Auditor Skepticism: An Examination of Audit Partners and Accounting Estimates

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Abstract: This paper examines whether an audit partner's professional skepticism surrounding accounting estimates varies within an individual audit partner/client relationship. Using confidential data on audit partner identity in the banking industry, we find that banks systematically report higher loan loss reserves at the beginning of audit partner/client relationships relative to the later years. However, we do not find evidence that there are changes in actual bank risk-taking across the tenure of the audit partner/client relationship. We also find that the higher loan loss reserve represents higher estimate quality in the early years of the audit, relative to later years. This result suggests that a partner's professional skepticism is higher and more appropriate in the early years of the audit, but declines over the relationship. Our results highlight the inconsistency of an individual audit partner's professional skepticism during a partner/client relationship and should be of interest to regulators, auditors, and investors.

1.   Introduction

External auditors play an important role in a firm's corporate governance by providing assurance over publicly released financial statements, which helps mitigate agency costs that exist between management and outside stakeholders (Fan and Wong 2005). A challenge in fulfilling this governance role is that the quality of an audit is dependent on the professional skepticism exercised by auditors (KPMG 2012). Regulators are continually concerned that auditors fail to exercise appropriate and consistent levels of skepticism (PCAOB 2011; IASB 2012). Despite the importance of auditor professional skepticism, limited empirical evidence exists on the dynamic effects that individual partners have on the financial statements and how their skepticism may vary during the audit partner/client relationship (hereafter, "the relationship"). To the extent that there is variation in professional skepticism exercised by an audit partner within an individual partner/client relationship, this could result in either inefficient or ineffective audits, particularly related to higher-risk areas such as key accounting estimates. In this paper, we examine whether audit partner professional skepticism changes across a partner/client relationship by examining accounting estimates of banking clients.

While prior studies have examined the effects of professional skepticism and individual audit partners on various audit outcomes, much of the research is either analytical or experimental (Nelson 2009; Brazel, Jackson, Schaefer and Stewart 2016; Cohen, Dalton, and Harp 2017) or is limited by data availability, as individual partner identity is unavailable prior to the implementation of Form AP in 2017. Given limited time series of partner identity, prior studies have attempted to infer partner tenure from a public disclosure (Laurion et al. 2017; Kuang et al. 2020; Krishnan and Zhang 2019) or rely on international data (Lennox et al. 2014; Chi et al. 2009; Carey and Simnett 2006). Other studies rely on broad measures of audit quality

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and provide little insight into variation in auditors' professional skepticism on a specific high-risk area, such as accounting estimates (Gipper et al. 2021). Importantly, studies of the effect of partner rotation are generally focused on variation in audit outcomes when changing from one partner to a *different* partner. In this study we are interested in the variation of exercised professional skepticism across the relationship of the *same* audit partner on a given client. We overcome limitations of prior research by utilizing confidential data on audit partner identity for bank audits over an extended time series and by examining the partner effect on a specific account, the loan loss reserve estimate.

Ex ante, whether changes in an individual audit partner's professional skepticism could affect accounting estimates is not obvious. While audit partners ultimately lead the engagement team, other team members also affect the audit decision regarding the reporting of accounting estimates in audited financial statements (Gipper et al. 2021). Additionally, audit firms use extensive quality control systems (Bedard et al. 2008), which include oversight by engagement quality review partners, who are involved throughout the engagement and tasked with ensuring audit quality and consistency with firm standards (Lennox et al. 2020; Epps and Messier 2007). Further, within the banking industry, banks are subject to oversight by the bank's board of directors, internal audit function, and monitoring by regulatory examiners. Therefore, the impact of an individual audit partner on accounting estimates may be subsumed by other internal or external regulatory monitors. Such an explanation is consistent with the lack of evidence for differential audit quality effects associated with mandatory audit partner rotation or partner characteristics documented in some prior studies (Gipper et al. 2021; Kuang et al. 2020; Burke et al. 2019).

On the other hand, prior research provides evidence that individual partner characteristics and incentives do affect audit quality (Lennox et al. 2020; Gul et al. 2013) or perceived audit quality (Aobdia et al. 2015). A change in partner professional skepticism could specifically affect accounting estimates in several ways. First, in the early stages of the relationship, audit partners could enforce the reporting of higher quality estimates by taking a "fresh look" at firms' financial reporting. Incentives that favor higher professional skepticism early in engagements includes the potential for regulatory enforcement and litigation (Nelson 2009). Thus, while audit partners may enforce higher quality reporting early in the relationship, the partner may become less focused on estimate quality as their time with the client increases (Laurion et al. 2017). Alternatively, early relationship audit partners may not have the knowledge of evidential patterns to determine whether the evidence suggests heightened risk (Nelson 2009). Thus, partners need time to gain sufficient knowledge of the client and its specific risks, leading to lower quality reporting of accounting estimates early in the relationship relative to estimates reported later in the relationship (Lennox and Wu 2018). Additionally, the knowledge of impending rotation may heighten reputation concerns as the current partner considers the successor audit partner's review of her work (Cassell et al. 2016) or a perceived higher risk of regulatory scrutiny upon rotation. In all of these cases, we would expect to observe variation in the sufficiency of professional skepticism exercised by audit partners on accounting estimates across the partner/client relationship.

We use the banking industry as a setting to examine variation in the reporting of accounting estimates within a partner/client relationship for several reasons. First, one of the most significant accounting estimates in the banking industry, the loan loss reserve, provides us with an opportunity to measure the quality of a key estimate by examining ex post bank charge-

off information (Beatty and Liao 2014). Second, all bank holding companies (BHCs) above certain size thresholds are required to file a consolidated financial report, referred to as the Y9C filing, which include confidential line items such as the name of the audit partner assigned to a bank for a given year.[1] These confidential data allow us to construct a panel data set of audit partner/client relationships between 2010 and 2019.[2] The availability of these data allows us to specifically identify both the timing of partner changes, as well as individual partner tenure. We include bank × partner × engagement fixed effects in our model, effectively allowing us to examine variation in the loan loss reserve estimate within a given partner/client relationship, holding constant partner or client-specific characteristics.[3]

In our setting, we identify the loan loss reserve as an area where we can identify professional skepticism exercised by the audit partner. Though a client's loan loss reserve can change over time, finding evidence of a systematic increase in the loan loss reserve at the beginning of individual audit partners' relationship with their clients compared to the end of the relationship would suggest heightened skepticism at the beginning of the relationship. Our primary result suggests that loan loss reserves are significantly higher in the first two years of an audit partner/client relationship relative to later years. Prior research suggests that increased scrutiny results in an increase in the audit procedures performed, typically resulting in a higher reserve level (Stuber and Hogan 2021; Westermann et al. 2019). Thus the higher level of loan loss reserve in the initial years of the audit is consistent with higher professional skepticism at the beginning of the relationship relative to the later years. Economically, the loan loss reserve is

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[1] Throughout the paper, we refer to "BHCs" and "banks" interchangeably.
[2] These fields are available from 2005 onwards as we need at least 5 years of leading data to identify partner/client relationships lasting at least five years. Further, examining a sample period from 2010-2019 allows us to avoid the effects of the financial crisis of 2008 – 2009, as well as the COVID-19 pandemic of 2020.
[3] Engagement fixed effects capture repeat assignments from the same audit partner.

