Voluntary Audit in Small Private Banks

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Abstract

This paper examines small private banks' voluntary audit choice, their accounting quality, and economic consequences. We find that an important determinant to voluntarily audit their accounts is high supervisory scrutiny. The voluntary audit is associated with more conservative loan loss provisioning and a lower likelihood of future restatements, but audited banks are more likely to manage with real accounting tools. Economic consequences include safer lending practices, higher loan growth, and more brokered deposits.

Keywords: Auditors, Banks, Supervisor, Regulatory capital, Accounting quality

JEL Classifications: G28, M41, M42, M48

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1 Introduction

The role of external auditors in providing assurance on financial statements is widely recognized (Chaney and Philipich, 2002; DeFond and Zhang, 2014; Bertomeu, Mahieux, and Sapra, 2018; Ghosh, Jarva, and Ryan, 2022), but only some U.S. banks are required to undergo full-scope external audits. While larger banks face mandatory audit requirements, small private banks have the flexibility to choose from low-cost alternatives, such as reviews or other agreed-upon procedures.

Small private banks represent over 80% of the universe of US commercial banks. These banks play a vital role in the financial sector, catering to the diverse needs of their customers and contributing to overall economic stability. However, there is limited evidence of their accounting choices, as most prior work focuses on publicly listed banks. Unlike their larger counterparts, small private banks often operate under less stringent regulatory frameworks, which may raise concerns regarding the reliability of their financial statements.

The voluntary audit represents a costly signaling mechanism for small private banks (DeFond and Zhang, 2014), incurring expenses and potentially diverting managerial attention from core business activities. Moreover, audited banks face the risk of receiving a going concern opinion if accounting issues or financial health concerns are uncovered during the audit process. Surprisingly, despite these challenges, more than 55% of small private banks voluntarily choose to audit their financial statements. The motivations, benefits, challenges, and overall impact of voluntary audits on small private banks have not been comprehensively explored in the existing literature. In this study, we answer the following three questions: i) Why do banks voluntarily audit their accounts? ii) Do voluntarily audited banks present better accounting quality? iii) Does this choice have economic consequences regarding lending, profitability, and funding sources?

Understanding the effects of the audit choice on improving the quality of information is complex. First, it is not clear whether having an auditor might have an effect on banks' behavior as their monitoring role is of second-order importance. Banks have

as main monitoring agents federal supervisors. Irrespective of their monitoring capacity, all supervisors rely on inputs from the accounting system in their examinations and are generally concerned with financial statements quality (e.g., EBA, 2017). Therefore, substantial overlap exists in the activities that auditors and supervisors carry out to evaluate bank performance and internal controls (Nicoletti, 2018; Ghosh et al., 2022). In addition, there are differences arising from the preference for loan loss provisioning calculus (Garcia Osma, Mora, and Porcuna-Enguix, 2019). Auditors focus on the application of US GAAP, which involves the incurred loss criteria. On the other hand, supervisors favor an expected loss model that allows banks greater flexibility to overstate reserves.

Second, it is challenging to separate the economic impacts in terms of leading, loan growth, profitability, and funding sources, of the audit choice from those attributed to having audited financial information, as audited banks generally exhibit greater credibility and accounting quality. Moreover, the decision to undergo an audit is likely influenced by changes in growth opportunities.

To overcome these challenges, we focus on a sample of private banks with less than $500 million in consolidated total assets, no supervisory enforcement actions and a minimum of three years of activity to secure that financial statements get a full audit scope by choice. From now on, we refer to this sample as small, private, never enforced (SPNE) banks. The sample period is from 1996 to 2018. We define a treated group consisting of SPNE banks that voluntarily opt for full-scope audits. That is the bank's choice of either an integrated audit of its financial statements (with or without internal controls) or an audit of the parent holding company's consolidated financial statements (with or without internal controls), conducted by an independent auditor. We establish two control groups for comparison. The primary control group consists of SPNE banks that opt not to audit their financial statements. Alternatively, we examine a secondary control group composed of SPNE banks located in states where audits are mandatory, regardless of bank size or ownership status. The latter control group allows the disentangling of the effects of the signaling mechanism of voluntarily choosing an auditor from the quality effect in accounting information of having an auditor.

We first examine the determinants of voluntary audits. We predict that the probability that SPNE banks voluntarily audit their accounts increases in the stringency of supervisor monitoring. To measure differences in the intensity of supervisory scrutiny, we exploit differences in supervisory leniency (Agarwal, Lucca, Seru, and Trebbi, 2014). National banks have federal supervision. However, for state-chartered banks, federal and state supervisors alternate their examinations. According to Agarwal et al. (2014), state supervisors are reportedly more lenient. If the information generated by the auditing process is relevant and valued by a supervisor, banks might voluntarily audit their financial statements to avoid supervisory focus. Given supervisors' reliance on accounting information, we expect small banks with stricter supervision to be more likely to audit their financial statements.

Consistently, descriptive evidence presents an early indication that SPNE banks may voluntarily audit their accounting to lower supervisory monitoring concerns. Audited banks are relatively larger, have lower regulatory capital, and are less profitable than non-audited banks. Such banks are likely to attract supervisory attention. Our multivariate findings confirm that the probability that SPNE banks voluntarily audit their accounts increases in supervisory scrutiny.

Secondly, we assess the impact of voluntary audits on accounting quality. Our findings indicate that audited banks are more conservative and exhibit improved alignment between loan loss provisions and nonperforming loans. However, these banks may also overestimate loan loss provisions, potentially compromising the accuracy of these provisions. The latter findings support the notion of an auditor who aligns more closely with supervisory preferences for the expected loss model. In addition, audited banks demonstrate a lower likelihood of future restatements of call reports compared to both control groups, suggesting the effectiveness of voluntary audits in mitigating financial reporting errors.

We then analyze a case when banks have high incentives to manage regulatory capital either with accruals or real tools. Regulatory capital ratios are crucial indicators in the banking industry, utilized by supervisors to assess financial health and intervene in

problematic banks (Peek and Rosengren, 1996; Benston and Kaufman, 1997; Berger, Kyle, and Scalise, 2001; Van den Heuvel, 2002). Given the importance placed on maintaining the well-capitalized category (above the 10% threshold), bank managers may prioritize inflating it artificially using both accounting and real discretion when they are about to fall short of a threshold(Orozco and Rubio, 2022).

Auditors' responsibilities primarily involve ensuring the accuracy of financial statements, without assessing the underlying motivations behind business decisions. Previous research highlights that high audit quality reduces accruals management (Becker, DeFond, Jiambalvo, and Subramanyam, 1998; Balsam, Krishnan, and Yang, 2003; Krishnan, 2003; Cohen, Dey, and Lys, 2008; Chi, Lisic, and Pevzner, 2011; Zang, 2012; Bratten, Causholli, and Myers, 2020). However, auditor monitoring does not necessarily diminish incentives for manipulating financial ratios. Consequently, when auditors restrict accruals usage, firms may shift towards real methods to meet targets due to the increased costs associated with accruals manipulation and the potential of a qualified opinion (Cohen and Zarowin, 2010; Burnett, Cripe, Martin, and McAllister, 2012; Zang, 2012).

In our study, we use accretive realized gains and losses (RGL) on available-for-sale securities to measure real management actions and accretive abnormal loan loss provision (ALLP) to measure accruals-based management. We link these management actions to regulatory capital pressures, leveraging the regulatory-driven discontinuity observed around the 10% capital ratio threshold in Orozco and Rubio (2022). Audited banks below the 10% regulatory capital threshold are more likely to have accretive RGL. However, the effect on accretive ALLP is not significant, consistent with banks using REM when auditors are involved in the monitoring.

Third, we analyze the economic consequences of voluntary audits in small private banks. While enhanced accounting quality and conservatism may benefit auditors and supervisors, they may also entail economic costs. We find that audited banks, relative to unaudited banks, are more likely to adopt safer lending practices, as indicated by a higher ratio of collateralized residential loans and fewer problem loans, similar to Balakrishnan, De George, Ertan, and Scobie (2021). Additionally, audited banks experience higher loan

growth but have a lower ratio of one-year-ahead loans. These banks also attract brokered deposits. The latter result is consistent with Lo (2015), which finds that the reporting credibility granted by an external auditor is crucial for small banks to access certificates of deposits (uninsured funding).

Finally, to address potential selection bias in the auditors' choice, we instrument the probability of choosing to audit financial statements. Similarly to Lo (2015), to meet the exclusion restriction requirement, we include the presence of a voluntary audit five years ago. This choice is motivated by the persistent nature of audits. Small banks with past audits will likely maintain the same audit status to avoid regulatory complications (Federal–Register, 2019). However, due to significant time lags, a bank's past audit choice is unlikely to directly affect changes in accounting quality and economic effects in the second-stage regression. The results from this instrumentation are in line with previous results.

Our paper contributes to the expanding research on the role of audits in private firm settings. Notably, Minnis (2011) finds that audits enhance earnings quality and reduce the cost of debt for U.S. private firms by verifying financial statements. Lennox and Pittman (2011) finds that voluntary audited firms receive higher credit scores, while Kausar, Shroff, and White (2016) focuses on the real effects and finds that audited firms increase debts, investment, and operating performance. However, there is little research focusing on private financial firms. We investigate small private banks, shedding light on their determinants of audit choice, implications for accounting quality, and economic consequences.

This paper also contributes to a growing literature investigating the effects of different monitoring agents on bank-level outcomes. Nicoletti (2018) explores the conflicting relationship between supervisors and auditors and their effects on loan loss provision timeliness. In this study, audits show a negative association with timeliness in the presence of strict regulators, indicating a conflict where auditors hold the dominant role. Interestingly, she founds that audited banks exhibit similar levels of timeliness irrespective of the extent of regulatory scrutiny. Differently, in our findings, we observe more conservative

loan loss provisioning among audited banks, which better aligns with current, future, and past changes in non-performing loans, even after controlling for supervisory differences relative to both samples of unaudited and mandatory audited banks. Costello, Granja, and Weber (2019) show that strict supervisors are more likely to enforce restatements on banks' call reports. We show that banks that choose to have an auditor are less likely to restate in the following year after controlling for supervisory differences. Balakrishnan et al. (2021) finds that auditors report to European bank supervisors reduce banks' risk-taking, problem loans, and risk-weighted assets, as well as improvements in the timeliness of loan loss provisions. Our study provides a distinct perspective by examining the effects of full-scope examinations on small private banks and their implications for accounting quality and economic outcomes.

The remainder of this paper is structured as follows. Sections 2 and 3 describe the method and data. Section 4 presents the results, and section 5 concludes.

2 Variables definition and research design

Understanding whether the audit choice provides information that eases financing frictions is complicated. The economic effects of the audit choice are difficult to disentangle from those of the audited financial information since companies that undergo audits generally have more credible financial statements and accounting quality. Moreover, the choice to obtain an audit is likely to be affected by changes in growth opportunities.

