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# Is there a relation between audit fee cuts during the global financial crisis and banks' financial reporting quality?



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### A B S T R A C T

As a result of the global financial crisis (GFC), several audit clients were able to negotiate lower audit fees for the years 2008 and 2009. However, the PCAOB has expressed concern that lower audit fees might lead to lower audit effort and lower audit quality and financial reporting quality. This study examines the relation between audit fee cuts and banks' financial reporting quality. Specifically, we focus on earnings management via loan loss provisions (LLP), the relation between current period LLP and future loan charge-offs, i.e., LLP validity, and the timely recognition of loan losses. For banks audited by Big 4 auditors, we find that income-increasing abnormal LLP are *decreasing* in audit fee cuts and LLP validity is *increasing* in audit fee cuts. For banks audited by non-Big 4 auditors, LLP validity is higher for banks that received a fee cut of more than 25% relative to other banks audited by non-Big 4 auditors. We do not observe an association between timely loan loss recognition and cuts in audit fees except for banks audited by non-Big 4 auditors and exempt from internal control audits where a fee cut of more than 25% is associated with less timely loan loss recognition. Overall, the findings suggest that Big 4 auditors constrained earnings management via LLP in banks that received cuts in audit fees. Our findings have important implications for regulators, investors, and others.

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## 1. Introduction

The financial reporting quality as well as the quality of bank audits has received much attention in the wake of the recent global financial crisis (GFC) (Bajaj and Creswell, 2008; Sikka, 2009). The PCAOB's *Investor Advisory Group* (2011) in its report on the GFC states: "... serious questions have been raised both about the quality of these financial institutions' financial reporting practices and about the quality of audits that permitted those reporting practices to go unchecked." Further, following the GFC, several audit clients were able to cut their audit fees. McCann (2010) reports that audit fees fell in 2008 and 2009. Whitehouse (2010) reports that 63% of the *S&P 500* firms won price concessions for 2009 from their external auditors. We find that 32% of banks received cuts in audit fees during 2008 and 2009.

The objective of this study is to examine the relation between cuts in audit fees during the GFC years (2008 and 2009) and banks' financial reporting quality (described below). Our study is important for several reasons. First, financial reporting quality of banks, particularly during the GFC period has received considerable attention from regulators, investors, and others. Second, regulators have expressed concern about the possible negative impact of audit fee cuts on financial reporting quality. For example, Daniel Goelzer, a former member of the Public Company Accounting Oversight Board (PCAOB), in response to audit fee cuts states, "The PCAOB ... will be watching to see whether (fee) pressure tempts audit firms to ease up on the rigor of audits." (Whitehouse, 2010). Similarly, Lynn Turner, a former Chief Accountant at the Securities and Exchange Commission (SEC) remarked, "... investors get nervous when a company in their portfolio, particularly one that's in hard times, wins a steeply lower fee." (McCann, 2010). Thus, empirical evidence on whether audit fee cuts impact banks' financial reporting quality is timely and important to regulators and capital market participants.

Third, while Ettredge et al. (2011) and Chen et al. (2013) also examine the relation between audit fee cuts and financial reporting quality, the findings are mixed. Further, both studies exclude banks. Thus, despite the obvious importance of banks in the functioning of capital markets and the great impact of the financial crisis on banks compared with firms in other business sectors, currently, there is no empirical evidence on whether audit fee cuts impact banks' financial reporting quality.

Finally, from a research design standpoint, focusing on a single, homogeneous industry offers some advantages. For example, Kanagaretnam et al. (2010) argue that examining a single accrual (loan loss provisions) facilitates a sharper separation into its normal (nondiscretionary) and abnormal (discretionary) components than the abnormal accrual measures used in prior research and thereby enhance the quality of the inferences.<sup>2</sup> We also exploit a unique regulatory feature in the banking industry where smaller banks (with total assets less than \$1 billion) are not subject to an audit of their internal control over financial reporting under the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) relative to larger banks. Prior research suggests that auditor independence may be impaired for smaller banks. We examine whether the effect of audit fee cuts on financial reporting quality varies between smaller and larger banks.

We use several measures to capture banks' financial reporting quality. Our first two measures relate to banks' loan loss provisions (LLP). We focus on LLP since they are the most important operating accruals for banks and prior research suggests that LLP are important to bank managers for a variety of reasons besides earnings management: signaling, capital management, and management compensation (Wahlen, 1994; Collins et al., 1995; Kanagaretnam et al., 2004). In particular, we focus on upward earnings management since it is more of a concern to regulators, investors, and others relative to income-decreasing earnings management. Higher values of income-increasing abnormal LLP are consistent with impaired financial reporting quality. However, we also examine income-decreasing earnings management via LLP. Our first set of tests focus on whether audit fee cuts during the recession years are associated with income-increasing (negative abnormal) or income-decreasing (positive abnormal) LLP.

<sup>2</sup> See McNichols (2000, 2002) for a discussion on the challenges associated with discretionary accruals derived from aggregate accruals. McNichols (2002, p. 68) state, "... the complexity associated with modeling the estimation errors in aggregate accruals is daunting, and the construct validity associated with a proxy based aggregate accruals seems low. A focus on specific accruals can permit a more complete characterization of the relation between accruals and cash flows. ..."

Next, we examine LLP validity (Altamuro and Beatty, 2010) which is concerned with the relation between current period LLP and future loan charge-offs. A stronger association would indicate LLP validity, i.e., LLPs are more informative about future write-offs. On the other hand, a weaker relation between current period LLP and future loan charge-offs would be consistent with less informative LLP, i.e., impaired financial reporting quality. A focus on LLP validity is important because recent evidence suggests that during the financial crisis banks did not recognize loan charge-offs in a timely fashion and as a result, banks' balance sheets offered a distorted view of their financial health (Huizinga and Laeven, 2012; Furlong and Knight, 2010). We relate audit fee cuts during the GFC years to LLP validity to test whether audit fee cuts imply lower financial reporting quality via lower LLP validity. Our third measure, a balance sheet measure of timely loan loss provision, is the ratio of the allowance for loan losses divided by nonperforming loans (Beatty and Liao, 2011). A higher ratio is consistent with more timely recognition of both concurrent and expected loan losses. Finally, we use restatement of financial statements as our fourth measure of financial reporting quality.

Our sample consists of 550 bank-years representing years 2008 and 2009. We calculate audit fee cut as follows. We deduct the ratio of audit fee of the current year divided audit fee of the prior year from 1. Note positive (negative) values indicate a fee cut (increase). We document several key findings. First, we find that about 32% of the observations received some form of a fee cut. Further, we find that 39% of banks audited by Big 4 auditors received some form of a cut in audit fees compared to 27% for banks audited by non-Big 4 auditors. Thus, it appears that cuts in audit fee were more common during the financial crisis for clients of Big 4 auditors relative to the clients of Big 4 auditors.

Second, the absolute value of income-increasing abnormal LLP are *decreasing* in audit fee cuts for banks audited by Big 4 auditors. We also find that for banks audited by Big 4 auditors, income-decreasing abnormal LLP are lower for banks that received a fee cut. Third, LLP validity, i.e., the relation between current period LLP and future loan charge-offs is *increasing* in audit fee cuts for banks audited by Big 4 auditors. For banks audited by non-Big 4 auditors LLP validity is higher for banks that received a fee cut of more than 25% relative to other banks audited by non-Big 4 auditors. We observe no significant associations between audit fee cuts and our timely loan loss recognition measure or restatement of financial statements with one exception. For banks audited by non-Big 4 auditors and exempt from an audit of internal controls, a fee cut of more than 25% is negatively associated with the likelihood of timely recognition of loan losses. Overall, our results suggest that audit fee cuts did not have a negative impact on the financial reporting quality of banks audited by Big 4 or non-Big 4 auditors. On the contrary, we find that Big 4 auditors constrained earnings management via LLP in banks that received cuts in audit fees.

The rest of this paper is organized as follows. The next section presents our hypothesis. Section 3 describes our measure of audit fee cut and proxies for banks' financial reporting quality (abnormal LLP and LLP validity). Section 4 describes the sample selection. Results are in Section 5 followed by conclusions.