2.45 percent higher in the first two years of the partner/client relationship, relative to later years of the relationship.

Increases in reported loan loss reserve estimates can result from either changes in actual loan portfolio risk or changes in the reporting of risk. If the change in the loan loss reserve represents a change in actual risk, then our results do not suggest inconsistency in professional skepticism, because the change in reported risk reflects changes in underlying bank risk. On the other hand, if the change in the loan loss reserve is due to a change in the reporting of risk, then our primary results indicate the consistency of professional skepticism related to the loan loss reserve estimate varies across the relationship.

To explore these two possibilities, we examine the effect of partner tenure on loans that are less than 30+ days past due. Audit partners are prohibited significantly influencing client operating decisions as such an influence would result in a partner auditing their own work, a clear violation of standards (SEC 2019); however, if individual audit partners do affect the underlying risk-taking activities of their clients, we would expect to see changes in past due loans, which are leading indicators of loan portfolio deterioration and are not subject to management discretion (Gopalan et al. 2021). Consistent with partners not influencing bank operations, we do not find any change in past due loans at the beginning of the audit partner/client relationship relative to the later years. However, we do find that reported non-accrual loans, which can have a discretionary component (Gopalan, Imdieke, Schroeder, and Stuber 2021) increase at the beginning of the relationship. Collectively, these results suggest that the higher loan loss reserve, and loans classified as non-accrual early in the audit partner/client relationship is the result of changes to the reporting of underlying risk. This evidence indicates that partners exercise higher professional skepticism over the reporting of problem loans and the

loan loss reserves early in the relationship, even though the underlying loan portfolio quality is not statistically different relative to the latter years of partner tenure.

While higher professional skepticism is usually associated with a more effective audit, it is also possible that an auditor can increase scrutiny to the point of being too skeptical, resulting in an inefficient audit (Nelson 2009; Westermann et al. 2019). Thus, variation in accounting estimates alone do not provide insight into the effect of the audit partner's skepticism on estimate quality. One key benefit of examining the loan loss reserve is that we can evaluate the quality of the estimate based on observing ex post loan charge-offs. To do so, we utilize a model from Altamuro and Beatty (2010) to examine the relation between the loan loss provision and subsequent charge-offs in the early years of the relationship relative to later years. We find that the validity of the loan loss provision is significantly higher in the early years relative to later years, consistent with higher quality financial reporting at the beginning of the relationship. Though skepticism appears higher at the beginning of the relationship, our results suggest that early relationship skepticism results in a more effective audit.

One reason that partners may exhibit higher skepticism in the early years of the relationship is due to managing incentives related to their reputation risk (Nelson 2009). If this is the case, we would expect the effects to be strongest for those clients where partners face the greatest reputation risk: public client engagements, which are subject to potential PCAOB inspection, and large client engagements, where audit failure will have the greatest reputational impact. Consistent with partners being particularly concerned with inspection risk on public and large clients, we find the loan loss reserve is significantly higher in the early years for public banks and large banks relative to private banks and small banks, respectively. Collectively these

results suggest that incentives to exhibit higher skepticism early in the relationship are strongest when there is a stronger monitoring environment and amongst higher-risk clients.

Overall, our results suggest that there is higher professional skepticism and higher quality reporting of the loan loss reserve estimate in the earlier years of the audit partner/client relationship, consistent with early relationship audit partners providing a "fresh look". However, our results also suggest that audit partners' professional skepticism with a client decline over time, thus potentially negatively impacting the effectiveness of an audit in the later stages of a relationship.

This paper contributes to several streams of literature. First, our results contribute to the literature on professional skepticism. Much prior research on skepticism is limited to experimental research. Our study is unique in that we can isolate changes in individual partners' skepticism over their relationship with individual clients. Second, our results contribute to the auditor rotation and tenure literature. There is continued debate as to whether audit partner rotation is an effective approach to alleviate the concerns that may arise from long partner/client relationships. We find some evidence of higher quality loan loss reserve estimates in earlier years of the relationship, which provides evidence of potential benefits of auditor rotation.

Second, we contribute to the developing literature on individual audit partners. With the newly available Form AP data revealing partner identity, the focus of auditing research has been on the effect of individual partner characteristics on audit quality. In this study rather than focusing on the partner characteristics, we utilize partner fixed effects to control for partner characteristics and isolate the effect of individual partners' skepticism on the reporting and validity of the loan loss reserve estimate.

Our findings are informative to bank regulators as they demonstrate that shifts in the overall governance function in banks leads to reduced consistency of financial reporting and the reporting of bank risk. Our findings are also of interest to auditing standard setters and public accounting firm quality control system administrators, as they weigh both the costs and benefits of audit partner rotation.

2.   Background and Theoretical Framework

2.1.   Professional Skepticism

Auditors have a responsibility to plan and perform an audit with professional skepticism which requires an auditor to maintain a questioning mind and thoroughly investigate all evidence presented by the client (PCAOB 2006; AS 1015.07). The degree of professional skepticism employed is positively related to the evidence that an auditor requires to justify their audit opinion (Brazel et al. 2016; Nelson 2009). However, the degree of professional skepticism employed requires a balance between effectiveness and efficiency (Nelson 2009). Thus, while an auditor requires a certain amount of evidence to reduce the chance that they fail to detect a misstatement (e.g., audit effectiveness), if an auditor is too skeptical, the audit will be inefficient and potentially cause client dissatisfaction.

Insufficient professional skepticism is consistently cited by the accounting profession and regulators as a primary cause of audit failures, Securities and Exchange Commission (SEC) and Public Company Accounting Oversight Board (PCAOB) enforcement actions, and auditor litigation (e.g., Beasley, Carcello, and Hermanson 2001; Brazel et al. 2016; Messier, Kozloski and Kochetova-Kozloski 2010; PCAOB 2012). However, why and where insufficient skepticism persists is not well understood. Nelson (2009) provides a model that describes how audit evidence interacts with auditor knowledge, traits and incentives to reflect professional

skepticism. While insufficient knowledge early in a relationship may result in insufficient professional skepticism, incentives to avoid reputation penalties may increase skepticism. However, Brazel et al. (2016) suggest that audit firms' evaluation systems may inadvertently discourage skepticism among auditors by penalizing auditors who employ appropriate skepticism, but do not identify misstatements.

Management estimates are subject to bias and are a key area where earnings management may occur. Thus, applying sufficient professional skepticism is of particular importance when evaluating management estimates (PCAOB 2011). Additionally, obtaining audit evidence relative to estimates may require different auditing procedures from those to evaluate routine historical data. Thus, early in the relationship, audit partner knowledge is low which will require the partner to solicit more information from sources outside of the company to be comfortable with management's estimate. This requirement may decline over time, thus decreasing overall skepticism.

2.2. Prior Literature on Audit Partners Characteristics and Audit Partner Tenure

Regulators have expressed interest in how individual audit partners affect audit outcomes. In 2018, the Public Company Accounting Oversight Board (PCAOB) implemented a requirement to disclose audit partner identity for publicly traded companies via Form AP. The rationale of regulators is that in spite of firm quality control systems, audit partners may cause variation in the quality of individual audit engagements (PCAOB 2011). While the work of audit partners is subject to firm-level quality control measures, audit partners have significant latitude in many areas of the engagement. Additionally, since individual audit partners bear the primary responsibility for the oversight and execution of the audit engagement, it is likely that varying

characteristics and incentives of individual partners would affect the conduct and quality of the audit (Lennox and Wu 2018). Consistent with the existence of an individual partner effect, prior literature suggests that factors such as partner style, expertise, and tenure are associated with audit quality (Carey and Simnett 2006; Chen et al. 2008; Gul et al. 2013). However, there is little evidence that the disclosure of partner identity itself has had any significant impact on audit quality (Cunningham et al. 2019).