To overcome these issues, we focus on a sample of banks that are private, with less than $500 million in consolidated total assets, that have not received an enforcement action from the supervisor, and with more than three years of activity. According to Section 36 of the Federal Deposit Insurance Act (FDIA) and Part 363 of the FDIC's regulations, these banks voluntarily opt to have audited financial statements. Therefore, our treated group is the SPNE banks that choose a full-scope audit examination.[1] We

[1]The term "full-scope examination" refers to the bank opting for either an integrated audit of the bank's financial statements, including or excluding internal controls, conducted by an independent auditor following professional standards, or an audit of the parent holding company's consolidated financial statements, including or excluding internal controls, conducted by an independent auditor who reports on the consolidated holding company.

have two control groups: The first and main one is the group of SPNE banks that choose not to audit their financial statements.[2] Alternatively, we use a second control group that comes from the banks located in states where audit is mandatory, independent of bank size or ownership status. In Appendix we identify these states and the number of banks located in each of them. We consider a state that mandates audits if the percentage of audited bank-year is higher than 98%.

2.1 Determinants of voluntary audits

To study the determinants of voluntary audit and the role of supervisor monitoring in the decision to audit the financial statements, we run the following model:

$$VoluntarilyAudited_{i,t} = \beta_1 SupervisorMonitoring_{i,t} + \Theta Controls_{i,t-1} + \varsigma_j + \eta_k + \lambda_t + \epsilon_{it} \quad (1)$$

where the subscript i denotes individual SPNE banks, and t denotes quarter-year. *Voluntarily Audited* which takes the value one when the SPNE bank chose to have audited financial statements in the year (treated group). It takes the value zero when the bank does not have an auditor (first control group) or when the bank is located in a state that mandates audited financial statements (second control group).

Regulatory scrutiny is not directly observable as the information about the dates of examination, supervisory hours invested in each bank, and the results of the on-site examinations, CAMELS ratings, are not publicly available. To overcome this constraint, we use two approaches to measure differences in supervisor monitoring intensity. First, we define *National Bank* as an indicator variable that takes the value one when the institution is a national bank (only supervised by a federal agency, the OCC) and zero otherwise. Second, we use Agarwal et al. (2014) supervisory leniency index to measure *Regulatory Leniency Index* at the state regulator level. This proxy is available from the first quarter of 1996 to the last quarter of 2010, reducing our sample size in some tests.

[2]We cover a range of banks, from those that opt for no external audit work to those that choose a director's examination, review of financial statements, a compilation of financial statements, or other audit procedures performed by an external auditor.

We expect that SPNE banks are more likely to voluntary audit themselves where supervisory monitoring is more stringent. Therefore, β_1 should be positive when we use *National Bank* as our proxy, and negative when we use *Regulatory Leniency Index*, indicating that supervisor monitoring leads to a greater likelihood of voluntary auditing of the financial statements.

In this model, we include four specific variables that are associated with bank complexity and the likelihood to require an external auditor. To assess the impact of geographically dispersed banking operations, we include *Branch* which is an indicator variable that takes the value 1 if the bank has branches and zero otherwise. We include *Vol ROA* which is the volatility of return on assets because complex operations can result in volatile operational results. *BHC* is an indicator variable that takes the value 1 if the bank belongs to a BHC and zero otherwise. Finally, *Employees* is the natural logarithm of the number of employees.

We include a set of controls, common to all regressions, following previous literature (Beatty and Liao, 2014; Ng and Roychowdhury, 2014; Duchin and Sosyura, 2014; Lim, Hagendorff, and Armitage, 2016; Barth, Gomez-Biscarri, Kasznik, and López-Espinosa, 2017; Berger, El Ghoul, Guedhami, and Roman, 2018; Delis, Staikouras, and Tsoumas, 2016; Gropp, Mosk, Ongena, and Wix, 2018; Kandrac and Schlusche, 2018; Stuber and Hogan, 2021). *Charge-Offs* is total net charged-off loans and leases financing receivables debited to the allowance for loan and lease losses. *NPL* is total nonperforming loans and leases. Following Duchin and Sosyura (2014), Berger et al. (2018) and Delis et al. (2016), we include proxies of the CAMELS examination ratings. We use *Regulatory Capital* as a proxy of capital adequacy. As a proxy of asset quality, we use loan loss allowance *LLA*, and management quality is proxy by *Noninterest Expenses*. We measure *Net Income* as a proxy for earnings and is income before taxes over lagged assets. As a proxy for liquidity, we use *Cash*, and sensitivity to market risk is proxy by *Noninterest Income*. *Size* is the natural logarithm of total assets. *Loan* is the total loan. All variables are normalized by the beginning of the quarter's total assets. All control variables are lagged one period.

In addition, we include state fixed effects (η_k) to control for permanent regional differ-

ences and quarter fixed effects (λ_t) to account for general macroeconomic trends when the supervisory proxy is *National Bank*. In the regression with *Regulatory Leniency Index*, which varies at the state level, we include supervisor fixed effects (ς_j) and quarter fixed effects (λ_t). Also, when we use the second control group, we do not include state fixed effects as all the variation of *Voluntarily Audited* comes from differences across states.

2.2 Accounting Quality

We design a set of analyses and dependent variables to test the quality of accounting estimates when banks choose to have an auditor. We estimate the following model:

$$AccountingQuality_{i,t} = \beta_1 VoluntarilyAudited_{i,t} + \Theta Controls + \varsigma_j + \eta_k + \lambda_t + \epsilon_{i,t} \quad (2)$$

Now the main variable of interest is *Voluntarily Audited*. The specification also includes a battery of fixed effects: supervisor fixed effects (ς_j) to control for differences in leniency across supervisors (Agarwal et al., 2014), state fixed effects (η_k) to control for permanent regional differences and quarter fixed effects (λ_t) to account for general macroeconomic trends. We do not include bank fixed effects because it would subsume the audit choice effect as it tends to be sticky in time. Also, when we use the second control group, we do not include state fixed effects as all the variation of *Voluntarily Audited* comes from differences across states.

To identify auditors' role in the quality of bank accounting we use several proxies. First, we analyze loan loss provisions and whether they become more timely and related to nonperforming loans when audited financial statements are in place. Following the preferred model of Beatty and Liao (2014) we estimate a variant of equation 2 with LLP as a function of the change in past, current, and future nonperforming loans (ΔNPL) and the interaction term with *Voluntarily audited*. Conceptually, the interaction terms capture whether NPL better explains LLP in the presence of an auditor.

Second, we analyze the accuracy of the loan loss provisions. Similarly to Stuber and

Hogan (2021), we define *Accruracy LLP* as the ratio of charge-offs in the following four quarters to the current LLP. The four-quarters period is reasonable because the probable loss on any loan in a pool should ordinarily become apparent in the period (OCC, 1998; Altamuro and Beatty, 2010; Bushman and Williams, 2012; Stuber and Hogan, 2021). The more accurate the loan loss provision in t is, the more similar the charge-off in *t+4* should be. Values of the ratio lower than one reflect overprovisioning. As losses are written off as charge-offs, the ability of the current LLP to explain charge-offs in the following year captures how well the provision explains the fundamentals of the loan pool.

The interpretation of the coefficient varies according to the provisioning status of a bank-quarter observation. If a bank is overprovisioned, the level of charge-offs in *t+4* is smaller than the level of LLP in t (*Accuracy LLP*< 1). A negative β_1 would indicate lower levels of accuracy in the provision for voluntary audited banks relative to the control group. That is a more conservative LLP estimate.

The previous two analyses speak to the prevalence of different objectives between supervisors and auditors in terms of loan loss provisioning (Balla, Rose, Romero et al., 2012; Nicoletti, 2018; Garcia Osma et al., 2019). Auditors play a role in limiting the use of judgmental, forward-looking information and adopting a stringent interpretation of loan loss accounting standards. This approach delays the recognition of losses until objective information becomes available. On the other hand, supervisors favor an expected loss model that allows banks greater flexibility to overstate reserves.

Third, we use restatements of call reports to measure financial reporting quality as part of accounting quality. When the supervisor detects irregularities in the call reports, the bank must file and disclose a "catch-up" adjustment that corrects the accounting items that were misclassified or misstated adjusting the current period's earnings to reflect the cumulative impact of the errors. Following Costello et al. (2019), we use two dummy variables: *i) Restatements* that takes the value one whenever a restatement has been made in *t+4*, and zero otherwise. *ii)* Using textual analysis we capture the cause of the restatement and create *Accounting Restatements* dummy. It takes the value one if the bank makes a restatement relative to material accounting errors and changes

in accounting principles in *t+4*, and zero otherwise.[3] A negative β_1 indicates a lower likelihood of the material errors found in call reports of voluntary audited banks relative to the control groups.

Our fourth analysis regarding accounting quality is regulatory capital management. We focus on a case where there are high incentives to manage regulatory capital. The reported regulatory capital, *Regulatory Capital*, is measured as the sum of Tier 1 and Tier 2 capital normalized by risk-weighted assets. Orozco and Rubio (2022) find that there is a regulatory-driven discontinuity at 10% of regulatory capital and that regulation affects banks' incentives and ability to meet the threshold for the period 1996-2009. We exploit this discontinuity to show the effect of voluntary audits on banks' incentives in the same period as after 2009 the discontinuity vanishes.

We explore two accounting tools that banks can use to manage regulatory capital: *i) RGL* is calculated as realized gains and losses on available-for-sale securities normalized by risk-weighted assets following Barth et al. (2017). *ii) ALLP* is estimated using the preferred Beatty and Liao (2014) model as a benchmark normalized by risk-weighted assets.[4] Then, we estimate the *unmanaged* regulatory capital, absent real and accrual management (*RegCap_RGL* and *RegCap_ALLP*, respectively).

To analyze the auditors' role in SPNE banks' choices between real and accrual-based management around the 10% threshold of regulatory capital, we use a local polynomial density of order one and estimate a variant of equation 2:

[3]We use keywords related to the following general accounting adjustments: loan loss accounting, misclassification of gains and losses on securities, errors in accrual accounting, specific misclassified accounting accruals, misclassification of interest and expense, investment accounting, and measurement issues.