## 2. Hypothesis

As discussed earlier, regulators have expressed concern about the potential adverse impact of audit fee cuts on audit quality and financial reporting quality. This concern is based on the assumption that lower fees would result in lower audit effort as the auditor attempts to minimize the loss on the engagement. There is some support for this assumption in prior research. Alderman and Deitrick (1982) finds that auditors may sign off an engagement prematurely and gather insufficient evidence, i.e., reduce effort in order to stay within the allocated time and resources. A similar finding is supported by Reckers et al. (1997). Using a sample of firms from Greece, Caramanis and Lennox (2008) find that low audit effort is associated with aggressive financial reporting implying lower audit quality. Recently, Ettredge et al. (2011) examine the relation between audit fee cuts and audit quality for a sample of non-banks and find that clients that successfully exert fee pressure are more likely to have

accounting misstatements and have higher levels of discretionary accruals in 2008.<sup>3</sup> On the other hand, [Chen et al. \(2013\)](#), also focus on non-banks and examine the effects of audit fee cuts on several measures of earnings quality. They do not find a significant association between audit fee cuts and earnings quality. Given the above mixed findings and the fact that neither study examined banks, we do not offer a prediction on the relation between audit fee cuts and banks' financial reporting quality and state our hypothesis in null form as follows:

**H.** Cuts in audit fees are not associated with banks' financial reporting quality.

### 3. Research design

We examine the relation between audit fee cuts and four proxies that capture a bank's financial reporting quality. We first describe the two proxies that are based on LLP. We focus on LLP since they are the most important operating accruals for banks and prior research suggests that LLP are important to bank managers for a variety of reasons besides earnings management: signaling, capital management, and management compensation ([Wahlen, 1994](#); [Collins et al., 1995](#); [Kanagaretnam et al., 2004](#)). We are especially interested in upward earnings management since it is more of a concern to regulators, investors, and others relative to income-decreasing earnings management. Also, prior research indicates that auditors are more likely to be sued for income-increasing earnings management ([St Pierre and Anderson, 1984](#); [Heninger, 2001](#)). Further, [Kanagaretnam et al. \(2010\)](#) argue that income-increasing LLP are likely to be used to meet or beat earnings benchmarks. Thus, our first proxy is the abnormal LLP, particularly income-increasing (negative abnormal LLP). We posit that an association between abnormal LLP and audit fee cuts would suggest upward earnings management and impaired financial reporting quality. However, during the recession, banks could have engaged in downward earnings management by strategically timing the recognition of bad news or by taking a "big bath." Therefore, we also investigate downward earnings management as reflected by positive abnormal LLP.

Our second proxy for financial reporting quality is LLP validity ([Altamuro and Beatty, 2010](#)) is concerned with the relation between current period LLP and future loan charge-offs. A stronger association would indicate LLP validity, i.e., LLP are more informative about future write-offs. On the other hand, a weaker relation between current period LLP and future loan charge-offs would be consistent with less informative LLP, i.e., impaired financial reporting quality. By relating audit fee cuts to LLP validity we test whether audit fee cuts imply lower financial reporting quality via lower LLP validity.

Our next proxy is a stock (balance sheet) measure of timely loan loss provision used by [Beatty and Liao \(2011\)](#). They use the ratio of the allowance for loan losses divided by nonperforming loans to assess the delay in recognition of expected loan losses. The underlying idea here is that banks need to recognize expected risk in their performing loans as well as incurred losses in their non-performing loans. Thus, higher (lower) values of the above ratio are consistent with more (less) timely loss recognition. Our final proxy is restatement of financial statements. This is a commonly used measure of financial reporting quality as well as audit quality in accounting research ([Francis et al., 2013](#)). Next, we describe our measure of audit fee cut and the estimation of abnormal LLP.

#### 3.1. Measure of audit fee cut

We calculate audit fee cut as the inverse of audit fee growth rate. Specifically, *FEECUT* is equal to 1 minus audit fee of the current year divided by audit fee of the prior year for the same firm. Thus, a positive value for *FEECUT* indicates a cut in audit fee while a negative value indicates an increase in

<sup>3</sup> [Ettredge et al. \(2011\)](#) use a different approach to measure cuts in audit fees. Instead of comparing current year fees with prior year fees to estimate the fee cut, they measure fee cut as the difference between actual audit fee and the expected audit fee estimated from the audit fee model. We do not use this approach for two reasons. First, since the expected audit fee is not publicly available, it is unobservable by regulators and investors whereas the actual fee cut (used in this study) is readily observable by the participants of the capital market. Second, we believe the alternate fee cut measure is subject to significant measurement error and overstates the frequency as well as the magnitude of a fee cut.

audit fees. It is possible that the relationship between audit fee cut and banks' financial reporting quality is nonlinear. We also obtain two alternative measures of audit fee cut. *FEECUTD1* is 1 if *FEECUT* is positive, and 0 otherwise; *FEECUTD2* is 1 if *FEECUT* is more than 25%, and 0 otherwise.

### 3.2. Estimation of abnormal loan loss provisions

Next, we describe our first proxy for a bank's financial reporting quality, abnormal loan loss provisions (*ALLP*). Following Kanagaretnam et al. (2010), we estimate the normal component of LLP by regressing LLP on beginning loan loss allowance, beginning balance of non-performing loans, change in non-performing loans, net loan charge-offs, changes in total loans outstanding, total loans outstanding, loan mix, and controls for year effects. Specifically, we estimate the following model:

$$\begin{aligned} LLP_{it} = & \chi_0 + \chi_1 BEGLLA + \chi_2 BEGNPL + \chi_3 CHNPL + \chi_4 LCO + \chi_5 CHLOANS + \chi_6 LOANS \\ & + \chi_7 COMM + \chi_8 CONSUME + \chi_9 REALEST + \chi_{10} AGRI + \chi_{11} FBG + \chi_{12} DEPINS \\ & + \text{Year effects} + e_{it} \end{aligned} \quad (1)$$

Definitions of variables appear in Table 1. The residuals from model (1) are *ALLP*. Note higher the *ALLP*, lower is the financial reporting quality. Consistent with Kanagaretnam et al. (2010), we expect a negative coefficient on *BEGLLA* and *CONSUME*. Positive coefficients are predicted on *CHNPL*, *LCO*, *LOANS*, and *COMM*. Kanagaretnam et al. (2010) do not find *BEGNPL*, *CHLOANS*, *REALEST*, *AGRI*, *FBG*, and *DEPINS* to be significant. We also include a year-indicator variable to control for year-specific effects.

### 3.3. Audit fee cuts and abnormal loan loss provisions

Next, we describe the model used to test our hypothesis, i.e., whether there is a relation between cuts in audit fees and financial reporting quality via abnormal LLP. Our model is similar to Kanagaretnam et al. (2010)'s model (3) and we include two additional controls, *OFFICE* and *INFLUENCE*. Choi et al. (2010) find that higher audit quality is associated with the size of the local office performing the audit. Thus, financial reporting quality (i.e., lower abnormal LLP) is likely to be higher for larger offices relative to smaller offices. However, audit quality at the office may be comprised due to pressure from influential clients. Therefore, we include *INFLUENCE*, a measure of client importance. We estimate the following model:

$$\begin{aligned} ABSALLP = & \alpha_0 + \alpha_1 FEECUT + \alpha_2 EXEMPT + \alpha_3 OFFICE + \alpha_4 INFLUENCE + \alpha_5 MB + \alpha_6 LNMV \\ & + \alpha_7 LOSS + \alpha_8 PASTLLP + \alpha_9 EBP + \alpha_{10} TCAP + \text{Year effects} + \varepsilon \end{aligned} \quad (2)$$

Definitions of variables are in Table 1. To provide evidence on whether there is any differential relation between audit fee cut and the magnitude of abnormal LLP conditional on whether the abnormal LLP is income-increasing (negative) or income-decreasing (positive), we also examine the income-increasing and income-decreasing abnormal LLP separately. Our variable of interest is *FEECUT*. A positive coefficient on *FEECUT* is consistent with lower financial reporting quality due to greater earnings management via LLP, i.e., lower financial reporting quality. On the other hand, a negative coefficient would be consistent with higher financial reporting quality, i.e., less earnings manipulation via LLP.

### 3.4. Audit fee cuts and LLP validity

Next, we describe the empirical model to test the relation between audit fee cuts and LLP validity, our second measure of a bank's financial reporting quality. LLP validity is an important measure of financial reporting quality for the following reasons. First, the SEC has emphasized the relation between LLP and loan charge-offs (SEC, 2001).<sup>4</sup> Further, recent research suggests that during the financial

<sup>4</sup> SEC's Staff Accounting Bulletin (SAB) 102 states that: "the staff believes that a registrant's loan loss allowance methodology is considered valid when it ... include(s) procedures that adjust loan loss estimation methods to reduce differences between estimated losses and actual subsequent charge-offs." (SEC, 2001).