The literature is decidedly mixed in examining the effects of audit partner tenure and auditor rotation on audit quality. On one hand, proponents of mandatory partner rotation argue that longer tenure impairs auditor independence resulting in lower quality. Additionally, increased tenure could result in decreased professional skepticism which may make the audit procedures more predictable to the client. Thus, a "fresh look" from a new auditor could improve audit quality via increased professional skepticism (PCAOB 2011). Prior research has found support for this theory in that audit partner rotation firms experience an increase in restatement announcements (Laurion et al. 2017) and that longer partner tenure is negatively associated with the propensity to issue going concern opinions (Carey and Simnett 2006; Ye et al. 2011).

On the other hand, opponents of mandatory firm and/or partner rotation argue that longer tenure could lead to higher audit quality because of the partner's accumulated client- and industry-specific knowledge. Research in support of this theory finds that longer audit firm tenure is associated with smaller discretionary accruals (Chen et al. 2008; Chi et al. 2017), and a reduced likelihood of undetected fraud (Patterson et al. 2019). Additionally, mandatory auditor rotation results in sometimes unwanted auditor client realignment due an audit firm's inability to comply with partner rotation rules (Kuang et al. 2020).

2.3 Hypothesis Development

In contrast with studies focused on the change in financial reporting quality when changing from one partner to another (i.e., partner rotation), in this study, we are interested in whether and how individual audit partner professional skepticism varies within an individual partner/client relationship. Ex ante, it is unclear whether and how individual partner skepticism will vary within an audit engagement.

A partner's engagement team performs the majority of substantive audit work, but the engagement team does not typically rotate when the audit partner rotates. Therefore, the continuity of experience on the engagement team should mitigate any individual partner's effect on financial reporting. Furthermore, bank examiners are not subject to rotation requirements, thus the consistency of bank examiners could mitigate the effects of changes in an individual audit partner on reported bank risk. Further, Knechel et al. (2015) find that aggressive and conservative audit reporting persists for individual audit partners over time. This would suggest that partners' skepticism also may remain constant over time. If partners' traits affect the underlying reporting of their clients, then we would expect that there may be a change in audit quality immediately following auditor rotation, but we would not expect variation in the conservativeness or aggressiveness of reporting across an individual audit partner's relationship with a given client.

Alternatively, it is possible that an auditor's professional skepticism of a bank's financial reporting, and particularly accounting estimates, could be heightened during the early years of partner's tenure due to increased incentives related to reputation concerns and partner focus on the client. However, in the early years of an engagement, a new partner does not have the client-specific knowledge to challenge the bank's reporting of problem assets. In this case, we would

expect a more effective level of professional skepticism in the later years of an audit

engagement. Given the competing predictions of when and whether audit partner skepticism

effects the reporting of accounting estimates, we state our hypothesis in null form.

> **H1:** There is no change in the reporting of accounting estimates across an individual
> audit partner/client relationship.

3. Sample Selection and Identification Strategy

3.1. Sample Selection

To investigate how audit partner skepticism affects financial reporting, we construct a

panel data set consisting of both publicly available and proprietary information. Our first data

source contains annual reports of banks' balance sheets, income statements and asset quality.

These reports, referred to as the Consolidated Reports of Condition and Income (colloquially

referred to as Call Reports), are mandatory filings for all regulated financial institutions,

regardless of their size or publicly listed status. These reports are useful for market investors who

wish to gather information on publicly traded banks (Badertscher et al. 2018), as well as for

examiners who use Call Report to determine whether reported bank performance meets or

exceeds implicit or explicit risk thresholds (Gopalan 2018; Costello et al. 2019). From the

publicly available Call Report data, we collect information on bank size, performance, and asset

quality. Our second data source consists of confidential data from bank regulatory agencies that

identify the audit partner on all bank audits between 2005 and 2019. These data allow us to

identify the year in which the audit partner changes for a given client as well as identify the

tenure of the audit partner/client relationship. We begin our sample period in 2010, as five years

of lagged partner identity data are necessary to accurately calculate partner tenure.[4] We require

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[4] We remove 39 public client relationships (1.4%) that lasted greater than 5 years from our sample as these are
obvious data abnormalities.

that all bank-year observations have non-missing total assets at time period t. We merge audit partner/client relationship data from bank holding company regulatory filings with bank-year Call Report data, resulting in a final sample of 6,277 bank-year observations from 2010 to 2019.

Table 1 and Figures 1a-1c present the frequency of the tenure length of individual audit partner/client relationships (hereafter: relationships) in our data set by bank type. The highest concentration of relationships last a maximum of 1 year (23.89 percent) or 5 years (19.96 percent). These trends are consistent with mandatory rotation policies for public bank clients at the 5-year mark. We also see in Figure 1c that private banks tend to follow to the same rotation schedule as only 13.37 percent of private bank relationships extend past 5 years. This trend is consistent with audit firms enacting internal quality control standards requiring audit partner rotation. Collectively, the trends presented in Table 1 and Figures 1a-1c provide confidence that the audit partner data is accurate and consistent with regulation of audit partner rotation.

3.2. Identification Strategy

Our empirical strategy focuses on examining the variation in the loan loss reserve estimate across an audit partner's relationship with a client. Specifically, we measure how reported bank outcomes are affected by relationship stage between the auditor and the client. We estimate the following model using OLS regression:

$$LLR_{it} = \beta_0 + \beta_1 Relationship\_Stage_t + \gamma Controls + \alpha_{ipe} + \alpha_t + \varepsilon_{it} \qquad (1)$$

where LLR is the allowance for loan loss reserve scaled by beginning of the period total assets.[5] We measure $Relationship\_Stage$ in two ways. First, we construct a variable $Initial\_Year$ which is equal to one when the relationship is in its first year. Second, we create an indicator variable $Beginning$ which is equal to one when the relationship is in the first or second year. The

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[5] We multiple LLR by 100 to when estimating the model to ease in the interpretation of coefficients.

coefficient on the *Relationship_Stage* variables captures the difference in *LLR* in the early years of the relationship relative to the later years. Increased scrutiny results in an increase in the audit procedures performed, typically resulting in a higher reserve level (Stuber and Hogan 2021; Westermann et al. 2019). Thus, a positive coefficient on *Relationship_Stage* proxies would indicate heightened professional skepticism. We include bank-level control variables for the size and performance of the bank including assets *(Size)*, *Equity*, and *Net_Income* as well as loan values *(Loans)* to mitigate concerns that our results may be driven by the size or performance of the bank unrelated to the relationship between tenure and bank outcomes. Standard errors are clustered at the bank level.

