit at banks subject to lower regulatory scrutiny

	Dep Var = RealSGL$_t$		
	(1)		(2)
Variables	Coeff		SE
StateCharter$_t$	0.001		(0.002)
Audit$_t$	0.003	*	(0.002)
Audit$_t$*StateCharter$_t$	-0.003		(0.002)
EBSGL$_t$	-0.097	***	(0.028)
Audit$_t$*EBSGL$_t$	-0.057		(0.038)
StateCharter$_t$*EBSGL$_t$	-0.004		(0.049)
Audit$_t$*StateCharter$_t$*EBSGL$_t$	**0.005**		**(0.060)**
Controls & Interactions	Yes		
Year & State Fixed Effects	Yes		
Observations	19,031		
R-squared	0.200		

Panel A presents regression results from the estimation of equation (4a), which examines the effect of greater regulatory scrutiny on the realization of securities gains/(losses) at state-chartered banks relative to a control group of national banks. The sample includes unaudited banks only ($Audit = 0$). Panel B presents regression results from the estimation of equation (4b), which examines the effect of auditors on the realization of securities gains/(losses). The sample includes banks subject to lower regulatory scrutiny ($Strict = 0$). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. All additional interactions and controls are included but are suppressed for brevity. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Table 11: Difference in Loan Loss Provision Timeliness for Mandatory vs. Voluntary Audits

	Dep Var = LLP_t		
	(1)		(2)
Variables	Coeff		SE
$Mandatory_t$	0.002	***	(0.007)
ΔNPL_{t+1}	0.034	***	(0.007)
$Mandatory_t$*ΔNPL_{t+1}	**0.006**		**(0.034)**
ΔNPL_t	0.124	***	(0.008)
$Mandatory_t$*ΔNPL_t	**0.056**		**(0.037)**
ΔNPL_{t-1}	0.127	***	(0.007)
$Mandatory_t$*ΔNPL_{t-1}	-0.048		(0.033)
ΔNPL_{t-2}	0.077	***	(0.006)
$Mandatory_t$*ΔNPL_{t-2}	0.026		(0.032)
$EBLLP_t$	0.019	***	(0.005)
$Tier1_{t-1}$	-0.007	***	(0.001)
$Size_{t-1}$	0.000	***	(0.000)
$\Delta Loans_t$	0.003	***	(0.000)
Year & State Fixed Effects	Yes		
Observations	19,853		
R-squared	0.150		
p-value for joint F-test:			
$Mandatory_t$*ΔNPL_{t+1} = 0 & $Mandatory_t$*ΔNPL_t = 0	0.32		

This table presents regression results from the estimation of a modified equation (1) and examines differences in loan loss provision timeliness for mandatorily audited banks compared to voluntarily audited banks. The sample includes the subsample of audited banks (voluntary) and banks with assets between $500 million and $1 billion (mandatory). Column (1) provides coefficient estimates and column (2) provides robust standard errors clustered by bank. All variables are defined in Appendix A and all continuous variables are winsorized at the 1st and 99th percentiles. Significance at the .10, .05 and .01 level for two-sided tests is denoted by *, ** and ***, respectively.