**Table 1**  
Definitions of variables.

AGRI	=	agricultural loans divided by beginning total assets
ALLP	=	abnormal loan loss provision (residual from model (1))
ABSALLP	=	Absolute value of ALLP
BEGLLA	=	beginning loan loss allowance divided by beginning total assets
BIGN	=	indicator variable that equals 1 if audited a Big 4 firm, and 0 otherwise
CHGOFF	=	loan charge-offs during the subsequent year, scaled by beginning total assets
CHLOANS	=	change in total loans outstanding divided by beginning total assets
CHNPL	=	change in non-performing loans divided by beginning total assets
COMM	=	commercial loans divided by beginning total assets
CON	=	consumer loans divided by beginning total assets
DEPINS	=	loans to other depository institutions divided by beginning total assets
EBP	=	net income before extraordinary items and LLP divided by beginning total assets
EXEMPT	=	1 for banks exempted from internal control regulations, and 0 otherwise. An indicator variable that equals 1 if a bank has less than \$1 billion in total assets and public float less than \$75 million, and 0 otherwise
FBG	=	loans to foreign banks and governments divided by beginning total assets
FEECUT	=	1-audit fee of the current year divided audit fee of the prior year
FEECUTD1	=	1 if FEECUT is positive, 0 otherwise
FEECUTD2	=	1 if FEECUT is more than 0.25, 0 otherwise
INFLUENCE	=	Sum of audit and non-audit fees paid by the client over total revenue of the audit office in the current year
LASSETS	=	natural log of total assets
LCO	=	net loan charge-offs divided by beginning total assets
LNMV	=	natural log of market value of common equity at the end of the year
LOANS	=	total loans outstanding divided by beginning total assets
LOSS	=	indicator variable that equals 1 if net income < 0, and 0 otherwise
MB	=	market-to-book ratio at the end of the year
OFFICE	=	natural log of total audit fees of the audit office that audits the bank
PASTLLP	=	prior year's LLP divided by beginning total assets
REALEST	=	real estate loans divided by beginning total assets
TCAP	=	total risk-adjusted capital ratio at the beginning of the year
SMALLDELAY	=	1 if the lagged loan loss allowance divided by nonperforming assets is greater than the sample median during the quarter, and 0 otherwise
$\Delta$ NPL	=	change in nonperforming assets divided by lagged total loans
CAPITALR1	=	tier 1 risk-adjusted capital ratio at the beginning of the quarter, divided by 100
$\Delta$ UNRATE	=	change in the quarterly unemployment rate
SIZE	=	the natural log of total assets at the beginning of the quarter
DEPOSITS	=	total deposits divided by total loans, at the beginning of the quarter
$\Delta$ CAPITALR1	=	change in variable CAPITALR1
$\sigma_{ret}$	=	Standard deviation of daily return of the previous quarter

crisis banks did not recognize loan charge-offs in a timely fashion and as a result, banks' balance sheets offered a distorted view of their financial health (Huizinga and Laeven, 2012; Furlong and Knight, 2010). Our interest is in examining whether audit fee cuts impair LLP validity. Our model is similar to the model in Altamuro and Beatty (2010):

$$CHGOFF_{t+} = \psi_0 + \psi_1 LLP + \psi_2 FEECUT + \psi_3 FEECUT \times LLP + \psi_4 EXEMPT + \psi_5 LCO + \psi_6 LASSETS + \psi_7 EXEMPT \times LLP + \psi_8 LASSETS \times LLP + \text{Year effects} + \varepsilon \quad (3)$$

Once again, variable definitions are in Table 1. Consistent with prior research, a positive coefficient is predicted on  $\psi_1$ , i.e., current LLP is expected to be informative about future charge-offs. Here the coefficient of interest is  $\psi_3$ . A negative coefficient on  $\psi_3$  would be consistent with lower LLP validity at higher levels of audit fee cuts, i.e., lower financial reporting quality. On the other hand, a positive coefficient would be consistent with higher LLP validity at higher levels of fee cuts. We do not offer a prediction on  $\psi_2$ . A list of variables used in this study appears in Table 1.

### 3.5. Audit fee cuts and timely loss recognition

We estimate the following model to test the relation between timely recognition of both incurred losses from nonperforming loans and expected losses from performing loans. Following Beatty and Liao (2011), we use the lagged ratio of allowance for loan losses scaled by nonperforming loans and code bank-years above the sample median as 1 (small delay in loss recognition); below the sample median is coded as 0 (greater delay).<sup>5</sup>

$$\begin{aligned} \text{SMALLDELAY} = & \beta_0 + \beta_1 \text{FEECUT} + \beta_2 \text{EXEMPT} + \beta_3 \text{OFFICE} + \beta_4 \text{INFLUENCE} + \beta_5 \Delta \text{NPL}_t \\ & + \beta_6 \Delta \text{NPL}_{t+1} + \beta_7 \text{CAPITALR1} + \beta_8 \Delta \text{UNRATE} + \beta_9 \text{SIZE} + \beta_{10} \text{DEPOSITS} \\ & + \beta_{11} \Delta \text{CAPITALR1} + \beta_{12} \sigma_{\text{RET}} + \text{Year effects} + \varepsilon \end{aligned} \quad (4)$$

The dependent variable is an indicator variable that equals 1 for bank-years with small delay in recognition of losses and 0 for bank-years with greater delay in loss recognition. Please see Table 1 for variable definitions. The coefficient of interest here is  $\beta_1$ . A positive (negative) coefficient is consistent with the notion that audit fee cuts are associated with better (poor) financial reporting quality, i.e., more timely loss recognition.

## 4. Sample selection

We first identify U.S. domestic bank holding companies whose fiscal years end in December 2008 – December 2009 with available total asset data, from bank regulatory database in Wharton Research Data Services (WRDS). The initial data includes 1988 bank-year observations. Next, we identify public bank holding companies using the dataset provided by the Federal Reserve Bank of New York to link bank regulatory identification number to permanent company number (PERMCO) used in CRSP. This procedure yields 722 public bank-year observations. We then exclude all bank-year observations without audit fee data from *Audit Analytics* and financial data from *Compustat* needed to calculate audit fee cut in 2008 or 2009. This procedure results in 654 observations. To ensure that the measure of audit fee cut is not confounded by audit fee low balling, we exclude 80 observations that switched auditors in 2008 or in 2009.<sup>6</sup> We use this sample of 574 observations to estimate normal loan loss provision. Another 24 observations are deleted for missing control variables in the abnormal loan loss regression. Among these 550 bank-years, data on subsequent year loan charge-offs were unavailable for 17 observations. Therefore, 533 observations are retained for the analysis of loan charge-offs, with 235 observations for clients of Big 4 auditors and 298 observations for clients of non-Big 4 auditors. The number of observations available for analysis of timely loss recognition is, respectively, 743 and 977 for bank-quarters audited by Big 4 auditors and non-Big 4 auditors.

Panel A of Table 2 reports the frequency of audit fee cuts for our full sample. In Panel A, fee cuts are measured as the inverse of the audit fee growth (*FEECUT*). A cut in audit fee is implied when the audit fee of the current year is lower than the audit fee of the prior year. In contrast to the finding that 63% of the S&P 500 firms received audit fee cuts in 2009 (Whitehouse, 2010), we find that only 32% of the banks received fee cuts from the prior year during 2008–2009.<sup>7</sup> No observation received a fee cut more than 50%. About 4% received a fee cut between 25% and 50%. To examine whether the frequency of fee cuts is different between clients of the Big 4 and non-Big 4 firms, we report the frequency of fee cut for these two samples separately in Panels B and C. We find that 39% of the Big 4 auditees received a fee cut,

<sup>5</sup> Beatty and Liao (2011) also use a flow measure to examine timely loss recognition. We do not use this measure because it requires time-series data (involving pre-GFC years) and will significantly reduce our sample. The stock measure overcomes this shortcoming. They note that both measures of loan loss timeliness are quite stable through time.

<sup>6</sup> As a robustness check, we added back these 80 observations to the sample. All the results are qualitatively the same as reported in Tables 6 and 7.

<sup>7</sup> To shed light on whether the reduction in audit fee is due to lower rates or less audit efforts/hours. We compare audit delay between banks with and without audit fee cut. Audit delay is defined as the number of days between the fiscal year end and the audit opinion date. We find for banks without audit fee cut, mean audit delay is 69.44 days, while for banks with audit fee cut, mean audit delay is 68.19 days. Univariate test of the difference suggests no significance in the two means. Therefore, we believe that the audit fee cut documented in our study is not likely to be caused by lower audit hours/efforts.

**Table 2**  
Distribution of cuts in audit fee.

% Of cut	Number of observations	%
<i>Panel A: frequency of cuts in audit fee</i>		
No cut	372	67.64
0–10%	90	16.36
10–25%	66	12.00
25–50%	22	4.00
More than 50%	0	0.00
Total	550	100.00
<i>Panel B: frequency of cuts in audit fee of Big 4 client firms</i>		
No cut	147	61.00
0–10%	42	17.42
10–25%	40	16.60
25–50%	12	4.98
More than 50%	0	0.00
Total	241	100.00
<i>Panel C: frequency of cuts in audit fee of non-Big 4 client firms</i>		
No cut	225	72.82
0–10%	48	15.53
10–25%	26	8.41
25–50%	10	3.24
More than 50%	0	0.00
Total	309	100.00

Data covers years 2008 and 2009. We compare 2008 audit fees with 2007 audit fees to estimate the fee cut in 2008. Similarly, fee cuts in 2009 are estimated by comparing 2009 audit fees with 2008 audit fees.