One potential concern is that unobservable differences in bank characteristics, audit partner characteristics, audit firm characteristics and/or changing macroeconomic conditions during our sample period might impact our results. To mitigate this concern, we incorporate two classes of fixed effects to control for unobserved heterogeneity in our sample. The first class of fixed effects capture the auditor/client relationship. Specifically, we include a fixed effect for bank × audit partner × engagement. The second class of fixed effect is a year fixed effect that allows us to examine variation within a given year. The inclusion of these fixed effects helps mitigate concerns about endogeneity and the potential for unobserved alternative explanations in several ways. First, with the inclusion of the bank × audit partner × engagement fixed effects, we control for time-invariant bank and auditor/audit firm characteristics that may affect our inferences. For instance, the reporting of underlying bank risk may be collinear with the size of the bank, or with the individual partner/firm characteristics. The inclusion of these fixed effects allows us to isolate within partner/client relationship changes in *LLR*.

4. Summary Statistics and Results

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4.1. Summary Statistics

Panel A of Table 2 presents summary statistics for all bank-year observations in our sample, while Panels B and C of Table 2 provide summary statistics separately for public and private banks, respectively. The average bank in out sample bank in our sample has $14.6 billion in total assets. As expected, public banks in our sample are much larger with an average of $15.2 billion in total assets compared to $14.1 billion in total assets for private banks. Loans comprise a majority of both public and private banks at 71.7 percent and 67.7 percent of assets, respectively. Sample banks are profitable, with a mean ROA of 0.8 percent, and have a low level of loan loss provisions (mean of 0.3 percent) and loan charge-offs (mean of 0.4 percent) of total assets. In terms of asset quality, our sample banks also appear to perform well overall. The mean loan loss reserve for public (private) banks is 1.0 (1.1) percent. Sample public (private) banks have a low percentage of past due and non-accrual loans with 0.5 (0.5) percent of assets with loans that are 30-89 days past due and non-accrual loans at 1.1 (1.2) percent of total assets.

4.2. Results

4.2.1. Reporting of underlying bank risk

In our first analysis, we examine whether banks' loan loss reserve level changes across the audit partner/client relationship. For this analysis we first estimate equation (1) using the outcome variable loan loss reserve scaled by lagged total assets (*LLR*). Columns (1) and (3) of Table 3 shows that the coefficient on *Initial_Year* is positive and statistically significant below the 0.01 percent level for the loan loss reserve. Columns (2) and (4) of Table 3 shows that the coefficient on *Beginning* is positive and statistically significant below the 0.01 percent level for the loan loss reserve. In terms of economic significance, the coefficient of 0.022 (0.027) in column (3) (column (4)) suggests that the loan loss reserve is 2.0 (2.45) percent higher in the first

year (the beginning) of the relationship relative to all subsequent years. The result provides evidence supporting higher professional skepticism resulting in a higher *LLR* at the beginning of the auditor's tenure relative to the later years.

4.2.2. Changes in bank risk-taking

The identified variation of the loan loss reserve documented in Section 4.2.1. can result from either changes in actual bank risk or from changes in the reporting of underlying bank risk. If the change in the loan loss reserve represents a change in actual risk, then our results do not suggest a change in professional skepticism, because the change in reported risk represents the change in the underlying economics of the bank. On the other hand, if the change in the loan loss reserve is not due to change in actual bank risk, but is a product of a change in the reporting of risk, then this suggests that risk reporting is affected by the partner's higher professional skepticism at the beginning of the relationship.

Though audit partners are specifically prohibited from influencing client operating decisions (SEC 2019), we conduct analyses to assess the possibility that the individual audit partner affects actual bank risk, rather than reported bank risk. Specifically, we examine the effect of the relationship stage on loans that are 30+ days past due. If individual audit partners affect the underlying risk-taking activities of their clients, we would expect to see changes in past due loans, which are leading indicators of bank deterioration and are not subject to management discretion. Additionally, the audit evidence required to evaluate loans that are 30+ days past due requires significantly less professional skepticism than audit evidence required to evaluate the validity of an estimate such as the *LLR*.

For this analysis we first estimate equation (1) replacing *LLR* with the outcome variable *PD_30+* which is measured as the total value of loans 30-89 days past due and still accruing

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scaled by beginning of period assets. Columns (1) through (4) of Table 4 shows that the neither the coefficients on *Initial_Year* nor *Beginning* are statistically significant. Thus, consistent with a lack of partner influence on bank operations, we do not find evidence of changes in past due loans between the beginning and later years of the audit partner/client relationship.

We next estimate equation (1) using the outcome variable of non-accrual loans (*NACC)* which is measured as the total value of non-accrual loans scaled by beginning of period assets. We find that the reporting of non-accrual loans is greater at the beginning of the audit partner/client relationship. Columns (5) and (7) (columns (6) and (8)) of Table 4 show that the coefficient on *Initial_Year* (*Beginning)* is positive and statistically significant below the 0.05 percent level for non-accrual loans. In contrast with past due loans, the non-accrual loan designation is subject to some discretion and therefore is subject to higher variation in professional skepticism.[6] Thus, our results are consistent with higher discretionary reporting of troubled assets at the beginning of the relationship, relative to later in the relationship which is also consistent with heightened skepticism at the beginning of the relationship.[7]

Collectively, these results suggest that the higher loan loss reserve, and loans classified as non-accrual, but not higher past due loans early in the audit partner/client relationship is the result of changes to the reporting of underlying risk as opposed to an actual increase in bank risk taking. Thus, our results suggest that audit partners are demonstrating higher professional skepticism and influencing clients' estimates of the *LLR* by requiring a higher *LLR* and higher

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[6] Guidance requires that banks place loans in non-accrual status once a loan is 90 days or more past due; however, according, loans are not required to be past due by 90 or more days to be classified as non-accrual. Loans should be classified as a non-accrual loan once reasonable doubt exists regarding the collectability of the loan, regardless of its past due status (FFIEC 2019). Thus, there are opportunities for significant discretion in the determination of non-accrual loans.

[7] As discussed in section 5.3.2, we also find evidence that reported charge-offs, another measure of bank risk subject to discretion, is higher in the first two years of partner/client tenure relative to the later years.

recognition of problem assets in the initial years of the partner/client relationship, relative to the later years.

4.2.3. The validity of auditors' estimates

In the prior section, we conclude that audit partners exhibit higher professional skepticism by eliciting higher reporting of underlying bank risk in earlier years of the relationship with their client relative to the later years. However, it remains unclear whether this higher professional skepticism represents improved estimate quality (audit effectiveness) or a decline in audit efficiency. To assess estimate quality, we follow Altamuro and Beatty (2010) and examine loan loss provision (*LLP*) validity. If LLP validity is higher in the early years of the relationship relative to later years, it would suggest that estimate quality is also higher in earlier years of the relationship which would imply that the auditor's increase professional skepticism in early years of the relationship increase audit effectiveness. However, if the estimate quality is either not different or worse in earlier years of the relationship, it would imply that audit partners are *overly* skeptical in the early years of the relationship potentially resulting in an inefficient audit.

When using specific accrual accounts to assess financial reporting quality it is important to identify an account that is material, subject to discretion, and that can be tied directly to explanatory factors of interest (McNichols 2000). The allowance for loan losses is typically the largest estimate on a bank's balance sheet and has implications for bank lending, opacity and overall systemic risk (Beatty and Liao 2014; Iannotta and Kwan 2014; Bushman and Williams 2012). The LLP is the measure of the change in the allowance for loan loss, net of loan charge-offs and recoveries. It is subject to a high level of management discretion making it susceptible both to management bias and manipulation (Beatty and Liao 2014). Prior literature has found that bank management uses the LLP to manage earnings (e.g., Beatty et al. 2002) and capital (Ahmed et al. 1999). The LLP is

directly impacted by loan portfolio composition and loan growth, and a bank's loan portfolio management decisions are observable through financial reports. Thus, audit partners may be able to affect the estimate that is included in the LLP.