[4]This model has been widely used in accounting literature as a benchmark model (e.g., Jiang, Levine, and Lin, 2016; Lim et al., 2016). Similar to our first analysis, loan loss provisions are estimated as a function of the change in past, current, and future nonperforming loans, bank characteristics, and macroeconomic variables (see Beatty and Liao, 2014, Model (c), pp.366): $LLP_{i,t} = \alpha_0 + \alpha_1 \Delta NPL_{i,t+1} + \alpha_2 \Delta NPL_{i,t} + \alpha_2 \Delta NPL_{i,t-1} + \alpha_3 \Delta NPL_{i,t-2} + \alpha_4 Size_{i,t-1} + \alpha_5 \Delta Loan_{i,t} + \alpha_6 \Delta Unemployment_t + \alpha_7 \Delta GDP_t + \alpha_8 RealEstateIndex_t + \epsilon_{it}$.

$$
\begin{aligned}
Accretive\_X_{i,t} &= \beta_1 Low\_RegCap_{i,t} \times VolAudited + \beta_2 VolAudited + \beta_3 Low\_RegCap_{i,t} \\
&+ \beta_4 Def\_RegCap_{i,t} \times VolAudited + \beta_5 Def\_RegCap_{i,t} \times Low\_RegCap_{i,t} \times VolAudied \\
&+ \beta_6 Def\_RegCap\_X_{i,t} + \beta_{7k} Def\_RegCap_{i,t} \times Low\_RegCap_{i,t} \\
&+ \Theta Controls + \varsigma_j + \eta_k + \lambda_t + \epsilon_{i,t}
\end{aligned} \tag{3}
$$

Our fourth set of dependent variables is created in the spirit of Hribar, Jenkins, and Johnson (2006) and Almeida, Fos, and Kronlund (2016). We identify RGL and ALLP that would have allowed banks to increase earnings and regulatory capital by at least 0.05%, as follows:

$$Accretive\_RGL = 1 \quad \text{if} \quad (1-\tau)RGL \geq 0.05\% \tag{4}$$

$$Accretive\_ALLP = 1 \quad \text{if} \quad (1-\tau)ALLP \leq -0.05\% \tag{5}$$

where *Accretive_X* is an indicator for executing Accretive RGL or ALLP to increase regulatory capital through Tier 1 and earnings by at least 0.05%. τ is the bank's marginal tax rate.[5]

Low_RegCap is a dummy variable that takes the value one if the *unmanaged* regulatory capital is below the 10% level, and zero otherwise. It represents the discontinuity at the threshold (Roberts and Whited, 2013). We define the *Def_RegCap* variable as the deficit (relative to the 10%) of regulatory capital before management. The interaction between *Low_RegCap* and *Def_RegCap* allows the slopes of the regression functions to vary at both sides of the threshold. The interaction of *Low_RegCap* and *Voluntarily Audited* reflects banks' management behavior when they choose to be audited relative to the control groups. A positive (negative) β_1 indicates a higher (lower) likelihood of Accretive RGL or ALLP to increase regulatory capital.[6]

[5]We estimate the banks' marginal tax rate following Graham and Mills (2008) specification except for S-corporations where we use the reported income taxes over income before taxes.

[6]In this specification, we do not use as a control variable, a proxy of capital adequacy. Because real and accruals management may substitute each other (Zang, 2012), we include the current value in each other regression. We also include available-for-sale securities, *AFS*, as a control in regressions involving RGL management, given that banks need to have AFS in advance to realize them.

2.3 Economic consequences

In the third set of analyses, we focus on the banks' economic consequences of voluntarily choosing to have audited financial statements. The introduction of a second monitoring agent and extra scrutiny based on increased information from auditors could lead to safer bank lending, affect loan growth, banks' ability to attract deposits, and ultimately banks' profitability.

We assess this impact by re-estimating equation 2 with three measures of safer lending: *i) Loan Type* measured as the ratio of residential mortgages to total loans, and *ii) Loan Maturity* measured as the ratio of one-year ahead loans to total loans. A positive β_1 indicates a shift in asset composition towards safer loans as collateralized and standardized forms are considered less risky for banks (Balakrishnan et al., 2021). *iii) Problem Loans* is the proportion of loans past due 30-89 days that have not yet been impaired (still accruing) but require close monitoring. We estimate the effect of voluntary audits in this self-reported measure over the following year. A positive β_1 would reflect audits efforts to increase reporting (Balakrishnan et al., 2021). However, a negative value of β_1 is interpreted as a subsequent increase in the quality of loans. In addition, we also examine *Loan Growth* as the change in total loans over four quarters.

Finally, we explore voluntary audit's effects on banks' profitability and whether banks are able to attract an important source of financing, brokered deposits. A brokered deposit is a deposit made to a bank by a deposit broker (an agent engaged in placing deposits from other people with insured institutions). *Profitability* is measured as the return on equity over four quarters. *Brokered Deposits* is the ratio of this type of deposit to total deposits over the following four quarters.

2.4 Identification Concerns

A critical aspect of our setting is that the decision to be audited is voluntary, and therefore, endogenous. We use a number of strategies to deal with this endogenous choice. First, the main tests control for factors that may be associated with both bank audit sta-

tus and accounting quality, as identified in prior studies. Second, we use a sample of very similar banks. That is, banks that are under the $500 million in assets threshold, private, never enforced, and with at least three years of operations. The latter help to mitigate observable differences between voluntary audits and the two control groups. Third, we alternatively instrument the probability of an audit to address potential selection issues. We use as instrument *Past Voluntary Audits*. It is a dummy variable that takes the value one if, in the previous 20 quarters, the bank voluntarily audits its financial statements and zero if the bank chooses not to have an external auditor. Although there are no tests that can fully address omitted correlated variables, consistent results across these analyses strengthen our inferences.

3 Sample and descriptive statistics

The data set includes SPNE commercial banks from 1996:Q1 to 2018:Q4. We begin in 1996 because most of the data, including total risk-based capital, is only available from 1996. We collect quarterly accounting information from Call Reports retrieved from the Research Information System (RIS).

We drop banks with negative values of total assets and loans and banks with missing values on the audit indicator. Observations in the first three years of a bank's operations are also excluded because these banks face a different sort of regulatory supervision and are required to have audited financial statements. We winsorize all continuous variables, except for regulatory capital, at the 1 and 99% levels to reduce the influence of outliers. In the case of regulatory capital, we do it at 0.1 and 99.9% levels. These thresholds differ from the classical ones considered in the literature. However, if we winsorize at the 1% level, the minimum regulatory capital is above 8%, and lose the variation coming from cases that are of interest to this paper.

The sample contains 410,143 bank-quarter observations from 9,410 unique SPNE banks, out of which 6,993 choose to have at least one year of audited financial statements. The first control group, voluntarily unaudited banks, represents 42% of the sample. While

the second control group, mandatory audited banks, only represent 2% of the sample. Appendix 5 provides descriptive statistics of the voluntary audit per state. As can be seen, there is substantial variation in the percentage of banks that are audited per state, from a low of 13.98 percent in Nebraska (out of 330 banks), to a high of 100 percent in Alaska, Delaware, and Rhode Island. A number of states are close to this 100 percent threshold, suggesting that the audit become mandatory in these states during our sample period.

Table 1 provides descriptive statistics of the variables included in the main tests. Panel A presents the summary statistics for the full sample of SPNE banks. It shows that 57.27% of the sample of the banks that can choose, decide to have audited financial statements. While the average bank has total assets of $131 million (11.43 *Size*), the *Profitability* ratio is 9.31%. *Loans* constitute more than half of the total assets for the average bank (64.17%) and only 1.35% of loans are problematic since they are past due 30-89 days and still accruing interest (*Problem Loans*). The annual growth rate in lending (*Loan growth*) is 5.89%, *Loan Maturity* 31.19%, and *Loan Type* 63.86%. The average *LLP* of the quarter is 0.13%, while the mean of *Accuracy LLP* is 107.75% which means that on average banks overestimate their provisions. The average probability of having a *Restatement* on the call reports is 4.14%, while the probability of having a restatement because of material accounting errors or changes in accounting principles is 1.65% (*Accounting Restatements*). The mean of *Regulatory Capital* is 17.34%, well above the 8% required by the Basel Committee and the 10% threshold. However, around 18% of the sample have a regulatory capital between 8 and 12% (untabulated).

Panel B from Table 1 presents comparative summary statistics for the subsamples of voluntary audited and unaudited banks and mandatory audited banks. Voluntarily audited banks present significantly fewer restatements, and are more accurate in their calculation of LLP, but are more likely to have accretive ALLP and RGL than voluntarily unaudited banks. In addition, relative to unaudited banks, voluntarily audited banks have significantly higher loan growth, and arguably safer lending (higher loan type and lower problem loans) and attract more brokered deposits. However, profitability is significantly

lower than unaudited banks but higher than mandatory audited banks.

Moreover, banks with voluntarily audited financial statements have significantly less reported regulatory capital compared to the rest of the banks. In addition, banks with audited financial statements are significantly bigger relative to unaudited ones, which is in line with bank size being a significant determinant for audit choice. The rest of the table presents summary statistics for other control variables. The figures are consistent with previous papers (Lo, 2015; Barton, Hodder, and Shepardson, 2015; Nicoletti, 2018; Costello et al., 2019; Balakrishnan et al., 2021). Finally, in Table 2, we present the Pearson correlation matrix.

4 Results

4.1 Determinants of voluntary audits

Table 3 presents our test for the determinants of voluntary audits and reports the results from equation (1). We find that *National Bank* is positive (coeff.= 0.066, t-stat=6.47) in column (1), while *Regulatory Leniency Index* is negative (coeff.=-0.372, t-stat=-3.77) in column (2). We find similar results when using as control group mandatory audited banks. Results are consistent with the view that more stringent monitoring from the supervisor is associated with a higher likelihood of voluntary audits.

Surprisingly, banks are less likely to have voluntary audits the more complex they are (in terms of branches, employees, and volatility of ROA). Nevertheless, the probability of choosing an auditor increase with the size of the bank. In addition, we find a negative relationship between the likelihood of choosing an auditor and capital adequacy and income.

4.2 Voluntary audit and accounting quality

In this section, we examine the financial reporting consequences of the audit. As a first analysis, we focus on loan loss reporting to understand whether auditors induce greater conservatism and over-provisioning. Table 4 reports the results from our estimation of

the effect of the audit on loan loss provisioning using Beatty and Liao (2014)'s preferred model. We interact the main variables of interest (ΔNPL) with *Voluntarily Audited*. The evidence supports the view that changes in NPL better explain LLP when banks are voluntarily audited relative to non-audited banks (column 1) and mandatory audited banks (column 2). The interactions of *Voluntarily Audited* with ΔNPL are all positive and statistically significant. Banks that choose a voluntary audit seem to be more conservative in their estimation of loan losses.

In the next test, we focus on the accuracy of these provisions in the following year. Results from Table 5 show that voluntary audited banks are more likely to overestimate their loan loss provisions. The coefficient is negative and significant (coeff.=-0.011, t-stat=-1.71) indicating lower levels of accuracy of audited banks relative to unaudited banks within the same state, period, and under the same supervisor, reinforcing the idea of conservative estimates of LLP. We do not find statistically significant evidence of overprovisioning when banks choose to be audited relative to mandatory audited banks.