In Panel A, we include the full sample. In Panels B and C, we include the clients of Big 4 auditors and the clients of non-Big 4 auditors, respectively. Percent of audit fee cut in all the panels is measured as one minus current year's audit fee divided by prior year's audit fee.

while 27% of the non-Big 4 auditees received a fee cut. Thus, it appears that cuts in audit fee were more common during the financial crisis for clients of Big 4 auditors relative to the clients of non-Big 4 auditors.<sup>8</sup>

Table 3, Panel A reports descriptive statistics for all the variables.<sup>9</sup> The mean abnormal LLP (*ALLP*) is zero by construction. The mean *ABSALLP* (*CHGOFF*) is 0.0022 (0.0123), suggesting that on average absolute value of abnormal LLP is 0.22 (1.23) percent of total assets. The mean and median values of fee cut are, respectively,  $-0.092$  and  $-0.045$ . About 44% of the sample observations are audited by Big 4 auditors. The proportion of banks exempt from an audit of internal controls is about 11%.

Panel B reports descriptive statistics separately for Big 4 and non-Big 4 client observations. The mean (median) *ABSALLP* is 0.0023 (0.0016) for non-Big 4 clients, about 21% (33%) higher than the corresponding mean (median) *ABSALLP* for Big 4 clients. However, the mean and median values for *CHGOFF* are slightly lower for non-Big4 clients relative to Big-4 clients. Note that both the percentage of clients receiving a fee cut and the percentage of clients receiving a cut of more than 25% are higher for Big 4 clients.

Table 4 reports correlations among *ABSALLP*, its determinants, and measures of audit fee cuts. *ABSALLP* is significantly negatively correlated with *FEECUT* and *FEECUTD1*, but not significantly correlated with *FEECUTD2*. These results suggest that audit fee cuts are associated with lower earnings management. *ABSALLP* is also negatively correlated with *MB*, *LNMV* and *TCAP* and positively correlated with *LOSS* and *PASTLLP* (significant at the 0.10 level). Turning to the correlations among the determinants

<sup>8</sup> Though our focus is on GFC years, we also examine audit fee cuts during 2005 and 2006 and those results indicate that the frequency of audit fee cuts during those years is very similar to the results reported in panel A of Table 2.

<sup>9</sup> We winsorize all continuous variables at the top and bottom 1%.



**Table 3**  
Descriptive statistics.

Variable	Mean	Std. dev.	Minimum	p25	Median	p75	Maximum
<i>Panel A: descriptive statistics (n = 550)<sup>a</sup></i>							
ALLP	0.0000	0.0032	-0.0157	-0.0015	-0.0001	0.0013	0.0171
ABSALLP	0.0022	0.0024	0	0.0007	0.0014	0.0028	0.0171
CHGOFF	0.0123	0.0109	0	0.0042	0.0091	0.0171	0.0541
FEECUT	-0.0918	0.3717	-6.3397	-0.1459	-0.0452	0.037	0.4741
FEECUTD1	0.3236	0.4683	0	0	0	1	1
FEECUTD2	0.0400	0.1961	0	0	0	0	1
BIGN	0.4382	0.4966	0	0	0	1	1
EXEMPT	0.1091	0.3120	0	0	0	0	1
OFFICE	15.4714	1.8692	11.4993	14.0887	14.9257	17.2029	19.4039
INFLUENCE	0.1997	0.2600	0.0034	0.04	0.097	0.235	1
MB	0.8925	0.6078	0.0007	0.4137	0.7338	1.2241	3.1996
LNMV	19.0950	1.9126	15.0974	17.6243	18.8045	20.2767	25.2695
LOSS	0.3855	0.4871	0	0	0	1	1
PASTLLP	0.0064	0.0073	-0.0005	0.0016	0.0037	0.009	0.0405
EBP	0.0099	0.0134	-0.0669	0.0077	0.0126	0.0169	0.0481
TCAP	11.4004	2.7498	6.0977	9.7119	10.8885	12.5615	27.1533
Variable	Non-Big 4 client firms			Big 4 client firms			
	Mean	Median	Std. dev.	Mean	Median	Std. dev.	
<i>Panel B: descriptive statistics by auditor type: Big 4 versus non-Big 4 client firms</i>							
ALLP	0.0000	-0.0003	0.0035	0.0000	-0.0001	0.0029	
ABSALLP	0.0023	0.0016	0.0026	0.0019	0.0012	0.0022	
CHGOFF	0.0118	0.0089	0.0111	0.0127	0.0096	0.0107	
FEECUT	-0.1056	-0.0500	0.4124	-0.0741	-0.0391	0.3119	
FEECUTD1	0.2718	0	0.4456	0.3900	0	0.4888	
FEECUTD2	0.0324	0	0.1772	0.0498	0	0.2180	
EXEMPT	0.1812	0	0.3858	0.0166	0	0.1280	
OFFICE	14.2314	14.5026	1.0403	17.0613	17.4171	1.4440	
INFLUENCE	0.2622	0.1387	0.2868	0.1196	0.0400	0.1938	
MB	0.7643	0.6159	0.5256	1.0569	0.9296	0.6650	
LNMV	18.1019	17.8809	1.2438	20.3684	20.2767	1.8666	
LOSS	0.4369	0	0.4968	0.3195	0	0.4673	
PASTLLP	0.0061	0.0038	0.0065	0.0069	0.0036	0.0083	
EBP	0.0075	0.0108	0.0135	0.0129	0.0144	0.0128	
TCAP	11.5358	11.1404	2.6004	11.2270	10.6652	2.9266	

<sup>a</sup> 534 Observations are available for the variable CHGOFF.**Table 4**  
Correlations between abnormal loan loss provision and its determinants.

	ABSALLP	FEECUT	FEECUTD1	FEECUTD2	EXEMPT	OFFICE	INFLUENCE	MB	LNMV	LOSS	PASTLLP	EBP	
FEECUT		<b>-0.121</b>											
FEECUTD1		<b>-0.091</b>	<b>0.392</b>										
FEECUTD2		-0.025	<b>0.225</b>	<b>0.295</b>									
EXEMPT		0.011	0.001	<b>-0.105</b>	-0.042								
OFFICE		-0.038	-0.042	<b>0.088</b>	0.015	<b>-0.248</b>							
INFLUENCE		0.032	0.017	0.012	-0.007	-0.033	<b>-0.597</b>						
MB		<b>-0.248</b>	-0.042	<b>-0.076</b>	<b>-0.106</b>	<b>-0.139</b>	<b>0.131</b>	-0.009					
LNMV		<b>-0.174</b>	0.011	0.056	-0.006	<b>-0.371</b>	<b>0.561</b>	-0.012	<b>0.456</b>				
LOSS		<b>0.333</b>	-0.036	0.035	<b>0.086</b>	0.034	0.010	-0.008	<b>-0.499</b>	<b>-0.272</b>			
PASTLLP		<b>0.253</b>	0.056	<b>0.207</b>	<b>0.096</b>	<b>-0.098</b>	<b>0.085</b>	0.047	<b>-0.328</b>	-0.057	<b>0.410</b>		
EBP		-0.065	-0.040	-0.007	<b>-0.071</b>	<b>-0.132</b>	<b>0.118</b>	-0.008	<b>0.322</b>	<b>0.347</b>	<b>-0.477</b>	<b>-0.083</b>	
TCAP		<b>-0.124</b>	0.024	-0.047	-0.057	<b>0.150</b>	<b>-0.075</b>	0.026	<b>0.255</b>	0.013	<b>-0.169</b>	<b>-0.179</b>	<b>0.110</b>

Correlations in bold are significant at 10%, two-tailed. See Table 1 for variable definitions.

of *ABSALLP*, we find two correlations higher than 0.5 or lower than  $-0.5$ . The correlation between *OFFICE* and *INFLUENCE* is  $-0.597$  and the correlation between *OFFICE* and *LNMV* is  $0.561$ . To test whether multicollinearity could be a problem in our analyses, we compute VIFs for our regressions. The highest VIF we find is  $4.20$ .<sup>10</sup> Therefore, we conclude there is no harmful multicollinearity in our regressions.