The validity of the LLP can be evaluated *ex post*, making it an attractive estimate for empirical analysis. The SEC's Staff Accounting Bulletin (SAB) 102 outlines the procedures that should be used to validate loan loss accounting methodology. The bulletin states that, "a registrant's loan loss allowance methodology is considered valid when it accurately estimates the amount of loss contained in the portfolio. Thus, the SEC normally would expect the registrant's methodology to include procedures that adjust loan loss estimation methods to "*reduce differences between estimated losses and actual subsequent charge-offs* (SEC 2001)." Consistent with this expectation, we consider a stronger relationship between current year LLP and subsequent year charge-offs to be indicative of greater LLP validity. We follow prior literature and regulatory guidance, in considering one year to be the appropriate time period over which to examine subsequent charge-offs (Altamuro and Beatty 2010; OCC 2012; Bushman and Williams 2012; Nicoletti 2018).[8]

We use the following model based on Altamuro and Beatty (2010) to examine whether the validity of the loan loss provision varies with audit partner tenure:

$$Future\_Charge\_Offs_{t+1} = \alpha + \beta_1 Relationship\_Stage_t + \beta_2 LLP_t +$$
$$\beta_3 Relationship\_Stage \times LLP_t + \gamma Controls + \alpha_{ipe} + \alpha_t + \varepsilon_{it} \qquad (2)$$

where *Future_Charge_Offs$_{t+1}$* is equal to charge-offs in year *t+1* scaled by beginning total assets.

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[8] According to the OCC's Comptroller's Handbook, "Many banks consider coverage of one year's losses an appropriate benchmark of an adequate reserve for most pools of loans...A one year coverage period is generally considered appropriate because the probable loss on any given loan in a pool should ordinarily become apparent in that time frame (OCC 2012)." The leading one year period is also consistent with prior literature which considers the LLP to be more timely if losses are recognized concurrently or in advance of loans becoming non-performing (OCC 2012; Bushman and Williams 2012; Nicoletti 2018).

Based on the definition of LLP validity, a positive relationship between the LLP and subsequent charge-offs suggests that an increase (decrease) in the LLP in time t is associated with an increase (decrease) in charge-offs in subsequent periods. The validity of the LLP is measured by the strength of the relationship between the LLP in time t and charge-offs in time $t+1$; thus, a positive (negative) coefficient on LLP suggests higher (lower) LLP validity. In this study, we are interested in how the audit partner relationship stage affects the relationship between the LLP and subsequent charge-offs. Thus, we interact both of our measures of *Relationship_Stage* with *LLP*. A positive (negative) coefficient on β_3 indicates that the validity of the LLP is higher (lower) in the initial years of the relationship compared to later years of audit partner tenure and would suggest a more (less) effective audit.

Results from estimating equation (2) are presented in Table 5. In columns (2) and (4) the coefficients on *Initial_Year$_t$* × *LLP$_t$* and *Beginning$_t$* × *LLP$_t$* related to the future charge-offs are positive and significant at the 5 percent level. These results provide evidence that the validity of the LLP is higher in the earlier years of the relationship compared to later years of the relationship. Thus, our results suggest the increase in skepticism in the earlier years of the relationship provides a more effective, but not inefficient audit. However, the effectiveness of the audit partner's professional skepticism declines in the later years of the relationship.

5.0.   Additional Analyses and Robustness

The results presented in Section 4 provide evidence that, on average, banks report higher loan loss reserves and non-accrual loans in the earlier years of the audit partner/client relationship. Nelson (2009) suggests that "incentives favoring professional skepticism are provided by the potential for regulatory enforcement by the PCAOB, SEC, and other regulatory bodies, litigation, and consequent reputation loss that reduces an audit firm's ability to attract

clients and maintain higher fees for audit services" (p.11). Therefore, in this section, we examine whether the effects of professional skepticism on bank estimates across a relationship vary based on the regulatory environment and degree of monitoring present at the bank.

Specifically, we examine whether the effects vary based on public vs. private banks and whether the effects vary based on the size of the bank where regulatory monitoring of the bank and audit partner would be higher.

5.1.   Public versus private banks

Audit partner reputation risk varies across public and private client engagements. Specifically, public company engagements are subject to potential PCAOB inspection and the reputation risk of failure on a public engagement is greater relative to a private engagement due to likely higher scrutiny. If the higher partner professional skepticism in the early years of the audit is due to greater salience of reputation risk in the early years of a client engagement, we would predict that the early relationship effects documented in Table 3 would be strongest in public clients. To examine this prediction, we create an indicator variable *Public* which is equal to one for publicly traded banks and zero otherwise. We then modify equation (1) as follows:

$$LLR_{it} = \beta_{0} + \beta_{1}Relationship\_Stage_{t} + \beta_{2}Public_{t} + \beta_{3}Relationship\_Stage_{t} \times Public_{t} + \gamma Controls + \alpha_{ipe} + \alpha_{t} + \varepsilon_{it} \qquad (3)$$

Results from estimating equation (3) are presented in Table 6. In columns (3) and (4) the coefficients on *Initial_Year$_t$ × Public$_t$* and *Beginning$_t$ × Public$_t$* related to the loan loss reserve are both positive and significant at the 1 percent level. These results provide some evidence that higher audit partner professional skepticism in early years of the relationship is stronger in public banks where incentives favoring professional skepticism are higher. Thus, mandatory audit partner rotation may induce higher quality estimates by forcing more early-stage audit partner/client relationships.

5.2. Large versus small banks

Outside of the increased risk of regulatory scrutiny from the PCAOB on public clients, prior research finds that audit firm litigation risk increases with firm size (Kim and Skinner 2012). Additionally, the PCAOB uses risk-based methods of selection for reviewing issuer audits which likely includes the size of the issuer.[9] Thus, audit partners are likely incentivized to exhibit more professional skepticism early in their tenure on larger clients. To examine this relationship, we create an indicator variable *Large_Bank* which is equal to one for all banks with greater than $1 billion in assets and zero otherwise.[10] We then modify equation (1) as follows:

$$LLR_{it} = \beta_{0+}\beta_1 Relationship\_Stage_t + \beta_2 Large\_Bank_t +$$
$$\beta_3 Relationship\_Stage_t \text{ x } Large\_Bank_t + \gamma Controls + \alpha_{ipe} + \alpha_t + \varepsilon_{it} \qquad (4)$$

Results from estimating equation (4) are presented in Table 7. In columns (3) and (4) the coefficients on *Initial_Year*$_t$ × *Large_Bank*$_t$ and *Beginning*$_t$ × *Large_Bank*$_t$ related to the loan loss reserve are positive and significant at the 5 percent (1 percent) level, respectively. These results again provide some evidence higher audit partner professional skepticism in early years of the relationship is stronger in public banks where incentives favoring professional skepticism are higher.