We also examine the likelihood of restatements of the Reports of Condition and Income in the year after the audit. Given data limitations, this test is run for the period 2001 to 2018. Table 6 provides the results of this test. We run four specifications, for all restatements (columns 1 and 2), and then, for accounting restatements (columns 3 and 4). We find evidence of a lower likelihood of future restatements in voluntarily audited banks relative to both control groups. Interestingly, we find a significant decline in accounting restatements only when the bank chooses to have audited financial statements relative to unaudited banks (coeff.=-0.008, t-stat=-3.05). However, we do not find a significant decline when both groups, treated and controlled, have an auditor (coeff.=-0.008, t-stat=-1.20).

Overall, the evidence in Tables 4, 5, and 6 suggests that voluntarily audited banks have more conservative accounting and a lower likelihood of call report errors. This can be interpreted as auditor monitoring providing assurance over the financial reporting system, increasing financial reporting quality, but it also provides some evidence of overreaching accounting. These results are more aligned with supervisory reporting preference that

favor an expected loss model that allows banks greater flexibility to overstate reserves.

Next, we analyze whether there is regulatory capital management in the presence of the auditor in a setting where banks have high incentives to artificially increase their capital ratio. To observe the effect on banks' choices with the presence of the auditor, Figure 1 restricts the analysis to the ±2 interval around the 10% threshold and formally evaluates the statistical significance of the discontinuity based on nonparametric tests (Calonico, Cattaneo, and Titiunik, 2014; Calonico, Cattaneo, Farrell, and Titiunik, 2017). Using local polynomial density estimation the figure reveals a sharp jump at the 10% threshold in the subsamples of voluntarily audited and unaudited banks (panels A and B).[7] Panel A shows that the discontinuity is statistically significant for Voluntarly audited SPNE banks (t-stat=14.91). Panel B shows that the discontinuity for banks that chose to be unaudited is slightly lower compared to audited (t-stat=8.00). The latter result gives some indication that banks might be doing regulatory capital management to fall above the threshold in the case of both voluntarily audited and unaudited banks. We do not find a statistically significant discontinuity for the sample of mandatory audited banks (panel C).

In addition, we analyze what tools audited banks use to increase their regulatory capital around the discontinuity. Following previous literature, we identify the real and accrual tools widely used in the banking industry: RGL (Barth et al., 2017) and ALLP (Beatty and Liao, 2014; Ng and Roychowdhury, 2014). To analyze this relationship more formally, we present the results of estimating Eq. 3 in Table 7. We explore the relationship between the *unmanaged* regulatory capital and the probability of having accretive RGL and $ALLP$ when banks choose to be audited. We use an interval of ±0.5% interval around the 10% threshold (before adjustments) using a polynomial of order 1. All specifications include time and federal supervisors' fixed effects. Expect for the regression with mandatory audits, we also include state-fixed effects.

Table 7 column 1, shows that being audited and having a deficit in regulatory capital

[7] In untabulated results we also examine the distribution of regulatory capital ratio for the sample of SPNE banks independently of the audit status and find that there is a sharp jump at the 10% threshold, the t-statistic is 13.30.

increase the probability of having *Accretive_RGL*. That is, voluntarily audited relative to unaudited SPNE banks are 3.9% more likely to engage in *Accretive_RGL*, which its economic significance is important given the unconditional mean of *Accretive_RGL* for the bandwidth is 3.28%. For banks that are not audited, but do have a deficit in regulatory capital before the management, we do not find a significant relation with real management. Audited banks that have a surplus (relative to the 10% threshold) have an insignificantly lower probability of having *Accretive_RGL*.

Column 3 from table 7, shows that being audited and having a deficit in regulatory capital does not significantly increase the probability of under-provisioning loan losses to boost regulatory capital. In other words, we do not find a significant differential effect of being audited relative to unaudited banks. However, the probability of having *Accretive_ALLP* for banks that are unaudited but are below the threshold is positive and significant. We do not find a significant effect on audited banks that are above the 10% threshold, which is expected given that they do not have strong incentives to increase regulatory capital. Columns 2 and 4, show the results for voluntary audited banks relative to mandatory audited banks. We find some evidence that voluntarily audited banks with regulatory capital deficits are more likely to engage in *Accretive_ALLP* than mandatory ones (coeff.=0.147, t-stat=1.66). We do not find significant evidence of *Accretive_RGL*. Bratten et al. (2020) highlight the complexity of banks' transactions and the extensive accounting and auditing knowledge required to audit them. A possible explanation for our findings is that SPNE banks choose a small auditor not specialized in banks.

Taken together, these results suggest that in the presence of the auditor, SPNE banks that have a low pre-managed regulatory capital are more likely to use real tools, but they do not use more accrual tools compared to unaudited banks. The evidence fails to support the prediction that audited banks manage less through accruals. Because loan loss provisioning accounting standards leave room for interpretation on how likely future losses will occur, these banks might be able to circumvent auditors' oversight (Nelson, Elliott, and Tarpley, 2002).

4.3 Economic consequences of voluntary audits

This section aims to investigate the economic implications of voluntary audits. Given that monitoring involves the use of auditors' judgment, there is a potential for excessive conservatism in their evaluations of bank accounts. Although heightened accounting quality and conservatism may benefit auditors and supervisors, these improvements may also come with economic costs. For instance, increased conservatism in loan loss provisioning may restrict lending activity, lead to a shift towards safer lending practices, and it may hinder bank profitability. Consequently, an excessive level of scrutiny arising from enhanced information derived from audits may impede bank operations, both in terms of profitability and lending.

Accordingly, in Table 8, we examine whether voluntary audits are associated with safer lending and higher loan growth. We find that voluntarily audited banks relative to unaudited are statistically more likely to have a higher ratio of residential loans, fewer problem loans, and higher loan growth, but they have a lower ratio of one-year ahead loans. Relative to mandatory audited banks, voluntarily audited banks have significantly lower maturities portfolio, fewer problem loans, and higher loan growth. However, their ratio of residential mortgages is significantly lower than mandatory audited banks.

Next, we examine whether voluntarily audited banks are more profitable and more likely to attract brokered deposits. Table 9 shows that voluntarily audited banks are statistically less profitable than unaudited banks but more profitable than mandatory audited banks. We also find crossed evidence in the case of brokered deposits. Voluntarily audited banks are more likely to attract brokered deposits relative to unaudited but less likely than mandatory audits.

Previous results suggest that choosing to have an auditor is related to some desirable economic outcomes. In general, audited banks have safer lending, higher loan growth, and attract brokered deposits. However, their profitability is lower relative to unaudited banks. While we cannot draw causal inferences, given that the choice to voluntary audit the financial statements is endogenous, this evidence is indicative of SPNE banks

benefiting from the external audit.

4.4 Addressing potential self-selection bias

To address potential selection bias in the auditors' choice discussed in Section 2.4, we instrument the probability of choosing to audit financial statements adding to the specification of equation 1 past voluntary audits. We present the results of the first stage in Appendix 5.

In Table 10, we present the results of the second stage of the instrumental model. Panel A includes the effect of voluntary audits on accounting quality measures. Results are quantitatively similar to previous specifications. Voluntarily audited banks have more conservative accounting and a lower likelihood of restatements. However, they are more likely to engage in real accounting management if they need to boost regulatory capital.

Panel B in Table 10 presents the economic consequences of voluntary audits. Results are consistent with audited banks having safer lending relative to unaudited ones. Audited banks have more residential loans and fewer problem loans. In comparison to Table 8, this time, we find a negative effect on loan growth (coeff.=-0.003, t-stat=-5.41). In addition, once we instrument the audit choice, we find that these banks are more able to attract brokered deposits as another source of financing but less profitable. Overall, the instrumental variable evidence confirms the hypothesis that voluntary audits produce a more conservative accounting and have positive economic effects.

5 Conclusions

In this study, we explored the role and consequences of voluntary audits in small private banks, shedding light on their determinants, implications for accounting quality, and economic outcomes. Our findings indicate that despite audits being voluntary, a majority of small banks choose to audit their accounts. These banks are more likely to audit their accounts the higher the supervisory scrutiny. Consequently, audited banks are more conservative in the provision for loan losses, to the point of overprovisioning. In addition,

audited banks are less likely that the supervisor will enforce a restatement on the call reports. However, they engage in more real regulatory capital management, suggesting potential costs and risks associated with accruals manipulation. On the economic front, audited banks adopt safer lending practices, experience higher loan growth, and attract brokered deposits. These results are relevant for understanding how external audits and their insurance affect banks' behavior. These results provide insights into the motivations behind voluntary audits and their impact on small private banks' performance. Our findings should be informative to policymakers, supervisors, members of the banking industry, and academics interested in the behavior of banks.

Caveats should be noted. First, even though small banks represent 80% of all banks, the sample selection may reduce the generalizability of our results. Second, we cannot entirely rule out confounding omitted variables correlated with audit choice despite studying homogenous firms from a single industry segment and using different ways to address potential self-selection bias. Finally, like many other studies, this study may be subject to reverse causality or joint determination.

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Appendix A. Variable definitions

Variable Name	Description	Call Report Code	RIS Code
Accounting Restatement	Dummy variable that takes the value of one if the bank makes a restatement on its prior Reports of Condition and Income due to corrections of material accounting errors and changes in accounting principles associated with general accounting adjustments (loan loss accounting, misclassification of gains and losses on securities, errors in accrual accounting, specific misclassified accounting accruals, misclassification of interest and expense, investment accounting, measurement issues). Available since 2001-Q1.	RIADB507, TEXTB526	eqcrest
Accretive ALLP	Dummy variable that takes the value of one when ALLP net of taxes increases regulatory capital through Tier 1 by at least 0.05%, zero otherwise.		
Accretive RGL	Dummy variable that takes the value of one when RGL net of taxes increases regulatory capital by at least 0.05%, zero otherwise.		
Accuracy LLP	Ratio of charge-offs in the following four quarters to current LLP.	RIAD4625, RIAD4230	ntlnls, elnlos
AFS	Total fair value of available-for-sale securities normalized by lagged total assets.	RCFD1773, RCFD2170	scaf, asset
ALLP	Abnormal component of LLP (following Beatty and Liao (2014)) multiplied by lagged total assets and normalized by net risk-weighted assets.		
BHC	Dummy variable that takes the value one if the bank belongs to a BHC and zero otherwise.	RSSDHCR	rssdhcr
Branch	Dummy variable that takes the value one if the banks have branches and zero otherwise.	branch	branch
Brokered Deposits	Brokered deposits normalized by lagged total deposits.	RCON2365, RCFD2200	bro, dep
Cash	Cash normalized by lagged total assets.	RCFD0010, RCFD2170	chbal, asset
Charge-Offs	Total net charge-off loans and lease financing receivables scale by lagged total assets.	RIAD4625, RCFD2170	ntlnls, asset
Def RegCap ALLP	Difference between the 10% threshold and RegCap_ALLP.		
Def RegCap RGL	Difference between the 10% threshold and RegCap_RGL.		