## 5. Results

### 5.1. Estimation of abnormal LLP

Table 5 reports the determinants of LLP (i.e., model 1). Descriptive statistics for the LLP model are reported in the Appendix. We estimate the model separately for clients of Big 4 and non-Big 4 auditors to allow different coefficients for the two groups.<sup>11</sup> The signs on the following variables are consistent with predictions based on Kanagaretnam et al. (2010) and are significant at the 0.01 level or better: *BEG-LLA*, *CHNPL*, and *LCO*. *CHLOANS* is negative and significant at the 0.05 level. Unlike Kanagaretnam et al. (2010) we do not find commercial and real estate loans to be significant. The  $R^2$  is 95% for the Big 4 auditors and 91% for non-Big 4 auditors. These values are much higher than the 66.32% in Kanagaretnam et al. (2010), indicating that our model explains the variation in LLP quite well. Residuals from model (1) are *ALLP*.

### 5.2. Cuts in audit fees and abnormal LLP

Results of model (2) on the association between audit fee cuts and the magnitude of *ALLP* are in Table 6. As before, we present the results separately for the Big 4 auditors (Panel A) and non-Big 4 auditors (Panel B). Columns (1)–(3) present results for the full sample of the Big 4 auditees. With regard to control variables, *LOSS*, *PASTLLP* and *EBP* are positively associated with the magnitude of *ALLP*, consistent with that banks reporting loss, higher LLP in the prior year and higher earnings before LLP are associated with larger magnitude of abnormal LLP. *LNMV* is negative and significant at  $p < 0.05$ , suggesting less manipulation of LLP at larger banks. *EXEMPT* is negatively associated with the absolute value of *ALLP*, indicating less earnings management for banks exempt from an audit of their internal control under FDICIA.<sup>12</sup> Turning to the variables of interest, *FEECUT*, *FEECUTD1*, and *FEECUTD2* are all negatively associated with absolute value of *ALLP* and significant at  $p < 0.05$ , indicating that cuts in audit fees are associated with smaller magnitude of abnormal LLP for Big 4 auditees.

To provide evidence on whether there is any differential relation between the fee cut metrics and abnormal LLP conditional on whether the abnormal LLP is income-increasing (negative) or income-decreasing (positive), we partition the sample into two groups based on the sign of abnormal LLP. We use absolute values of *ALLP* as the dependent variable for both partitions to facilitate interpretations of coefficients on the fee cut measures. Columns (4)–(6) report the regression results estimated using sample banks that report negative (income-increasing) abnormal LLP and columns (7)–(9) report the regression results using sample firms that report positive abnormal LLP. In the partition of income-increasing *ALLP*, we continue to find that coefficients on *FEECUT* and *FEECUTD1* are negative and significant at  $p < 0.1$  or better, but the coefficient on *FEECUTD2* is insignificant. These results indicate that income-increasing *ALLP* are actually decreasing, i.e., less earnings management as audit fee cuts increase. In the partition of income-decreasing *ALLP*, the coefficients on *FEECUTD1* and *FEECUTD2* are negative and significant at  $p < 0.1$  or better, but the coefficient on *FEECUT* is insignificant. Overall, we find that banks audited by Big 4 auditors that received cuts in audit fees have both lower magnitude of income-increasing and income-decreasing abnormal LLP compared with banks audited by Big

<sup>10</sup> This is well below the threshold of 10 at which collinearity may become a problem (Belsley et al., 1980).

<sup>11</sup> Chow test rejects the hypothesis that the coefficients in the LLP model are the same for the Big 4 and non-Big 4 subsamples at  $p < 0.01$ .

<sup>12</sup> Note that in our sample, there are only 4 observations of Big 4 auditees exempt from the internal control audit. As the results are driven by only 4 observations, it is far from conclusive whether Big 4 auditees exempt from the internal control audit exhibit less earnings manipulation through LLP.

**Table 5**  
Results of Regression of Loan Loss Provisions (LLP) and its Determinants.

	Big 4 client firms	Non-Big 4 client firms
	(1)	(2)
Constant	−0.00150 (−1.36)	−0.00254 <sup>*</sup> (−1.83)
BEGLLA	−0.25675 <sup>***</sup> (−3.21)	−0.40388 <sup>***</sup> (−3.20)
BEGNPL	0.00252 (0.08)	0.03400 (0.97)
CHNPL	0.15654 <sup>***</sup> (4.49)	0.10278 <sup>***</sup> (4.52)
LCO	1.21208 <sup>***</sup> (26.68)	1.16195 <sup>***</sup> (23.84)
CHLOANS	−0.00632 <sup>**</sup> (−1.99)	−0.00898 <sup>**</sup> (−2.11)
LOANS	0.00663 (1.04)	0.01007 (1.46)
COMM	0.00558 (0.87)	−0.00293 (−0.39)
CONSUME	−0.00153 (−0.21)	−0.00254 (−0.27)
REALEST	−0.00165 (−0.30)	−0.00010 (−0.01)
AGRI	−0.00949 (−0.27)	−0.01809 (−1.35)
FBG	0.30244 (1.36)	1.68380 (1.26)
DEPINS	0.00607 (0.07)	0.07831 (0.96)
Year controls	Yes	Yes
N	246	328
R <sup>2</sup>	0.95	0.91

Variables are as defined in Table 1.

For each variable, we report the regression coefficient and t-statistics with the observations clustered by firm identity.

\*\*\* Represent 1% significance levels, respectively, two-tailed tests.

\*\* Represent 5% significance levels, respectively, two-tailed tests.

\* Represent 10% significance levels, respectively, two-tailed tests.

4 auditors with no such cuts. These findings support the notion that cuts in audit fees are associated with lower earnings management via LLP among banks audited by Big 4 auditors.

Panel B report the association between audit fee cuts and the magnitude of ALLP for banks audited by non-Big 4 auditors. Columns (1)–(3) present results for the full sample, while columns (4)–(6) report the results for banks that report income-increasing (negative) abnormal LLP and columns (7)–(9) report the results for banks that report income-decreasing (positive) abnormal LLP. For the variables of interest, *FEECUTD1* is negatively associated with absolute value of *ALLP* and significant at  $p < 0.05$ . However, the negative association between *FEECUTD1* and absolute value of *ALLP* seems to be driven by the partition of banks with income-decreasing *ALLP*. None of the fee cut variables are significant for negative *ALLP*. With regard to the control variables, only *LOSS* and *TCAP* are significant. Specifically, the magnitude of *ALLP* is higher at banks that report loss and lower at banks with higher total risk-adjusted capital. Overall, we find weak evidence that banks audited by non-Big 4 auditors with cuts in audit fees have lower magnitude of *ALLP* compared with banks audited by non-Big 4 auditors with no such cuts, but the relation seems to be driven by the income-decreasing *ALLP*.

To further explore the financial reporting quality of banks audited by non-Big 4 auditors, we interact fee cut variables with *EXEMPT* and those results are in Panel C. In the full sample of non-Big 4 auditees and the partition of banks that report income-decreasing abnormal LLP, we find that the coefficient on *FEECUTD2* × *EXEMPT* is negative (significant at the 0.1 level or better), indicating that