5.3. Robustness tests

5.3.1. Alternative measurements of the loan loss reserve

It is possible that our results are sensitive to measurement and design choices, especially regarding our main outcome variable of interest (*LLR*). One potential concern is that scaling the loan loss reserve by total assets does not accurately capture the underlying riskiness of the bank's portfolio. Thus, we also measure *LLR* by scaling the loan loss reserve by both contemporaneous

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[9] https://pcaobus.org/oversight/inspections/inspection-procedures
[10] We select the $1 billion in asset threshold as this corresponds with an increase in client size as well as auditor responsibility for financial statement audits under FDICIA.

loans and by lagged loans. Results are presented in Table 8. In Columns (1) through (4), we scale *LLR* by contemporaneous loans and continue to find a significant and positive coefficient on *Initial_Year* and *Beginning* at the 5 percent and 1 percent level, respectively. In Columns (5) through (8), we scale *LLR* by loans in year *t-1* and continue to find a significant and positive coefficient on both *Initial_Year* and *Beginning* at the 1 percent level. Thus, our results are not driven by the design choice related to how we scale the loan loss reserve.

5.3.2. Alternative dependent variables

Our main approach is to examine the effects of the audit partner/client relationship stage on discretionary financial reporting by examining changes in the reporting of the loan loss reserve and non-accrual loans. However, it is also possible that the effects manifest in loan loss provision and charge-offs. To examine this relationship, we re-estimate equation (1) and replace the loan loss reserve with loan charge-offs (*Charge_Offs)* and the loan loss provision *(LLP)*. Results are provided in Table 9. In columns (1) and (3) the coefficient on *Initial_Year* is not significant at conventional levels related to either loan charge-offs or the loan loss provision. However, in columns (2) and (4) the coefficient on *Beginning* is positive and significant at the 5 percent level for both loan charge-offs and the loan loss provision. Thus, our evidence suggests that the audit partner's effect on loan loss provision level and charge-off levels is present, but slightly delayed compared to the effect on the loan loss reserve.

6.   Conclusion

In this study, we examine whether an audit partner's professional skepticism varies across an audit partner/client relationship by examining the consistency and quality of a key accounting estimate in banks. We use a novel panel data set of audit partner/client relationships within the banking industry and find that banks systematically report a higher loan loss reserve at

the start of an audit partner/client relationship compared to later years of the relationship. Further, we find that the loan loss reserve has higher validity as the start of audit partner/bank relationships. We also find similar effects for loan charge-offs and the loan loss provision. In additional analysis, we find that this result is stronger in publicly traded and larger banks that are subject to greater regulatory and monitoring risk. However, we do not find evidence that there are changes in actual bank risk-taking across the tenure of the audit partner/client relationship. Thus, we provide evidence of higher audit partner professional skepticism, and potentially higher quality reporting of underlying bank risk in earlier years of the audit partner/client relationship. While these results suggest the increase of professional skepticism related to "fresh eyes" in the early years of tenure contributes to audit effectiveness as opposed to being a detriment to audit efficiency, it also indicates that the sufficiency of an audit partner's professional skepticism is decreasing across an individual client relationship.

Overall, our results provide evidence that there are is systematic variation in the professional skepticism applied to the auditing of accounting estimates within a partner/client relationship. Such an effect on the consistency of risk reporting has the potential to negatively impact bank regulators and other users of bank financial statements. Our results highlight inconsistencies in how key corporate governance stakeholders shape financial reporting quality and should be of interest to regulators, auditors, and investors.

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Appendix 1- Variable definitions

Dependent variables	
LLR	Loan loss reserve scaled by beginning-of-period total assets $(RCFD3123_t)/(RCF D2170_{t-1})$
PD_30+	Loans 30-89 days past due and still accruing scaled by beginning-of-period total assets $(RCFD1408_t)/(RCFD2170_{t-1})$
NACC	Non-accrual loans scaled by beginning-of-period total assets $(RCFD1403_t)/(RCFD2170_{t-1})$
Charge_Offs	Annual loan charge-offs scaled by beginning-of-period total assets $(RIAD4635_t)/(RCFD2170_{t-1})$
LLP	Annual loan loss provisions scaled by beginning-of-period total assets $(RIAD4230_t)/(RCFD2170_{t-1})$
Independent variables	
Initial_Year	An indicator variable equal to 1 if it represents the first year of the audit partner/client relationship, 0 otherwise
Beginning	An indicator variable equal to 1 if it represents either of the first two years of the audit partner/client relationship, 0 otherwise
Public	An indicator variable equal to 1 if the client is a publicly traded bank, 0 otherwise
Large_Bank	An indicator variable equal to 1 if the client's total assets are greater than $1 billion, 0 otherwise $(RCFD2170_t)$
Size	Natural log of beginning-of-period total assets $(RCFD2170_{t-1})$
Equity	Equity scaled by beginning-of-period total assets $(RCFD3120_t)/(RCFD2170_{t-1})$
NACC	Non-accrual loans scaled by beginning-of-period total assets $(RCFD1403_t)/(RCFD2170_{t-1})$
Net_Income	Net income scaled by beginning-of-period total assets $(RIAD4340_t)/(RCFD2170_{t-1})$
Loans	Loans scaled by beginning-of-period total assets $(RCFD2122_t)/(RCFD2170_{t-1})$

Figure 1 Distribution of audit partner/client relationships by length of tenure

Figure 1a.
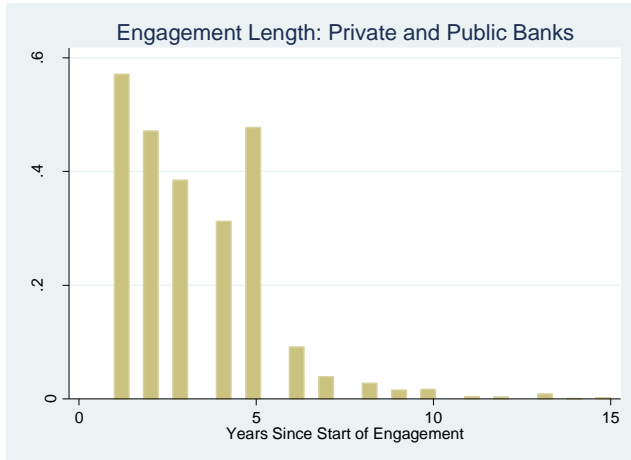
Figure 1b.
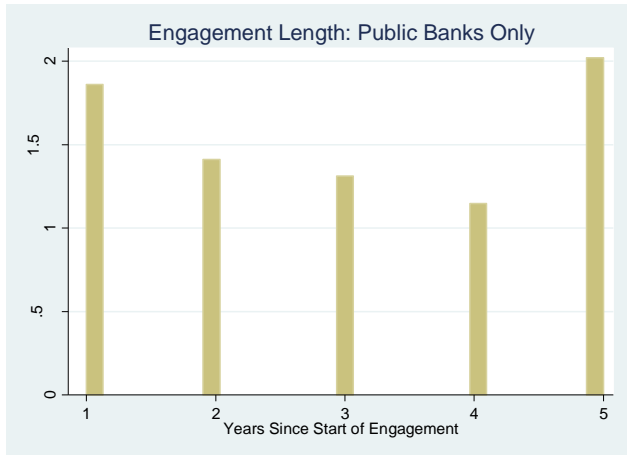
Figure 1c.
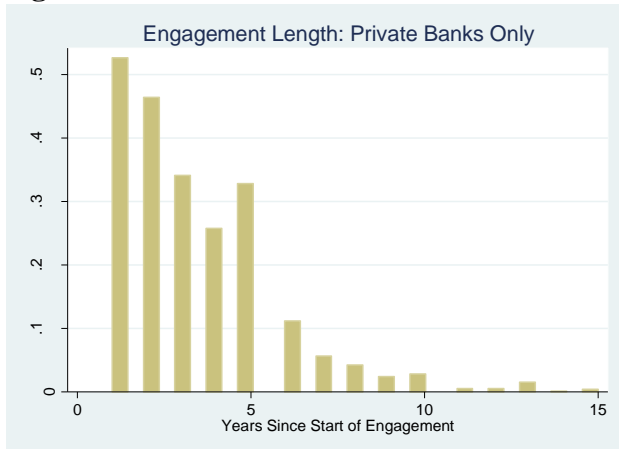
Table 1- Sample selection and distribution of observations