Variable Name	Description	Call Report Code	RIS Code
Employees	Natural logarithm of the number of employees on a payroll.	RIAD4150	numemp
LLA	Loan loss allowance normalized by lagged total assets.	RCFD3123, RCFD2170	lnlsresz, asset
LLP	Loan loss provision of the quarter normalized by lagged total assets.	RIAD4230, RCFD2170	elnlos, asset
Loans	Total loans normalized by lagged total assets.	RCFD2122, RCFD2170	lnlsgr, asset
Loan Growth	Mean change of total loans in the next four quarters, relative to the mean in the previous four quarters normalized by lagged total assets.	RCFD2122, RCFD2170	lnlsgr, asset
Loan Maturity	Loans and leases with a remaining maturity of one year or less over total loans.	RCFDA247, RCFD2122	lnlsles1, lnlsgr
Loan Type	Loans secured by real estate on a consolidated basis over total loans.	RCFD1410, RCFD2122	lnre, lnlsgr
Low RegCap ALLP	Dummy variable that takes the value of one when *RegCap ALLP* is lower than 10%, zero otherwise.		
Low RegCap RGL	Dummy variable that takes the value of one when *RegCap RGL* is lower than 10%, zero otherwise.		
National Bank	Dummy variable equal to one for national banks and zero for state banks.	RSSD9055	bkclass
Net Income	Income before taxes net of RGL and LLP normalized by lagged total assets.	RIAD4301, RIAD3196, RIAD4230, RCFD2170	ibeftax, iglsca, elnlos, asset
Noninterest expenses	Non-interest expenses normalized by lagged total assets.	RIAD4093, RCFD2170	nonix, asset
Noninterest income	Non-interest income normalized by lagged total assets.	RIAD4079, RCFD2170	nonii, asset
NPL	Includes the outstanding balances of loans and lease financing receivables that the bank has placed in non-accrual status plus restructured loans and lease plus loans and lease financing receivables on which payment is due and unpaid for 90 days or more, normalized by lagged total assets.	RCFD1403, RCFD1407, RCFD2170	nalnls, p9lnls, asset

Variable Name	Description	Call Report Code	RIS Code
Problem Loans	Total loans and lease financing receivables that are past due 30 through 89 days and still accruing interest on a consolidated basis over total loans	RCON1406, RCFD2122	p3lnls, lnlsgr
Profitability	The ratio of net income over four quarters to equity over four quarters.		netinca, eq2
Regulatory Capital	The sum of Tier 1 and Tier 2 capital normalized by net risk-weighted assets.	RCFD8274, RCFD8275, RCFDA223	rbct1w, rbct2w, rwajt
Restatement	Dummy variable that takes the value of one if the bank makes a restatement on its prior Reports of Condition and Income due to corrections of material accounting errors and changes in accounting principles. Available since 2001-Q1.	RIADB507	eqcrest
RGL	Realized gains and losses on available-for-sale securities normalized by net risk-weighted assets.	RIAD3196, RCFDA223	iglsca, rwajt
Size	Natural logarithm of total assets.	RCFD2170	asset
Supervisory Leniency Index	Agarwal et al. (2014) supervisory leniency index of the state regulator. Available from 1996-Q1 to 2010-Q4.		
Vaudit_Maudit	Dummy variable that takes the value one when financial statements are voluntarily audited by an external auditor, and zero when the bank belongs to a state where audits are mandatory.	RCFD6724	audit
Vaudit_Unaudit	Dummy variable that takes the value one when financial statements are voluntarily audited by an external auditor, and zero if the bank chooses not to audit financial statements.	RCFD6724	audit
Vol ROA	Standard deviation of return on assets.	RIAD4340, RCFD2170	netinc, asset

Appendix B. Audited banks per state

The table below shows the number of banks, the percentage of audited banks per state, and whether having an external auditor is a voluntary choice. We consider it as a choice if the percentage of audits per state is smaller than 98%.

	Number of Banks (1)	Audited Banks (2)	State Voluntary Audit (3)
Alabama	194	67.73	Yes
Alaska	4	100.00	No
Arizona	58	90.26	Yes
Arkansas	210	64.42	Yes
California	390	96.80	Yes
Colorado	234	65.21	Yes
Connecticut	32	97.35	Yes
Delaware	22	100.00	No
District of Columbia	8	99.66	No
Florida	392	89.85	Yes
Georgia	434	95.29	Yes
Hawaii	11	98.71	No
Idaho	26	75.56	Yes
Illinois	795	50.72	Yes
Indiana	140	84.92	Yes
Iowa	479	28.78	Yes
Kansas	424	20.85	Yes
Kentucky	255	85.67	Yes
Louisiana	172	92.99	Yes
Maine	17	99.59	No
Maryland	63	96.57	Yes
Massachusetts	36	92.79	Yes
Michigan	154	80.36	Yes
Minnesota	555	25.27	Yes
Mississippi	111	69.78	Yes
Missouri	414	32.70	Yes
Montana	98	18.05	Yes
Nebraska	330	13.98	Yes
Nevada	35	94.22	Yes
New Hampshire	18	98.65	No
New Jersey	92	91.38	Yes
New Mexico	61	86.06	Yes
New York	128	82.60	Yes
North Carolina	94	99.52	No
North Dakota	121	16.68	Yes

	Number of Banks (1)	Audited Banks (2)	State Voluntary Audit (3)
Ohio	193	66.10	Yes
Oklahoma	338	25.51	Yes
Oregon	47	90.23	Yes
Pennsylvania	180	93.45	Yes
Rhode Island	3	100.00	No
South Carolina	89	83.61	Yes
South Dakota	114	24.35	Yes
Tennessee	254	88.85	Yes
Texas	894	68.16	Yes
Utah	39	84.31	Yes
Vermont	13	89.13	Yes
Virginia	141	95.68	Yes
Washington	113	76.73	Yes
West Virginia	71	98.55	No
Wisconsin	350	29.67	Yes
Wyoming	58	55.75	Yes

Appendix C. Predicting voluntary audit choice

The table below shows the probability of voluntary audits. Variables associated with bank complexity correlate with the probability of being audited. Especially important is *Past Voluntary Audits* that is positive and statistically significant at 1% level. This reflects the stickiness of audit status.

Dependent variable:	*Voluntarily Audited*
	(1)
Past Voluntary Audits	0.637
	(82.53)
National Bank	0.011
	(1.83)
Branch	-0.011
	(-1.67)
Vol ROA	-0.354
	(-0.28)
BHC	0.019
	(2.96)
Employees	-0.034
	(-3.74)
LLA	1.554
	(2.94)
Charge-Offs	1.169
	(1.74)
NPL	-0.095
	(-0.59)
Regulatory Capital	-0.033
	(-1.46)
Noninterest Expenses	4.447
	(3.78)
Net Income	-5.054
	(-4.53)
Cash	-0.025
	(-0.69)
Noninterest Income	4.630
	(2.78)
Loan	-0.008
	(-0.32)
Size	0.099
	(11.68)
AFS	-0.053
	(-2.40)
Constant	-0.847
	(-11.35)
Observations	229,805
Adjusted R-squared	0.660
Time FE	Yes
Supervisor FE	No
State FE	Yes

Table 1. Summary statistics. Panel A shows descriptive statistics for commercial banks used in this paper. Panel B provides a comparison between banks that have voluntary audits (treatment sample) with unaudited and mandatory audited banks (control samples). Sample period 1996–2018. Because of data availability, the analysis for *Problem Loans*, and *Restatements* started in 2001. All variables, except for *Size* and *Employees*, are multiplied by 100 for expositional convenience. All variables are defined in Appendix 5.

Panel A: Full sample summary statistics

	Obs	Mean	SD	Q1	Median	Q3
	(1)	(2)	(3)	(4)	(5)	(6)
Explanatory Variables: Auditing status						
Audit_Unaudit	401846	57.27	49.47	0	100	100
Vaudit_Maudit	238422	96.52	18.33	100	100	100
Dependent variables: Accounting quality and real outcomes						
Accretive ALLP	425163	15.07	35.78	0.00	0.00	0.00
Accretive RGL	425163	4.72	21.21	0.00	0.00	0.00
Accuracy LLP	425163	107.75	220.94	12.23	53.00	121.53
Brokered Deposits	425163	2.10	5.70	0.00	0.00	0.33
LLP	425163	0.13	0.24	0.02	0.06	0.13
Loan Growth	425163	5.89	10.22	0.33	3.87	8.67
Loan Maturity	425163	31.19	15.85	20.08	29.60	40.33
Loan Type	425163	63.86	18.85	51.80	66.49	78.15
Problem Loans	291422	1.35	1.15	0.49	1.05	1.90
Profitability	425163	9.31	52.89	6.06	9.86	13.92
Restatements	308521	4.14	19.92	0.00	0.00	0.00
Restatements Accounting	308526	1.65	12.75	0.00	0.00	0.00
Control variables: Bank characteristics						
AFS	425163	19.33	14.26	8.17	17.42	28.23
ALLP	425163	0.01	0.19	-0.08	-0.04	0.02
BHC	425163	80.02	39.98	100.00	100.00	100.00
Branch	425163	74.05	43.84	0.00	100.00	100.00
Cash	425163	6.38	5.78	2.97	4.45	7.38
Charge Offs	425163	0.06	0.14	0.00	0.01	0.05
Employees	425128	3.41	0.82	2.83	3.40	3.99
LLA	425163	0.93	0.45	0.65	0.85	1.10
Loans	425163	64.17	15.45	54.59	65.49	75.07
National Banks	425163	22.45	41.73	0.00	0.00	0.00
Noninterest Expenses	425163	0.82	0.31	0.63	0.76	0.92
Noninterest Income	425163	0.20	0.19	0.10	0.15	0.23
NPL	425163	0.88	1.16	0.14	0.48	1.13
Regulatory Capital	425163	17.34	8.74	12.62	15.23	19.37
RGL	425163	0.01	0.04	0.00	0.00	0.00
Size	425163	11.43	0.87	10.83	11.47	12.08
Vol ROA	425163	0.11	0.13	0.04	0.07	0.13