**Table 6**  
Relation between fee cut and abnormal loan loss provisions.

	Absolute value of ALLP			Absolute value of ALLP income-increasing (negative ALLP)			Absolute value of ALLP income-decreasing (positive ALLP)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Panel A: Big 4 client firms</i>									
Constant	0.00392** (2.53)	0.00415** (2.59)	0.00397** (2.43)	0.00241 (0.97)	0.00235 (0.91)	0.00235 (0.90)	0.00534*** (2.92)	0.00587*** (3.04)	0.00575*** (3.47)
<b>FEECUT</b>	<b>-0.00138*** (3.36)</b>			<b>-0.00174*** (3.62)</b>			<b>-0.00052 (0.60)</b>		
<b>FEECUTD1</b>		<b>-0.00069*** (3.13)</b>			<b>-0.00066* (1.95)</b>			<b>-0.00071* (1.95)</b>	
<b>FEECUTD2</b>			<b>-0.00109** (2.39)</b>			<b>-0.00040 (0.28)</b>			<b>-0.00157*** (4.53)</b>
EXEMPT	-0.00102*** (4.18)	-0.00120*** (3.97)	-0.00099*** (3.76)	-0.00090*** (2.86)	-0.00108*** (2.66)	-0.00086** (2.36)	-0.00075 (1.42)	-0.00101* (1.81)	-0.00086* (1.83)
OFFICE	0.00005 (0.37)	0.00007 (0.56)	0.00006 (0.42)	0.00011 (0.64)	0.00015 (0.79)	0.00012 (0.63)	-0.00001 (0.04)	-0.00002 (0.13)	-0.00005 (0.28)
INFLUENCE	0.00071 (0.80)	0.00082 (0.89)	0.00080 (0.83)	0.00128 (1.08)	0.00150 (1.11)	0.00128 (0.85)	0.00027 (0.29)	0.00012 (0.12)	0.00012 (0.13)
MB	-0.00034 (1.38)	-0.00032 (1.29)	-0.00036 (1.44)	-0.00001 (0.02)	-0.00004 (0.13)	-0.00008 (0.26)	-0.00067* (1.91)	-0.00072** (2.06)	-0.00081** (2.27)
LNMV	-0.00018* (1.95)	-0.00020** (2.14)	-0.00019** (1.98)	-0.00017 (1.38)	-0.00018 (1.35)	-0.00016 (1.19)	-0.00021 (1.55)	-0.00020 (1.53)	-0.00018 (1.38)
LOSS	0.00116** (3.35)	0.00124*** (3.74)	0.00137*** (3.88)	0.00091 (1.21)	0.00109 (1.43)	0.00110 (1.39)	0.00142*** (3.40)	0.00129*** (3.20)	0.00153*** (3.92)
PASTLLP	0.05649*** (2.76)	0.05961*** (2.85)	0.04824** (2.36)	0.06211** (2.28)	0.06262** (2.18)	0.05314* (1.85)	0.05866* (1.80)	0.06529* (1.96)	0.05379* (1.70)
EBP	0.03535** (2.41)	0.04196*** (2.80)	0.04430*** (2.84)	0.03377 (1.38)	0.04813* (1.85)	0.05168* (1.85)	0.03826* (1.78)	0.03791* (1.85)	0.03882* (1.90)
TCAP	0.00000 (0.02)	-0.00000 (0.03)	-0.00000 (0.02)	-0.00002 (0.39)	-0.00003 (0.57)	-0.00004 (0.77)	0.00003 (0.50)	0.00003 (0.47)	0.00004 (0.71)
Year controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	241	241	241	127	127	127	114	114	114
R <sup>2</sup>	0.28	0.27	0.26	0.27	0.21	0.20	0.34	0.36	0.37
<i>Panel B: non-Big 4 client firms</i>									
Constant	0.00515 (1.56)	0.00486 (1.53)	0.00488 (1.52)	0.00427 (1.41)	0.00380 (1.25)	0.00332 (1.14)	0.00873 (1.08)	0.00904 (1.15)	0.00881 (1.11)
<b>FEECUT</b>	<b>-0.00035 (0.89)</b>			<b>-0.00071 (0.80)</b>			<b>0.00002 (0.06)</b>		

<b>FEECUTD1</b>		<b>-0.00067**</b>			<b>-0.00040</b>			<b>-0.00084*</b>	
		(2.24)			(1.17)			(1.82)	
<b>FEECUTD2</b>			<b>-0.00036</b>			<b>0.00051</b>			<b>-0.00148</b>
			(0.43)			(0.49)			(1.63)
EXEMPT	-0.00009	-0.00014	-0.00010	0.00012	0.00014	0.00021	-0.00031	-0.00042	-0.00025
	(0.19)	(0.30)	(0.21)	(0.26)	(0.32)	(0.50)	(0.36)	(0.49)	(0.29)
OFFICE	0.00007	0.00013	0.00012	-0.00010	-0.00007	-0.00009	0.00043	0.00037	0.00042
	(0.32)	(0.67)	(0.60)	(0.47)	(0.35)	(0.44)	(0.88)	(0.88)	(0.98)
INFLUENCE	0.00055	0.00080	0.00069	-0.00034	-0.00026	-0.00037	0.00192	0.00180	0.00185
	(0.67)	(1.02)	(0.86)	(0.46)	(0.35)	(0.51)	(1.16)	(1.22)	(1.21)
MB	-0.00004	-0.00009	-0.00001	-0.00025	-0.00028	-0.00023	0.00095	0.00079	0.00095
	(0.14)	(0.28)	(0.03)	(0.91)	(1.03)	(0.90)	(1.10)	(0.92)	(1.10)
LNMV	-0.00022	-0.00024	-0.00024	-0.00004	-0.00003	0.00000	-0.00069	-0.00064	-0.00069
	(1.09)	(1.21)	(1.20)	(0.23)	(0.15)	(0.01)	(1.47)	(1.41)	(1.49)
LOSS	0.00137***	0.00134***	0.00138***	0.00106	0.00103	0.00109	0.00179***	0.00176***	0.00178***
	(3.16)	(3.13)	(3.16)	(1.40)	(1.35)	(1.42)	(2.76)	(2.80)	(2.76)
PASTLLP	0.00814	0.01422	0.00680	0.02433	0.02967	0.02225	0.00378	0.00990	0.00848
	(0.27)	(0.47)	(0.22)	(0.72)	(0.85)	(0.64)	(0.07)	(0.18)	(0.15)
EBP	0.01165	0.01240	0.01159	0.01797	0.01767	0.02045	0.00962	0.01159	0.01055
	(0.81)	(0.87)	(0.81)	(0.78)	(0.76)	(0.87)	(0.43)	(0.53)	(0.47)
TCAP	-0.00008*	-0.00008*	-0.00008*	-0.00005	-0.00005	-0.00004	-0.00019*	-0.00019*	-0.00019*
	(1.88)	(1.94)	(1.97)	(1.12)	(1.10)	(1.07)	(1.86)	(1.88)	(1.90)
Year controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	309	309	309	170	170	170	139	139	139
R <sup>2</sup>	0.12	0.13	0.12	0.11	0.11	0.11	0.15	0.17	0.16
<i>Panel C: non-Big 4 client firms, conditional on EXEMPT</i>									
Constant	0.00514	0.00486	0.00459	0.00429	0.00380	0.00332	0.00878	0.00905	0.00857
	(1.56)	(1.53)	(1.42)	(1.43)	(1.24)	(1.14)	(1.08)	(1.15)	(1.07)
<b>FEECUT</b>		<b>-0.00037</b>		<b>-0.00103</b>			<b>0.00005</b>		
		(0.88)		(1.04)			(0.12)		
<b>FEECUT × EXEMPT</b>		<b>0.00050</b>		<b>0.00308</b>			<b>-0.00092</b>		
		(0.41)		(1.61)			(0.57)		
<b>FEECUTD1</b>		<b>-0.00070**</b>			<b>-0.00038</b>			<b>-0.00089*</b>	
		(2.08)			(0.92)			(1.74)	
<b>FEECUTD1 × EXEMPT</b>		<b>0.00020</b>			<b>-0.00007</b>			<b>0.00045</b>	
		(0.35)			(0.12)			(0.41)	
<b>FEECUTD2</b>			<b>-0.00007</b>			<b>0.00051</b>			<b>-0.00039</b>
			(0.08)			(0.49)			(0.64)
<b>FEECUTD2 × EXEMPT</b>			<b>-0.00269**</b>			<b>0.00000</b>			<b>-0.00226*</b>
			(2.57)			(0.01)			(1.83)
EXEMPT	-0.00004	-0.00018	-0.00003	0.00036	0.00016	0.00021	-0.00039	-0.00051	-0.00018

(continued on next page)

Table 6 (continued)

	Absolute value of ALLP			Absolute value of ALLP income-increasing (negative ALLP)			Absolute value of ALLP income-decreasing (positive ALLP)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OFFICE	(0.10) 0.00007	(0.34) 0.00014	(0.06) 0.00012	(0.78) −0.00007	(0.33) −0.00007	(0.50) −0.00009	(0.45) 0.00042	(0.51) 0.00038	(0.20) 0.00041
INFLUENCE	(0.35) 0.00057	(0.69) 0.00082	(0.58) 0.00065	(0.34) −0.00026	(0.36) −0.00026	(0.44) −0.00037	(0.86) 0.00187	(0.90) 0.00185	(0.96) 0.00181
MB	(0.70) −0.00003	(1.04) −0.00009	(0.82) −0.00001	(0.35) −0.00015	(0.36) −0.00028	(0.51) −0.00023	(1.14) 0.00096	(1.26) 0.00079	(1.18) 0.00095
LNMV	(0.11) −0.00022	(0.27) −0.00024	(0.02) −0.00023	(0.56) −0.00008	(1.03) −0.00003	(0.90) 0.00000	(1.10) −0.00068	(0.91) −0.00065	(1.10) −0.00067
LOSS	(1.12) 0.00137***	(1.22) 0.00133***	(1.13) 0.00142***	(0.46) 0.00112	(0.15) 0.00103	(0.01) 0.00109	(1.45) 0.00183***	(1.41) 0.00174***	(1.45) 0.00184***
PASTLLP	(3.15) 0.00849	(3.12) 0.01457	(3.26) 0.00852	(1.47) 0.02957	(1.34) 0.02924	(1.42) 0.02225	(2.81) 0.00474	(2.79) 0.00843	(2.82) 0.01049
EBP	(0.28) 0.01164	(0.48) 0.01223	(0.28) 0.01255	(0.89) 0.01711	(0.82) 0.01780	(0.64) 0.02045	(0.08) 0.00961	(0.15) 0.01139	(0.18) 0.01112
TCAP	(0.81) −0.00007*	(0.85) −0.00008*	(0.86) −0.00008*	(0.76) −0.00003	(0.76) −0.00005	(0.87) −0.00004	(0.43) −0.00019*	(0.51) −0.00019*	(0.49) −0.00019*
	(1.83)	(1.94)	(1.88)	(0.70)	(1.11)	(1.07)	(1.86)	(1.90)	(1.87)
Year controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Test of joint significance									
CUT_VAR + CUT_VAR × EXEMPT = 0	<b>0.00023</b>	<b>−0.00050</b>	<b>−0.00276***</b>	<b>0.00205</b>	<b>−0.00043</b>	<b>0.00051</b>	<b>−0.00087</b>	<b>−0.00044</b>	<b>−0.00265**</b>
	<b>(0.01)</b>	<b>(0.98)</b>	<b>(23.16)</b>	<b>(1.65)</b>	<b>(1.14)</b>	<b>(0.24)</b>	<b>(0.31)</b>	<b>(0.22)</b>	<b>(6.73)</b>
N	309	309	309	170	170	170	139	139	139
R <sup>2</sup>	0.12	0.13	0.12	0.12	0.11	0.11	0.16	0.17	0.16

Variables are as defined in Table 1.