Tenure	All Banks		Public Banks		Private Banks	
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
1	687	23.89%	315	24.01%	372	23.79%
2	567	19.71%	239	18.22%	328	20.97%
3	463	16.10%	222	16.92%	241	15.41%
4	376	13.07%	194	14.79%	182	11.64%
5	574	19.96%	342	26.07%	232	14.83%
6	79	2.75%	0	0.00%	79	5.05%
7	40	1.39%	0	0.00%	40	2.56%
8	30	1.04%	0	0.00%	30	1.92%
9	17	0.59%	0	0.00%	17	1.09%
10	20	0.70%	0	0.00%	20	1.28%
11	4	0.14%	0	0.00%	4	0.26%
12	4	0.14%	0	0.00%	4	0.26%
13	11	0.38%	0	0.00%	11	0.70%
14	1	0.03%	0	0.00%	1	0.06%
15	3	0.10%	0	0.00%	3	0.19%
Total:	2,876	100.00%	1,312	100.00%	1,564	100.00%

This table provides the distribution of audit partner/client relationships by length of tenure and by bank type

Table 2- Summary statistics

Panel A: All bank-year observations

Variable	N	Mean	STD	P25	Median	P75
Size	6,277	14.598	1.425	13.609	14.164	15.168
Loans	6,277	0.695	0.179	0.593	0.702	0.804
Equity	6,277	0.111	0.041	0.090	0.106	0.127
NACC	6,277	0.011	0.014	0.003	0.007	0.014
PD_30+	6,277	0.005	0.005	0.002	0.003	0.006
Net_Income	6,277	0.008	0.009	0.006	0.009	0.012
Charge_Offs	6,277	0.004	0.006	0.001	0.002	0.005
LLP	6,277	0.003	0.005	0.001	0.002	0.004
LLR	6,277	0.011	0.005	0.007	0.010	0.013
This table provides summary statistics for all banks in our sample						

Panel B: Public bank-year observations

Variable	N	Mean	STD	P25	Median	P75
Size	2,868	15.187	1.599	13.965	14.853	16.011
Loans	2,868	0.717	0.183	0.618	0.718	0.819
Equity	2,868	0.117	0.038	0.096	0.113	0.133
NACC	2,868	0.011	0.013	0.003	0.007	0.013
PD_30+	2,868	0.005	0.005	0.002	0.003	0.006
Net_Income	2,868	0.008	0.008	0.006	0.009	0.012
Charge_Offs	2,868	0.004	0.006	0.001	0.002	0.005
LLP	2,868	0.003	0.005	0.001	0.002	0.003
LLR	2,868	0.010	0.005	0.007	0.009	0.012
This table provides summary statistics for all public banks in our sample						

Panel C: Private bank-year observations

Variable	N	Mean	STD	P25	Median	P75
Size	3,409	14.103	1.024	13.424	13.876	14.467
Loans	3,409	0.677	0.173	0.570	0.686	0.790
Equity	3,409	0.106	0.042	0.085	0.100	0.119
NACC	3,409	0.012	0.014	0.003	0.007	0.015
PD_30+	3,409	0.005	0.006	0.001	0.003	0.006
Net_Income	3,409	0.008	0.009	0.005	0.008	0.012
Charge_Offs	3,409	0.004	0.006	0.001	0.002	0.005
LLP	3,409	0.003	0.005	0.001	0.002	0.004
LLR	3,409	0.011	0.005	0.008	0.010	0.013
This table provides summary statistics for all private banks in our sample						

Table 3- Loan loss reserve and tenure

Variable	(1) LLR × 100	(2) LLR × 100	(3) LLR × 100	(4) LLR × 100
Initial_Year	0.0295***		0.0219***	
	(3.11)		(2.76)	
Beginning		0.0369***		0.0271***
		(3.16)		(2.77)
Size			-0.252***	-0.248***
			(-5.37)	(-5.28)
NACC			12.46***	12.43***
			(10.00)	(9.99)
Equity			-1.486***	-1.495***
			(-4.11)	(-4.14)
Net_Income			-4.276***	-4.219***
			(-4.58)	(-4.51)
Loans			0.605***	0.613***
			(6.12)	(6.20)
Bank x Partner x Engagement FE	x	x	x	x
Year FE	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank
N	6277	6277	6277	6277
R-sq	0.902	0.902	0.926	0.926
adj. R-sq	0.861	0.861	0.895	0.895

This table presents the results of estimating equation (1) with the loan-loss reserve as the dependent variable. Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 4-Asset quality and tenure

Variable	(1) PD_30+ × 100	(2) PD_30+ × 100	(3) PD_30+ × 100	(4) PD_30+ × 100	(5) NACC × 100	(6) NACC× 100	(7) NACC× 100	(8) NACC× 100
Initial_Year	0.0103		0.00839		0.0721**		0.0641**	
	(0.80)		(0.68)		(2.51)		(2.42)	
Beginning		0.0149		0.0196		0.0936**		0.0877***
		(1.04)		(1.41)		(2.52)		(2.60)
Size			0.0611	0.0634			0.720***	0.731***
			(0.96)	(1.00)			(4.83)	(4.94)
Equity			0.230	0.211			0.0562	0.0148
			(0.59)	(0.54)			(0.06)	(0.02)
Net_Income			-2.338**	-2.274**			-31.05***	-30.82***
			(-2.04)	(-1.98)			(-9.08)	(-8.96)
Loans			0.761***	0.768***			1.361***	1.387***
			(8.64)	(8.65)			(5.73)	(5.86)
Bank x Partner x Engagement FE	x	x	x	x	x	x	x	x
Year FE	x	x	x	x	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
N	6277	6277	6277	6277	6277	6277	6277	6277
R-sq	0.825	0.825	0.833	0.834	0.866	0.866	0.881	0.882
adj. R-sq	0.751	0.751	0.763	0.763	0.809	0.809	0.831	0.831

This table presents the results of estimating equation (1) with loans 30-89 days past due as the dependent variable in columns (1) through (4) and non-accrual loans as the dependent variable in columsn (5) through (8). Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 5- Validity of the loan loss provision