Appendix A: Variable Definitions

Variable	Definition	Calculation
$Audit$	Indicator variable equal to 1 if the bank receives an external audit or if the bank is a member of a holding company that receives an external audit; 0 otherwise. External audit work for each fiscal year is reported in the March Call report of the following year.	Equal to 1 if $RCFD6724$ = 1 or 2; 0 otherwise
CI_Loans	Commercial and industrial loans scaled by total loans	$\frac{RCFD1600_t}{RCFD2122_t}$ OR $\frac{RCFD1766_t}{RCFD2122_t}$
$Cons\_Loans$	Consumer loans scaled by total loans	$\frac{RCFD1975_t}{RCFD2122_t}$
$EBLLP$	Earnings before the loan loss provision, taxes and extraordinary items scaled by lagged total loans	$\frac{RIAD4301_t + RIAD4230_t}{RCFD2122_{t-1}}$
$EBSGL$	Earnings before realized securities gains and losses scaled by total assets	$\frac{RIAD4301_t - RIAD3196_t}{RCFD2170_t}$
$IntInc$	Interest income scaled by total assets	$\frac{RIAD4107_t}{RCFD2170_t}$
Liq	Ratio of total loans to total deposits	$\frac{RCFD2122_t}{RCON2215_t + RCON2385_t}$
LLP	Loan loss provision scaled by lagged total loans	$\frac{RIAD4230_t}{RCFD2122_{t-1}}$
$\Delta Loans$	Change in total loans scaled by lagged total loans	$\frac{RCFD2122_t - RCFD2122_{t-1}}{RCFD2122_{t-1}}$
$Mandatory$	Indicator variable equal to 1 if bank assets in year $t-1$ are greater than $500 million (above the FDICIA mandatory audit threshold); 0 otherwise.	
ΔNPL	Change in non-performing loans scaled by lagged total loans	$\frac{RCFD1403_t - RCFD1403_{t-1}}{RCFD2122_{t-1}}$
ΔNPL_Loosen	Sum of the change in non-performing loans in each category c (consumer, real estate or C&I) multiplied by the percentage of banks reporting *loosened* credit standards for that loan category over the previous 2 years as reported in the Federal Reserve Loan Officer Survey (see Figure 2).	$\sum_c \%Loosen_c \times \Delta NPL_{i,t,c}$ $\%Loosen_c$ from Senior Loan Officer Opinion Survey‡
$RealSGL$	Realized gains/(losses) on securities scaled by total assets	$\frac{RIAD3196_t}{RCFD2170_t}$
RE_Loans	Real estate loans scaled by total loans	$\frac{RCFD1410_t}{RCFD2122_t}$

All variables are defined using annual Call report data items unless otherwise specified.

‡ Available at: http://www.federalreserve.gov/datadownload/Choose.aspx?rel=SLOOS

Appendix A: Variable Definitions – continued

Variable	Definition	Calculation
$Securities$	Total available-for-sale securities scaled by total assets	$\frac{RCON1773_t}{RCFD2170_t}$
$Size$	Log of total assets	$log(RCFD2170_t)$
$StateCharter$	Indicator variable equal to 1 if the bank is state-chartered; 0 if the bank is nationally-chartered	Equal to 1 if the OCC charter code (RSSD9055) is equal to 0; 0 if the charter code is populated
$Strict$	Indicator variable equal to 1 if the bank is located in a state where the regulatory index from Agarwal et al. (2014), which represents the average difference in CAMELS ratings assigned to state-chartered banks by federal regulators compared to state regulators, is below the regional median (stricter state regulators); 0 otherwise. Regions are defined using the OCC districts: (1) Central, (2) Northeast, (3) South and (4) West (see Figure 1).	from Agarwal et al. (2014)[§]
$Tier1$	Tier1 risk-based capital ratio, defined as the ratio of Tier 1 capital to risk-weighted total assets	$\frac{RCFD8274_t - RCFDC228_t}{RCFDA223_t - RCFDB504_t}$
$Tier1SGL$	Tier1 capital before realized securities gains or losses scaled by total assets	$\frac{RCFD8274_t - RIAD3196_t}{RCFD2170_t}$
$UnrSGL$	Unrealized gains/(losses) on securities scaled by total assets	$\frac{RCFD8434_t}{RCFD2170_t}$

All variables are defined using annual Call report data items unless otherwise specified.

[§] Available at: http://faculty.chicagobooth.edu/amit.seru/research/data.html

Appendix B: Summary of Predictions

		$Audit$		
		No (0)	Yes (1)	
$Regulatory$	Low (0)	$LLPT_0$	$LLPT_1$	**H2b**
$Scrutiny$	High (1)	$LLPT_2$	$LLPT_3$	**H3b**
		H2a	**H3a**	

This matrix provides a summary of the groups (audited vs. not and strict vs. lenient regulator) involved in each hypothesis. For example, H2a involves a comparison between $LLPT_2$ (unaudited banks subject to greater regulatory scrutiny) and $LLPT_0$ (unaudited banks subject to lower regulatory scrutiny).