Panel B: Sample comparison

Sample:	Voluntarily audited		Voluntarily unaudited		Mandatory audited		T-Stat	T-Stat
	Obs	Mean	Obs	Mean	Obs	Mean	(4)-(2)	(6)-(2)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variables: Accounting Quality and Real Outcomes								
Accretive ALLP	230,125	15.66	171,721	14.89	8,297	19.48	-6.71	9.36
Accretive RGL	230,125	5.09	171,721	4.26	8,297	4.13	-12.25	-3.91
Accuracy LLP	230,125	108.75	171,721	111.58	8,297	106.33	3.96	-1.00
Brokered Deposits	230,125	2.21	171,721	1.65	8,297	3.14	-32.16	14.11
LLP	230,125	0.13	171,721	0.11	8,297	0.13	-28.17	1.14
Loan Growth	230,125	5.51	171,721	4.19	8,297	5.14	-48.78	-3.60
Loan Maturity	230,125	29.57	171,721	33.90	8,297	18.74	87.11	-62.29
Loan Type	230,125	67.77	171,721	57.70	8,297	74.04	-170.00	31.62
Problem Loans	159,061	1.35	117,194	1.40	5,806	1.48	3.86	8.30
Profitability	230,125	9.24	171,721	10.42	8,297	7.42	6.80	-2.34
Restatements	168,000	4.00	123,912	4.21	6,123	6.04	2.79	7.94
Restatements Acc.	168,005	1.47	123,912	1.86	6,123	1.68	8.20	1.35
Control variables								
AFS	230,125	19.05	171,721	20.16	8,297	18.03	24.36	-6.61
ALLP	230,125	0.01	171,721	4E-03	8,297	8E-04	-6.48	-3.21
BHC	230,125	80.46	171,721	83.15	8,297	65.00	21.78	-34.62
Branch	230,125	80.87	171,721	66.79	8,297	87.45	-100.00	15.05
Cash	230,125	6.37	171,721	6.40	8,297	6.13	1.29	-3.81
Charge Offs	230,125	0.06	171,721	0.05	8,297	0.07	-26.12	1.96
Employees	230,114	3.69	171,721	3.07	8,288	3.79	-260.00	12.34
LLA	230,125	0.95	171,721	0.90	8,297	0.98	-38.36	5.92
Loans	230,125	64.58	171,721	62.64	8,297	66.63	-39.88	12.10
National Banks	230,125	26.56	171,721	17.49	8,297	17.93	-68.27	-17.55
Noninterest Expenses	230,125	0.83	171,721	0.76	8,297	0.84	-76.89	1.57
Noninterest Income	230,125	0.21	171,721	0.17	8,297	0.20	-70.52	-4.39
NPL	230,125	0.93	171,721	0.84	8,297	1.00	-25.82	4.53
Regulatory Capital	230,125	16.70	171,721	17.85	8,297	19.02	43.53	24.90
RGL	230,125	0.01	171,721	0.01	8,297	0.01	-18.56	-3.86
Size	230,125	11.71	171,721	11.08	8,297	11.80	-240.00	10.90
Vol ROA	230,125	0.11	171,721	0.12	8,297	0.09	23.52	-9.16

Table 2. Correlation matrix. The table shows the Pearson correlations. Correlations in bold are significant at the 5% level. Sample period 1996–2018. Because of data availability, the analysis for *Problem Loans*, and *Restatements* started in 2001. All variables are defined in Appendix 5.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
(1)	Vol Audit_Nonaudit	**1.00**																														
(2)	Vol Audit_Mand Audit	.	**1.00**																													
(3)	*Accretive ALLP*	**0.01**	**-0.02**	**1.00**																												
(4)	*Accretive RGL*	**0.02**	**0.01**	**-0.01**	**1.00**																											
(5)	*Accuracy LLP*	**-0.01**	0.00	**0.06**	0.00	**1.00**																										
(6)	*Brokered Deposits*	**0.05**	**-0.03**	**0.00**	**0.02**	**0.01**	**1.00**																									
(7)	*LLP*	**0.04**	0.00	**-0.03**	**0.05**	**-0.07**	**0.10**	**1.00**																								
(8)	*Loan Growth*	**0.08**	**0.01**	**-0.09**	**-0.05**	**-0.04**	**0.13**	**-0.01**	**1.00**																							
(9)	*Loan Maturity*	**-0.14**	**0.13**	**-0.03**	**-0.04**	**0.03**	**0.04**	**0.04**	**0.03**	**1.00**																						
(10)	*Loan Type*	**0.26**	**-0.06**	**0.07**	**0.04**	**-0.02**	**0.09**	**-0.04**	**0.04**	**-0.34**	**1.00**																					
(11)	*Problem Loans*	**-0.02**	**-0.02**	**0.03**	**0.03**	**0.08**	**-0.06**	**0.17**	**-0.26**	**0.05**	**-0.08**	**1.00**																				
(12)	*Profitability*	**-0.01**	**0.00**	**0.01**	**-0.01**	0.00	**-0.02**	**-0.07**	**0.01**	**0.01**	**-0.02**	**-0.11**	**1.00**																			
(13)	*Restatements*	**-0.01**	**-0.02**	**-0.01**	0.00	**0.01**	**0.01**	**0.01**	0.00	**0.02**	**-0.01**	**0.04**	**-0.02**	**1.00**																		
(14)	*Restatements Acc*	**-0.02**	0.00	**-0.01**	**0.00**	0.00	**0.01**	**0.01**	0.00	**0.01**	**-0.01**	**0.02**	**-0.02**	**0.59**	**1.00**																	
(15)	*AFS*	**-0.04**	**0.01**	**-0.01**	**0.17**	0.00	**-0.15**	**-0.06**	**-0.14**	**-0.07**	**-0.09**	**0.05**	**0.01**	0.00	0.00	**1.00**																
(16)	*ALLP*	**0.01**	**0.01**	**-0.26**	**0.06**	**-0.08**	**0.08**	**0.32**	**-0.06**	**0.05**	**-0.08**	**0.17**	**-0.08**	**0.02**	**0.01**	**-0.06**	**1.00**															
(17)	*BHC*	**-0.03**	**0.07**	**0.01**	**0.00**	**0.02**	**0.00**	**-0.07**	**-0.10**	**0.01**	**0.00**	**-0.04**	**0.03**	**-0.03**	**-0.02**	**0.05**	**-0.06**	**1.00**														
(18)	*Branch*	**0.16**	**-0.03**	**0.01**	**0.01**	**0.01**	**-0.03**	**-0.04**	**-0.01**	**-0.12**	**0.25**	**-0.06**	**0.01**	0.00	**0.00**	**-0.02**	**-0.06**	**0.15**	**1.00**													
(19)	*Cash*	0.00	**0.01**	**0.03**	**-0.01**	**-0.02**	**-0.06**	**0.03**	**-0.06**	**-0.05**	**0.00**	**-0.01**	**-0.03**	**-0.01**	0.00	**-0.15**	**0.03**	**-0.08**	**-0.09**	**1.00**												
(20)	*Charge-Offs*	**0.04**	**0.00**	**-0.04**	**0.04**	**-0.03**	**0.08**	**0.65**	**-0.18**	**0.02**	**-0.02**	**0.19**	**-0.06**	0.00	**0.00**	**-0.08**	**0.31**	**-0.02**	0.00	**0.03**	**1.00**											
(21)	*Employees*	**0.37**	**-0.03**	**0.02**	**0.01**	**0.01**	**0.03**	0.00	**-0.01**	**-0.17**	**0.32**	**-0.09**	**0.02**	0.00	**-0.01**	**0.01**	**-0.05**	**0.18**	**0.57**	**-0.13**	**0.04**	**1.00**										
(22)	*LLA*	**0.06**	**-0.01**	**0.24**	**-0.01**	**-0.01**	**0.16**	**0.32**	**-0.09**	**0.06**	**0.04**	**0.14**	**-0.04**	0.00	0.00	**-0.25**	**0.21**	**-0.03**	**-0.01**	**0.04**	**0.28**	**0.03**	**1.00**									
(23)	*Loans*	**0.06**	**-0.02**	**0.02**	**-0.11**	0.00	**0.27**	**0.05**	**0.31**	**0.03**	**0.21**	**-0.14**	**0.01**	**-0.01**	**-0.01**	**-0.62**	**0.02**	**0.07**	**0.15**	**-0.19**	**0.06**	**0.16**	**0.34**	**1.00**								
(24)	*National Banks*	**0.11**	**0.04**	**-0.01**	**0.01**	0.00	**-0.04**	**-0.01**	**-0.03**	**-0.09**	**-0.02**	**-0.02**	**0.00**	**-0.01**	**-0.01**	**0.09**	**-0.01**	**0.01**	**0.02**	**0.01**	**-0.01**	**0.13**	**-0.08**	**-0.09**	**1.00**							
(25)	*Noninterest Expenses*	**0.12**	0.00	**-0.02**	**-0.01**	**0.01**	**0.02**	**0.20**	**0.21**	**-0.03**	**-0.01**	**0.06**	**-0.04**	**0.02**	**0.02**	**-0.18**	**0.13**	**-0.10**	**0.03**	**0.14**	**0.14**	**0.12**	**0.17**	**0.13**	**0.07**	**1.00**						
(26)	*Noninterest Income*	**0.11**	**0.01**	**-0.02**	**-0.02**	**0.00**	**-0.01**	**0.09**	**0.03**	**-0.02**	**-0.03**	0.00	**0.03**	**0.02**	**0.01**	**-0.07**	**0.06**	**0.04**	**0.07**	**0.09**	**0.07**	**0.27**	**0.05**	**0.01**	**0.07**	**0.62**	**1.00**					
(27)	*NPL*	**0.04**	**-0.01**	**0.08**	**0.06**	**0.06**	**0.11**	**0.32**	**-0.28**	**0.01**	**0.09**	**0.37**	**-0.07**	**0.02**	**0.01**	**-0.13**	**0.30**	**-0.01**	**0.01**	**0.06**	**0.37**	**0.03**	**0.48**	**0.11**	**-0.02**	**0.11**	**0.01**	**1.00**				
(28)	*Regulatory Capital*	**-0.07**	**-0.05**	**0.04**	**0.02**	**-0.01**	**-0.10**	**0.01**	**-0.08**	**0.01**	**-0.12**	**0.10**	**-0.01**	**0.01**	**0.01**	**0.23**	0.00	**-0.20**	**-0.23**	**0.15**	**-0.05**	**-0.23**	**-0.13**	**-0.51**	**0.03**	**-0.03**	0.00	**-0.08**	**1.00**			
(29)	*RGL*	**0.03**	**0.01**	**-0.01**	**0.84**	**-0.01**	**0.01**	**0.05**	**-0.05**	**-0.04**	**0.04**	**0.03**	**-0.01**	**0.00**	**0.00**	**0.16**	**0.05**	0.00	**0.02**	**-0.01**	**0.04**	**0.02**	**-0.01**	**-0.11**	**0.01**	**-0.01**	**-0.03**	**0.05**	**0.02**	**1.00**		
(30)	*Size*	**0.36**	**-0.02**	**0.03**	**0.05**	**-0.01**	**0.15**	**0.00**	**-0.04**	**-0.18**	**0.40**	**-0.18**	**0.01**	**-0.02**	**-0.01**	**0.03**	**-0.05**	**0.17**	**0.48**	**-0.10**	**0.04**	**0.87**	**0.06**	**0.18**	**0.07**	**-0.16**	**0.06**	**0.05**	**-0.21**	**0.05**	**1.00**	
(31)	*Vol ROA*	**-0.04**	**0.02**	**0.03**	**0.06**	**-0.04**	**0.10**	**0.40**	**-0.02**	**0.08**	**-0.06**	**0.18**	**-0.08**	**0.03**	**0.03**	**-0.09**	**0.38**	**-0.10**	**-0.13**	**0.09**	**0.34**	**-0.17**	**0.32**	**0.03**	**-0.04**	**0.26**	**0.07**	**0.36**	**0.04**	**0.04**	**-0.17**	**1.00**