Variable	(1) Future_Charge_Offs ×100	(2) Future_Charge_Offs ×100	(3) Future_Charge_Offs ×100	(4) Future_Charge_Offs ×100
Initial_Year	0.0000631	0.0000520		
	(0.53)	(0.47)		
Beginning			-0.0000179	-0.0000333
			(-0.13)	(-0.26)
LLP	0.190***	0.0848***	0.170***	0.0658*
	(6.52)	(2.61)	(4.76)	(1.85)
Initial_Year x LLP	0.104***	0.0850**		
	(2.83)	(2.47)		
Beginning x LLP			0.0793**	0.0676**
			(2.06)	(2.19)
Size		0.00392***		0.00402***
		(6.55)		(6.78)
NACC		0.165***		0.165***
		(11.25)		(11.22)
Equity		-0.00275		-0.00227
		(-0.81)		(-0.66)
Net_Income		0.0163		0.0160
		(1.27)		(1.27)
Loans		0.000777		0.000880
		(0.87)		(0.97)
Bank x Partner x Engagement FE	x	x	x	x
Year FE	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank
N	5,089	5,089	5,089	5,089
R-sq	0.832	0.862	0.830	0.862
adj. R-sq	0.757	0.801	0.755	0.800

This table presents the results of estimating equation (2) with *Future_Charge_Offs* as the dependent variable and interacting *Tenure* measures with *the loan-loss provision* . Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 6- Public versus private banks

Variable	(1) LLR × 100	(2) LLR × 100	(3) LLR × 100	(4) LLR × 100
Initial_Year	-0.00248		-0.00346	
	(-0.20)		(-0.32)	
Public	0.00258	-0.0208	-0.00757	-0.0259
	(0.05)	(-0.37)	(-0.17)	(-0.59)
Initial_year x Public	0.0623***		0.0495***	
	(4.24)		(3.77)	
Beginning		-0.00445		-0.00409
		(-0.32)		(-0.35)
Beginning x Public		0.0802***		0.0610***
		(5.27)		(4.38)
Size			-0.246***	-0.235***
			(-5.36)	(-5.10)
NACC			12.42***	12.28***
			(9.98)	(9.91)
Equity			-1.477***	-1.484***
			(-4.08)	(-4.11)
Net_Income			-4.239***	-4.232***
			(-4.54)	(-4.53)
Loans			0.609***	0.621***
			(6.17)	(6.26)
Bank x Partner x Engagement FE	x	x	x	x
Year FE	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank
N	6277	6277	6277	6277
R-sq	0.903	0.903	0.926	0.927
adj. R-sq	0.861	0.862	0.895	0.895

This table presents the results of estimating equation (1) with the loan-loss reserve as the dependent variable and interacting *Tenure* measures with *Public* banks. Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 7- Large versus small banks

Variable	(1) LLR × 100	(2) LLR × 100	(3) LLR × 100	(4) LLR × 100
Initial_Year	0.00474		-0.00540	
	(0.29)		(-0.39)	
Large_Bank	0.0756**	0.0587	0.0310	0.0112
	(2.02)	(1.50)	(1.19)	(0.41)
Initial_year x Large_Bank	0.0350*		0.0391**	
	(1.95)		(2.49)	
Beginning		0.00164		-0.0113
		(0.09)		(-0.76)
Beginning x Large_Bank		0.0517***		0.0573***
		(2.74)		(3.46)
Size			-0.253***	-0.239***
			(-5.28)	(-5.02)
NACC			12.40***	12.36***
			(10.04)	(10.01)
Equity			-1.508***	-1.506***
			(-4.18)	(-4.19)
Net_Income			-4.284***	-4.268***
			(-4.59)	(-4.57)
Loans			0.602***	0.619***
			(6.20)	(6.38)
Bank x Partner x Engagement FE	x	x	x	x
Year FE	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank
N	6277	6277	6277	6277
R-sq	0.903	0.903	0.926	0.927
adj. R-sq	0.861	0.862	0.895	0.895

This table presents the results of estimating equation (1) with the loan-loss reserve as the dependent variable and interacting *Tenure* measures with *Large_Bank*. Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 8- Alternative measures of the loan loss reserve (*LLR)*

Variable	(1) LLR/Loans ×100	(2) LLR/Loans ×100	(3) LLR/Loans ×100	(4) LLR/Loans ×100	(5) LLR/Loans ×100	(6) LLR/Loans ×100	(7) LLR/Loans ×100	(8) LLR/Loans ×100
Initial_Year	0.0153		0.0321**		0.0559***		0.0439***	
	(1.04)		(2.48)		(3.90)		(3.42)	
Beginning		0.0634***		0.0348**		0.0688***		0.0500***
		(3.34)		(2.22)		(4.13)		(3.35)
Size			-0.265***	-0.260***			-0.405***	-0.398***
			(-3.53)	(-3.46)			(-5.76)	(-5.66)
NACC			16.51***	16.48***			14.73***	14.68***
			(8.46)	(8.45)			(8.07)	(8.05)
Equity			-1.294**	-1.300**			-0.320	-0.331
			(-1.99)	(-1.99)			(-0.53)	(-0.55)
Net_Income			-8.295***	-8.228***			-5.398***	-5.298***
			(-5.50)	(-5.44)			(-3.86)	(-3.78)
Loans			-1.018***	-1.009***			0.202	0.216
			(-5.89)	(-5.82)			(1.36)	(1.46)
Bank x Partner x Engagement FE	x	x	x	x	x	x	x	x
Year FE	x	x	x	x	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
N	6697	6697	6277	6277	6277	6277	6277	6277
R-sq	0.905	0.905	0.925	0.925	0.897	0.897	0.910	0.910
adj. R-sq	0.865	0.865	0.893	0.893	0.853	0.853	0.872	0.872

This table presents the results of estimating equation (1) with the loan-loss reserve as the dependent variable measured in two alternative ways. Columns (1) through (4) scale the loan-loss reserve by total loans in year *t* whereas columns (5) through (8) scale the loan-loss reserve by total loans in year *t-1* . Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.

Table 9- Alternative dependent variables

Variable	(1) Charge_Offs ×100	(2) Charge_Offs ×100	(3) LLP×100	(4) LLP×100
Initial_Year	0.0156		-0.00154	
	(1.24)		(-0.13)	
Beginning		0.0283**		0.0277**
		(2.17)		(2.15)
Size	0.180***	0.184***	0.277***	0.281***
	(3.09)	(3.15)	(4.29)	(4.35)
NACC	10.66***	10.61***	11.32***	11.23***
	(6.74)	(6.70)	(7.75)	(7.65)
Equity	0.425	0.404	-0.0258	-0.0757
	(1.08)	(1.02)	(-0.07)	(-0.19)
Net_Income	-24.52***	-24.45***	-30.65***	-30.56***
	(-12.86)	(-12.85)	(-14.64)	(-14.61)
Loans	0.00319	0.0131	0.593***	0.607***
	(0.04)	(0.15)	(5.67)	(5.74)
Bank x Partner x Engagement FE	x	x	x	x
Year FE	x	x	x	x
Std Errors Clustered at	Bank	Bank	Bank	Bank
N	6277	6277	6277	6277
R-sq	0.860	0.860	0.835	0.835
adj. R-sq	0.801	0.801	0.764	0.765

This table presents the results of estimating equation (1) with loan charge-offs as the dependent variable in columns (1) and (2) and the loan-loss provision as the dependent variable in columns (3) and (4). Standard errors are in parentheses. *, **, and *** denote significant at 0.10, 0.05, and 0.01 levels, respectively. We include all variable definitions in Appendix A.