For each variable, we report the regression coefficient and *t*-statistics with the observations clustered by firm identity. For test of joint significance, we report the coefficient sum and  $\chi^2$  statistics. CUT\_VAR is equal to FEECUT, FEECUTD1, and FEECUTD2 in columns (1), (4) and (7), (2), (5) and (8), and (3), (6) and (9), respectively.

\*\*\* Represent 1% significance levels, respectively, two-tailed tests.

\*\* Represent 5% significance levels, respectively, two-tailed tests.

\* Represent 10% significance levels, respectively, two-tailed tests.

for smaller exempt banks audited by non-Big 4 auditors, a deep audit fee cut of at least 25% is negatively associated with the extent of income-decreasing *ALLP*. We also test the sum of the coefficients on *FEECUTD2* and *FEECUTD2* × *EXEMPT* using the  $\chi^2$  test and those results indicate that the sum is significant at the 0.05 levels or better for the full sample and the partition of income-decreasing *ALLP*. The negative and significant coefficient sum on *FEECUTD2* + *FEECUTD2* × *EXEMPT* suggests that smaller exempt banks audited by non-Big4 auditors that received an audit fee cut for more than 25% report lower magnitude of income-decreasing *ALLP* relative to smaller exempt banks audited by non-Big4 auditors that did not receive a cut for more than 25%. The coefficients on *FEECUT* × *EXEMPT* and *FEECUTD1* × *EXEMPT* are insignificant in both the full sample and the subsamples. Overall, the results support the notion that income-decreasing earnings management is lower for those smaller exempt banks audited by non-Big 4 auditors and received a deep fee cut relative to exempt banks audited by non-Big 4 but did not receive a deep fee cut.

In sum, for both banks audited by the Big 4 auditors and banks audited by the non-Big 4 auditors, our results do not suggest that financial reporting quality is impaired by audit fee cuts. Moreover, for banks audited by the Big 4 auditors, audit fee cuts are associated with lower discretion in both income-increasing and income-decreasing abnormal LLP. Our results are consistent with auditors responding to market-based incentives, such as, preserving reputation capital and preventing lawsuits employed a variety of strategies to ensure that fee cuts did not reduce audit quality.<sup>13</sup>

### 5.3. Audit fee cuts and LLP validity

Results of model (3) on the relation between audit fee cuts and LLP validity are in Table 7. Recall that a stronger association between current period LLP and future loan charge-offs is consistent with a forward-looking LLP. While Panel A presents the results for banks audited by the Big 4 auditors, Panel B presents the results for non-Big 4 auditors. Panel C presents the results of interactions of *EXEMPT*, *LLP*, and fee cut. As expected, the coefficient on *LLP* is positive and significant at the 0.01 level for both auditors, suggesting that *LLP* predict future loan charge-offs. The interaction of *LLP* and *FEECUT* is positive and significant at  $p < 0.01$  for banks audited by Big 4 auditors, indicating that LLP validity is increasing in audit fee cuts. For banks audited by non-Big 4 auditors, the interaction of *LLP* and *FEECUTD2* and the three-way interaction among *LLP*, *FEECUTD1* and *EXEMPT* are positive and significant at  $p < 0.01$ . These results indicate the following. For non-Big 4 clients, LLP validity is higher for banks receiving cuts in audit fees in excess of 25% and LLP validity is higher for smaller exempt banks that received a fee cut relative to other banks.

### 5.4. Audit fee cuts and timely recognition of loan losses

Results of model (4) on the relation between timely recognition of loan losses and cuts in audit fees are in Table 8.<sup>14</sup> We first discuss the results for the clients of Big 4 auditors (see Panel A). Column 1 presents the results for the same specification as in Panel B of Table 4 in Beatty and Liao (2011). The adjusted  $R^2$  is 0.09 and higher than 0.035 in Beatty and Liao (2011). Consistent with Beatty and Liao (2011), the coefficients on  $\Delta$ UNRATE, DEPOSITS are positive and significant, indicating that changes in quarterly unemployment rate and total deposits are positively associated with timely recognition of loan losses. Also, the coefficient on  $\sigma_{ret}$  is negative and highly significant, indicating that stock return volatility in the previous quarter is negatively related to timely loss recognition. However, coefficients on the two variables that represent changes in nonperforming loans are negative while Beatty and Liao (2011) find them to be positive. The coefficient on *EXEMPT* is negative and significant, suggesting that smaller exempt banks delay recognition of loan losses relative to other banks. Turning to the variable of interest, none of the fee cut measures (see columns 2 through 4) are statistically significant. Results in Panels B and C representing non-Big 4 clients and exempt banks are consistent with the results in Panel A with

<sup>13</sup> PCAOB (2010) reports that auditors responded to the increased risks arising from the GFC by issuing technical guidance to staff, providing additional training, developing new audit tools, requiring additional audit procedures, and increasing supervision of engagement personnel.

<sup>14</sup> Descriptive statistics for variables in model (4) appear in appendix.

**Table 7**

Results of regression on the association among loan charge-offs, LLP, and audit fee cuts.

	(1)	(2)	(3)	(4)
<i>Panel A: Big 4 client firms</i>				
Constant	0.00409*** (5.61)	−0.00066 (0.11)	−0.00120 (0.20)	−0.00028 (0.05)
LLP	0.74399*** (13.24)	1.09232* (1.85)	1.00266* (1.72)	1.02809* (1.82)
FEECUT		−0.00344 (1.14)		
<b>FEECUT × LLP</b>		<b>0.37670** (2.22)</b>		
FEECUTD1			0.00028 (0.20)	
<b>FEECUTD1 × LLP</b>			<b>0.13332 (0.89)</b>	
FEECUTD2				−0.00160 (0.59)
<b>FEECUTD2 × LLP</b>				<b>0.51269 (1.63)</b>
EXEMPT		−0.00066 (0.27)	−0.00060 (0.24)	−0.00075 (0.30)
LCO		−0.15608 (0.59)	−0.15859 (0.58)	−0.08264 (0.32)
LASSETS		0.00028 (0.76)	0.00033 (0.87)	0.00027 (0.76)
EXEMPT × LLP		0.22295 (0.31)	0.32056 (0.45)	0.27433 (0.38)
LASSETS × LLP		−0.01267 (0.40)	−0.01318 (0.42)	−0.01503 (0.50)
Year controls	Yes	Yes	Yes	Yes
N	235	235	235	235
R <sup>2</sup>	0.60	0.62	0.62	0.62
<i>Panel B: non-Big 4 client firms</i>				
Constant	0.00747*** (8.34)	0.00069 (0.05)	0.00111 (0.08)	0.00020 (0.01)
LLP	0.62164*** (10.64)	0.27212 (0.32)	0.14232 (0.16)	0.15479 (0.18)
FEECUT		−0.00178 (0.39)		
<b>FEECUT × LLP</b>		<b>0.21998 (0.66)</b>		
FEECUTD1			0.00261 (1.26)	
<b>FEECUTD1 × LLP</b>			<b>−0.03842 (0.28)</b>	
FEECUTD2				−0.00192 (0.34)
<b>FEECUTD2 × LLP</b>				<b>0.71096*** (2.61)</b>
EXEMPT		−0.00095 (0.57)	−0.00118 (0.70)	−0.00100 (0.59)
LCO		−0.37754 (1.49)	−0.37593 (1.48)	−0.41903 (1.65)
LASSETS		0.00047 (0.48)	0.00042 (0.43)	0.00051 (0.53)
EXEMPT × LLP		−0.02171 (0.16)	0.01003 (0.07)	0.00036 (0.00)
LASSETS × LLP		0.04449 (0.80)	0.05157 (0.91)	0.05241 (0.94)
Year controls	Yes	Yes	Yes	Yes