Table 3. Likelihood of voluntary audit. The table shows the results for OLS regression of small private banks' audit status relative to voluntary unaudited banks (columns 1 and 2) and relative to mandatory audited banks (columns 3 and 4). The sample period for odd columns is 1996–2018. Even columns show the results using the *Regulatory Leniency Index* only available for the period 1996–2010. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Voluntarily Audited*			
Control sample:	Voluntarily unaudited		Mandatory audited	
	(1)	(2)	(3)	(4)
National Bank	0.066		0.015	
	(6.47)		(2.61)	
Regulatory Leniency Index		-0.372		-0.060
		(-3.77)		(-0.90)
Branch	-0.052	-0.040	-0.011	-0.013
	(-5.09)	(-3.32)	(-1.94)	(-2.33)
Vol ROA	-9.943	-16.199	4.447	4.016
	(-5.66)	(-7.02)	(3.98)	(3.69)
BHC	0.017	-0.081	0.034	0.027
	(1.65)	(-7.12)	(4.34)	(3.74)
Employees	-0.087	-0.047	-0.014	-0.017
	(-6.15)	(-2.92)	(-1.35)	(-1.66)
LLA	4.828	4.501	-0.065	-0.303
	(6.06)	(4.23)	(-0.12)	(-0.54)
Charge-Offs	1.246	3.081	-1.053	-1.465
	(1.31)	(2.37)	(-1.63)	(-2.04)
NPL	-0.516	-0.638	-0.148	-0.001
	(-2.18)	(-1.99)	(-0.88)	(-0.00)
Regulatory Capital	-0.101	-0.021	-0.165	-0.171
	(-2.12)	(-0.81)	(-3.66)	(-3.64)
Noninterest Expenses	10.400	30.405	0.775	1.342
	(5.76)	(14.16)	(0.71)	(1.44)
Net Income	-15.948	-10.107	2.132	1.477
	(-9.48)	(-5.05)	(2.10)	(1.47)
Cash	0.049	0.353	0.026	0.039
	(0.83)	(3.96)	(0.76)	(1.07)
Noninterest Income	12.864	-5.636	-0.218	0.058
	(5.50)	(-1.91)	(-0.13)	(0.04)
Loan	0.054	-0.174	-0.079	-0.079
	(1.39)	(-4.36)	(-3.53)	(-3.95)
Size	0.242	0.306	0.005	0.012
	(18.45)	(20.88)	(0.56)	(1.21)
AFS	-0.064	-0.200	-0.019	-0.024
	(-1.82)	(-5.12)	(-0.90)	(-1.26)
Constant	-1.972	-2.674	0.995	0.956
	(-17.07)	(-21.22)	(11.47)	(11.19)
Observations	385,523	285,321	229,806	169,906
Adjusted R-squared	0.379	0.194	0.014	0.014
Time FE	Yes	Yes	Yes	Yes
Supervisor FE	No	Yes	No	Yes
State FE	Yes	No	Yes	No

Table 4. Voluntary audit and loan loss provision conservatism. The table presents the results of estimating the loan loss provision model which examines the difference in conservatism for voluntary audited banks relative to unaudited banks (column 1) and voluntarily relative to mandatory audited banks (column 2). The sample period is 1996–2018. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*LLP*	
Control sample:	Voluntarily unaudited	Mandatory audited
	(1)	(2)
ΔNPL_{t+1} * *Vol Audited*	0.004	0.016
	(2.75)	(2.52)
ΔNPL_{t} * *Vol Audited*	0.011	0.016
	(6.21)	(2.21)
ΔNPL_{t-1} * *Vol Audited*	0.008	0.010
	(5.09)	(1.38)
ΔNPL_{t-2} * *Vol Audited*	0.005	0.012
	(3.53)	(1.91)
ΔNPL_{t+1}	0.001	-0.011
	(1.12)	(-1.75)
ΔNPL_{t}	0.007	0.002
	(5.91)	(0.22)
ΔNPL_{t-1}	0.022	0.019
	(18.58)	(2.54)
ΔNPL_{t-2}	0.020	0.013
	(19.68)	(2.11)
Voluntarily Audited	1.20E-04	-3.2E-05
	(5.66)	(-0.42)
Size	-2.1E-05	-1.5E-05
	(-1.41)	(-0.77)
$\Delta Loan$	-0.002	-0.002
	(-10.30)	(-6.30)
Observations	401,846	238,422
Adjusted R-squared	0.095	0.104
Supervisor FE	Yes	Yes
State FE	Yes	No
Time FE	Yes	Yes

Table 5. Voluntary audits and loan loss provisions accuracy in the following year. The table presents the results of the relationship between voluntary audits and overprovisioned loan losses relative to voluntary unaudited (column 1) and mandatory audited banks (column 2). The sample period is 1996–2018. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Accuracy LLP*	
Control sample:	Voluntarily unaudited	Mandatory audited
	(1)	(2)
Voluntarily Audited	-0.011	-0.027
	(-1.71)	(-1.30)
LLA	-10.881	-11.980
	(-14.22)	(-12.02)
Charge-Offs	28.018	28.129
	(26.94)	(20.31)
NPL	4.143	3.916
	(15.62)	(11.15)
Regulatory Capital	-0.043	-0.051
	(-1.31)	(-1.06)
Noninterest Expenses	6.879	2.776
	(4.44)	(1.44)
Net Income	21.694	21.587
	(13.91)	(11.33)
Cash	-0.101	-0.382
	(-2.11)	(-6.03)
Noninterest Income	-5.261	-2.614
	(-2.47)	(-0.94)
Loan	0.365	0.349
	(14.68)	(10.63)
Size	0.059	0.046
	(15.00)	(8.99)
Observations	271,574	161,201
Adjusted R-squared	0.061	0.054
Supervisor FE	Yes	Yes
State FE	Yes	No
Time FE	Yes	Yes

Table 6. Voluntary audits and the likelihood of a restatement in the following year. The table presents the results of the OLS regressions on the probability of having a restatement of the Reports of Condition and Income in the next year. Odd (even) columns include voluntary unaudited (mandatory audited) banks as the control sample. Because of data availability, the sample period is 2001–2018. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Restatements*		*Accounting Restatements*	
Control sample:	Voluntarily unaud	Mandatory aud	Voluntarily unaud	Mandatory aud
	(1)	(2)	(3)	(4)
Voluntarily Audited	-0.012	-0.035	-0.008	-0.008
	(-3.19)	(-2.32)	(-3.05)	(-1.20)
LLA	-0.103	-0.172	0.146	0.026
	(-0.27)	(-0.35)	(0.55)	(0.09)
Charge-Offs	0.302	-0.292	0.167	-0.093
	(0.58)	(-0.43)	(0.48)	(-0.21)
NPL	0.657	0.702	0.283	0.414
	(5.16)	(4.52)	(3.51)	(4.07)
Regulatory Capital	0.008	0.011	0.014	0.013
	(0.68)	(0.43)	(1.42)	(0.92)
Noninterest Expenses	0.784	2.823	0.106	0.904
	(0.94)	(2.91)	(0.19)	(1.64)
Net Income	-3.201	-1.448	-1.804	-1.293
	(-4.07)	(-1.49)	(-3.50)	(-2.07)
Cash	-0.033	-0.066	-0.019	-0.023
	(-1.42)	(-2.49)	(-1.27)	(-1.47)
Noninterest Income	2.483	-0.481	1.799	-0.261
	(2.18)	(-0.36)	(2.33)	(-0.34)
Loan	-0.028	-0.049	-0.006	-0.013
	(-2.28)	(-2.96)	(-0.78)	(-1.42)
Size	-0.002	0.003	-0.001	-0.001
	(-0.65)	(0.97)	(-0.57)	(-0.80)
Observations	276,230	164,844	276,230	164,861
Adjusted R-squared	0.021	0.022	0.007	0.006
Supervisor FE	Yes	Yes	Yes	Yes
State FE	Yes	No	Yes	No
Time FE	Yes	Yes	Yes	Yes

Table 7. Voluntary audits and regulatory capital management using RGL and ALLP. The table shows the relationship between voluntary audited banks' regulatory capital before *RGL* (*ALLP*) and the probability of having *Accretive RGL* (*ALLP*) in a given quarter. Each column presents the results for the ±0.5 bandwidth around the 10% threshold and the first polynomial order for the deficit of regulatory capital before *RGL* (*ALLP*). Odd (even) columns include voluntary unaudited (mandatory audited) banks as the control sample. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Accretive RGL*		*Accretive ALLP*	
Control sample:	Voluntarily unaud	Mandatory aud	Voluntarily unaud	Mandatory aud
	(1)	(2)	(3)	(4)
*Low RegCap * Vol Audited*	0.039	-0.114	-0.013	0.147
	(2.07)	(-1.05)	(-0.50)	(1.66)
Low RegCap	0.010	0.163	0.067	-0.089
	(0.82)	(1.51)	(3.48)	(-1.03)
Voluntarily Audited	-0.004	-3.1E-05	-0.009	-0.096
	(-0.51)	(-0.00)	(-0.78)	(-1.58)
Def RegCap	1.833	-2.142	-0.547	32.901
	(1.14)	(-0.17)	(-0.20)	(1.73)
*Def RegCap * Vol Audited*	-1.327	3.021	0.506	-32.423
	(-0.61)	(0.23)	(0.15)	(-1.70)
DRegCap_Low	-3.508	-44.145	-20.497	-52.369
	(-0.82)	(-1.77)	(-3.26)	(-1.65)
*DRegCap_Low * Vol Audited*	-11.186	29.311	5.217	36.146
	(-1.86)	(1.16)	(0.58)	(1.12)
LLA	-0.821	-0.976	31.143	29.942
	(-1.45)	(-1.32)	(20.69)	(17.01)
Charge-Offs	1.057	0.365	-12.112	-14.079
	(0.75)	(0.20)	(-4.69)	(-4.20)
NPL	0.349	0.503	-0.135	-0.252
	(1.50)	(1.54)	(-0.30)	(-0.44)
Noninterest Expenses	0.875	1.964	-4.449	-6.157
	(0.85)	(1.62)	(-2.19)	(-2.61)
Net Income	-3.262	-2.914	-9.369	-10.894
	(-2.97)	(-2.06)	(-4.94)	(-4.89)
Cash	-0.056	-0.032	-0.089	-0.251
	(-0.83)	(-0.37)	(-0.96)	(-2.22)
Noninterest Income	-0.384	-2.197	3.746	6.221
	(-0.29)	(-1.44)	(1.43)	(1.99)
Loan	-0.044	-0.073	-0.238	-0.222
	(-2.06)	(-2.58)	(-6.84)	(-5.27)
Size	0.005	0.004	0.002	0.001
	(1.78)	(1.11)	(0.40)	(0.18)
ALLP	3.101	2.961		
	(2.73)	(1.98)		
AFS	0.276	0.320		
	(9.41)	(7.95)		
RGL			-6.171	-0.197
			(-0.57)	(-0.01)
Observations	14,546	9,466	14,233	9,225
Adjusted R-squared	0.094	0.100	0.156	0.145
Polynomial Order	1	1	1	1
Sample	±0.5	±0.5	±0.5	±0.5
Supervisor FE	Yes	Yes	Yes	Yes
State FE	Yes	No	Yes	No
Time FE	Yes	Yes	Yes	Yes

Table 8. Voluntary audits and bank lending in the following year. The table presents the results of the effect of voluntary audits on safe lending proxies and loan growth in the following four quarters. Odd (even) columns include voluntary unaudited (mandatory audited) banks as the control sample. Because of data availability, the sample period for *Problem Loans* is 2001–2018. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Loan Type*		*Loan Maturity*		*Problem Loans*		*Loan Growth*	
Control sample:	Vol unaudited	Mand audited	Vol unaudited	Mandaudited	Vol unaudited	Mand audited	Vol unaudited	Mand audited
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voluntarily Audited	0.010	-0.048	-0.006	0.108	-0.001	-0.002	0.005	0.009
	(3.08)	(-5.72)	(-1.97)	(12.64)	(-4.84)	(-2.29)	(5.87)	(3.22)
RegCap	-0.023	0.033	0.035	-0.044	0.004	0.006	0.034	0.049
	(-1.13)	(0.80)	(1.76)	(-1.52)	(2.29)	(2.79)	(2.54)	(4.30)
LLA	-2.454	-2.143	1.580	2.516	0.070	-0.001	-1.992	-1.757
	(-7.01)	(-4.50)	(5.47)	(6.06)	(3.19)	(-0.05)	(-20.41)	(-13.97)
Charge-Offs	-8.475	-10.992	1.388	2.421	0.425	0.469	-6.356	-6.536
	(-14.85)	(-12.93)	(3.23)	(3.56)	(15.88)	(12.84)	(-39.45)	(-30.01)
NPL	0.368	1.089	0.510	0.347	0.346	0.362	-1.556	-1.779
	(3.51)	(7.84)	(5.70)	(2.93)	(45.57)	(35.79)	(-47.65)	(-42.01)
Noninterest Expenses	-4.111	-4.469	0.198	1.140	0.617	0.575	2.926	4.555
	(-3.89)	(-3.27)	(0.22)	(1.00)	(10.70)	(7.59)	(11.18)	(14.16)
Net Income	-10.223	-12.755	4.736	8.077	0.690	0.750	-0.900	-1.024
	(-10.64)	(-10.01)	(5.70)	(7.78)	(12.42)	(10.74)	(-3.34)	(-3.23)
Cash	0.011	-0.030	0.047	0.074	-0.005	-0.013	0.030	0.076
	(0.51)	(-1.04)	(2.25)	(2.74)	(-3.68)	(-6.90)	(4.92)	(8.95)
Noninterest Income	5.930	3.005	-5.267	-3.322	-0.814	-0.847	-0.726	-2.206
	(4.24)	(1.55)	(-4.30)	(-2.10)	(-11.37)	(-9.04)	(-1.94)	(-4.62)
Loan	0.192	0.227	0.022	-0.011	-0.015	-0.016	0.215	0.236
	(15.40)	(12.06)	(1.91)	(-0.69)	(-17.72)	(-15.99)	(40.08)	(44.65)
Size	0.045	0.054	-0.013	-0.020	-0.002	-0.003	0.003	0.005
	(21.08)	(19.45)	(-6.97)	(-8.01)	(-15.48)	(-14.26)	(6.00)	(7.15)
Observations	396,032	234,942	384,455	228,036	276,255	164,867	396,032	234,942
Adjusted R-squared	0.436	0.241	0.268	0.111	0.299	0.271	0.267	0.280
Supervisor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-Time FE	Yes	No	Yes	No	Yes	No	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Table 9. Voluntary audits, bank profitability, and broker deposits attraction
The table presents the relationship between voluntary audits and bank profitability and the attraction of brokered deposits in the following four quarters. Odd (even) columns include voluntary unaudited (mandatory audited) banks as the control sample. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Dependent variable:	*Profitability*		*Brokered Deposits*	
Control sample:	Voluntarily unaud	Mandatory aud	Voluntarily unaud	Mandatory aud
	(1)	(2)	(3)	(4)
Voluntarily Audited	-0.006	0.010	0.003	-0.006
	(-7.07)	(6.56)	(3.51)	(-1.60)
LLA	-2.376	-2.475	0.626	0.815
	(-24.30)	(-22.56)	(5.78)	(5.28)
Charge-Offs	-7.754	-7.746	1.550	1.907
	(-42.68)	(-32.50)	(9.61)	(7.96)
NPL	-0.946	-0.902	0.124	0.130
	(-30.93)	(-23.24)	(3.08)	(2.32)
RegCap	-0.076	-0.123	0.017	0.031
	(-2.50)	(-8.34)	(2.34)	(3.79)
Noninterest Expenses	1.592	1.625	-2.473	-2.126
	(7.10)	(6.36)	(-8.93)	(-6.15)
Net Income	20.543	22.099	-2.471	-2.811
	(63.17)	(75.31)	(-8.97)	(-7.81)
Cash	-0.002	-0.014	-0.040	-0.020
	(-0.28)	(-2.05)	(-6.03)	(-2.13)
Noninterest Income	-2.265	-2.125	2.785	3.031
	(-6.92)	(-6.02)	(7.57)	(6.34)
Loan	0.005	-0.039	0.080	0.094
	(0.48)	(-7.41)	(18.07)	(18.35)
Size	0.007	0.005	0.004	0.004
	(10.65)	(8.22)	(6.68)	(5.95)
Observations	396,032	234,942	396,032	234,942
Adjusted R-squared	0.597	0.633	0.148	0.137
Supervisor FE	Yes	Yes	Yes	Yes
State FE	Yes	No	Yes	No
Time FE	Yes	Yes	Yes	Yes

Table 10. Instrumental Regressions. The table presents the results of using the predicted probability of a voluntary audit, relative to unaudited banks, as an instrument. Panel A presents the second stage regression of voluntary audits and accounting accuracy measures. Panel B presents the second stage regression of voluntary audits and bank lending, brokered deposits attraction, and profitability. All variables are defined in Appendix 5. Standard errors are clustered at the bank level. Robust t-values are reported below coefficients.

Panel A: Voluntary Audits and Accounting Quality

Dependent variable:	*LLP*	*Accuracy LLA*	*Restatements*	*Accretive RGL*	*Accretive ALLP*
Control sample:			Voluntarily unaudited		
	(1)	(2)	(3)	(4)	(5)
$\Delta NPL_{t+1} * VolAud$	0.005				
	(1.65)				
$\Delta NPL_{t} * VolAud$	0.015				
	(4.39)				
$\Delta NPL_{t-1} * VolAud$	0.011				
	(3.73)				
$\Delta NPL_{t-2} * VolAud$	0.011				
	(3.62)				
Voluntarily Audited	1.78E-04	-0.026	-0.024	0.012	0.018
	(4.38)	(-4.21)	(-11.11)	(0.72)	(0.70)
*Low RegCap * Vol Audited*				0.119	0.028
				(2.19)	(0.44)
Observations	229,805	155,406	217,937	6,870	6,695
Controls	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes

Panel B. Economic Consequences of Voluntary Audits

Dependent variable:	*Loan Type*	*Loan Maturity*	*Problem Loans*	*Loan Growth*	*Profitability*	*Brokered Deposits*
Control sample:			Voluntarily unaudited			
	(1)	(2)	(3)	(4)	(5)	(6)
Vol Audited	0.009	-0.009	-0.001	-0.003	-0.005	0.002
	(8.49)	(-9.18)	(-16.83)	(-5.41)	(-12.54)	(5.83)
Observations	229,805	229,805	217,958	229,805	229,805	229,805
Controls	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

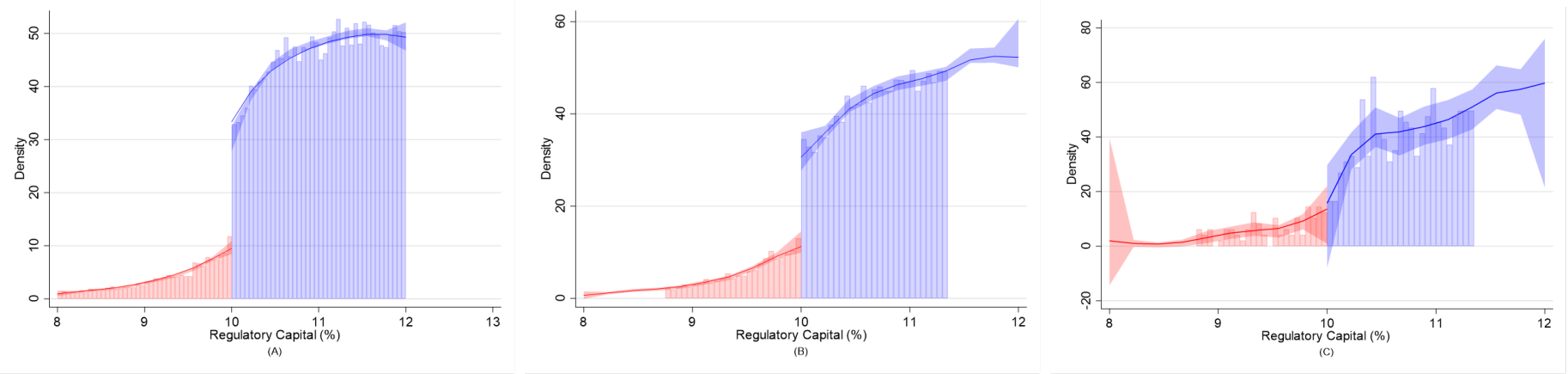

Figure 1. Discontinuity around the 10% threshold of regulatory capital - Audited vs. unaudited banks. Panel A plots the density function of reported regulatory capital for voluntarily audited banks. Panel B plots the density function of reported regulatory capital for voluntarily unaudited banks. Panel C plots the density function of reported regulatory capital for mandatory audited banks. Solid lines show the point estimates and shade areas present 95% confidence intervals in an interval of 8% to 12%. T-statistics are 14.91, 8.00, and -0.06, respectively. They are calculated using local polynomial density estimation (polynomial of order 2) (Calonico et al., 2014, 2017).