Table 7 (continued)

	(1)	(2)	(3)	(4)
<i>N</i>	298	298	298	298
<i>R</i> <sup>2</sup>	0.40	0.42	0.43	0.43
<i>Panel C: non-Big 4 client firms, conditional on EXEMPT</i>				
Constant	0.00747*** (8.34)	−0.00059 (0.04)	0.00164 (0.11)	−0.00010 (0.01)
LLP	0.62164*** (10.64)	0.28942 (0.33)	0.10881 (0.12)	0.16201 (0.19)
FEECUT		0.00107 (0.24)		
<b>FEECUT × LLP</b>		<b>0.13590 (0.39)</b>		
FEECUT × EXEMPT		−0.01658 (1.46)		
<b>FEECUT × EXEMPT × LLP</b>		<b>0.55112 (0.49)</b>		
FEECUTD1			0.00396 (1.58)	
<b>FEECUTD1 × LLP</b>			<b>−0.10708 (0.70)</b>	
FEECUTD1 × EXEMPT			−0.00866** (2.56)	
<b>FEECUTD1 × EXEMPT × LLP</b>			<b>0.73541*** (3.88)</b>	
FEECUTD2				0.00063 (0.09)
<b>FEECUTD2 × LLP</b>				<b>0.58634* (1.86)</b>
FEECUTD2 × EXEMPT				−0.00801* (1.68)
<b>FEECUTD2 × EXEMPT × LLP</b>				<b>Not applicable</b>
EXEMPT		−0.00233 (1.27)	0.00004 (0.02)	−0.00079 (0.44)
LCO		−0.38213 (1.51)	−0.37395 (1.48)	−0.41756 (1.64)
LASSETS		0.00058 (0.58)	0.00037 (0.36)	0.00053 (0.55)
EXEMPT × LLP		0.02603 (0.15)	−0.05706 (0.41)	−0.00423 (0.03)
LASSETS × LLP		0.04268 (0.76)	0.05485 (0.94)	0.05194 (0.93)
Year controls	Yes	Yes	Yes	Yes
Test of joint significance <b>CUT_VAR × LLP + CUT_VAR × EXEMPT × LLP = 0</b>		<b>0.68702 (0.40)</b>	<b>0.62833*** (31.25)</b>	<b>Not applicable</b>
<i>N</i>	298	298	298	298
<i>R</i> <sup>2</sup>	0.40	0.43	0.44	0.43

Variables are as defined in Table 1. For each variable, we report the regression coefficient and *t*-statistics with the observations clustered by firm identity. For banks audited by non-Big 4 auditors, there is only one observation with EXEMPT and FEECUTD2 both equal to 1, FEECUTD2 × EXEMPT × LLP is dropped in column (4) of Panel C due to multicollinearity. For test of joint significance, we report the coefficient sum and  $\chi^2$  statistics. CUT\_VAR is equal to FEECUT, FEECUTD1 and FEECUTD2 in columns (2), (3) and (4), respectively.

\*\*\* Represent 1% significance levels, respectively, two-tailed tests.

\*\* Represent 5% significance levels, respectively, two-tailed tests.

\* Represent 10% significance levels, respectively, two-tailed tests.

one exception. For banks audited by non-Big 4 auditors and exempt from an audit of internal controls, a fee cut of more than 25% is negatively associated with the likelihood of timely recognition of loan losses.

**Table 8**

Results of regression on the association between timely recognition of loan losses and audit fee cuts.

	(1)	(2)	(3)	(4)
<i>Panel A: Big 4 client firms</i>				
Constant	-2.82547**	-3.75330	-3.79021	-3.59038
<b>FEECUT</b>		<b>-0.14714</b>		
		<b>(0.43)</b>		
<b>FEECUTD1</b>			<b>-0.31770</b>	
			<b>(1.30)</b>	
<b>FEECUTD2</b>				<b>-0.44051</b>
				<b>(0.72)</b>
EXEMPT		-2.03541**	-2.16352**	-2.04609**
		(2.25)	(2.35)	(2.27)
OFFICE		0.06408	0.07407	0.05632
		(0.41)	(0.47)	(0.36)
INFLUENCE	-27.28464**	-29.00338**	-30.97383**	-28.21398**
	(2.20)	(2.14)	(2.26)	(2.17)
$\Delta NPL_t$	-18.90445	-20.67568	-21.41993	-20.03460
	(1.33)	(1.35)	(1.43)	(1.37)
$\Delta NPL_{t+1}$	0.95030	2.62493	3.68884	2.58566
	(0.12)	(0.32)	(0.45)	(0.31)
CAPITALR1	0.84933***	0.90796***	0.90030***	0.90038***
	(3.88)	(3.98)	(3.96)	(3.96)
$\Delta UNRATE$	0.15613	0.08516	0.07759	0.08787
	(1.49)	(0.69)	(0.63)	(0.71)
SIZE	2.15213***	2.39800***	2.33353***	2.38319***
	(3.49)	(3.70)	(3.64)	(3.56)
DEPOSITS	-5.02503	-6.83362	-7.46128	-6.23443
	(0.52)	(0.68)	(0.75)	(0.62)
$\Delta CAPITALR1$	-21.88764***	-22.91735***	-22.11267***	-22.90897***
	(3.87)	(3.91)	(3.73)	(3.91)
$\sigma_{ret}$	-2.82547**	-3.75330	-3.79021	-3.59038
	(2.07)	(1.43)	(1.44)	(1.36)
Year controls	Yes	Yes	Yes	Yes
N	883	883	883	883
R <sup>2</sup>	0.09	0.10	0.10	0.10
<i>Panel B: non-Big 4 client firms</i>				
Constant	-3.31218**	-6.86960**	-6.88791**	-6.93310**
	(2.25)	(2.38)	(2.39)	(2.39)
<b>FEECUT</b>		<b>-0.31119</b>		
		<b>(0.87)</b>		
<b>FEECUTD1</b>			<b>-0.32869</b>	
			<b>(1.33)</b>	
<b>FEECUTD2</b>				<b>-0.62119</b>
				<b>(0.96)</b>
EXEMPT		-0.07205	-0.10903	-0.07742
		(0.20)	(0.31)	(0.22)
OFFICE		0.34956*	0.37386*	0.36386*
		(1.76)	(1.89)	(1.84)
INFLUENCE	-19.42792***	-19.58667***	-19.68796***	-19.32050***
	(2.65)	(2.66)	(2.69)	(2.63)
$\Delta NPL_t$	-17.26540***	-17.24284***	-17.76878***	-16.92046***
	(2.61)	(2.64)	(2.67)	(2.58)
$\Delta NPL_{t+1}$	15.60307***	15.64920***	15.30200***	15.31596***
	(3.01)	(3.01)	(2.97)	(2.95)
CAPITALR1	0.67322***	0.66414***	0.64691***	0.66426***
	(4.09)	(3.94)	(3.87)	(3.94)
$\Delta UNRATE$	0.16114	-0.01691	-0.03678	-0.02892
	(1.02)	(0.09)	(0.20)	(0.15)
SIZE	0.89002	0.57395	0.50760	0.60260
	(1.23)	(0.79)	(0.71)	(0.83)

Table 8 (continued)

	(1)	(2)	(3)	(4)
DEPOSITS	-1.94700 (0.32)	-1.54130 (0.25)	-1.13456 (0.18)	-1.84276 (0.30)
ΔCAPITALR1	-22.18781*** (4.91)	-22.10831*** (4.85)	-21.47493*** (4.71)	-22.31344*** (4.85)
$\sigma_{ret}$	-3.31218** (2.25)	-6.86960* (2.38)	-6.88791** (2.39)	-6.93310** (2.39)
Year controls	Yes	Yes	Yes	Yes
N	1089	1089	1089	1089
R <sup>2</sup>	0.09	0.10	0.10	0.10
<i>Panel C: non-Big 4 client firms, conditional on EXEMPT</i>				
Constant	-3.31218** (2.25)	-6.85161** (2.38)	-6.93276** (2.40)	-6.98940** (2.40)
<b>FEECUT</b>		<b>-0.28292</b> <b>(0.79)</b>		
<b>FEECUT × EXEMPT</b>		<b>-0.26238</b> <b>(0.22)</b>		
<b>FEECUTD1</b>			<b>-0.37771</b> <b>(1.39)</b>	
<b>FEECUTD1 × EXEMPT</b>			<b>0.40304</b> <b>(0.57)</b>	
<b>FEECUTD2</b>				<b>-0.50118</b> <b>(0.69)</b>
<b>FEECUTD2 × EXEMPT</b>				<b>-0.84660</b> <b>(1.06)</b>
EXEMPT		-0.09464 (0.25)	-0.18524 (0.49)	-0.05429 (0.15)
OFFICE		0.34811* (1.75)	0.37617* (1.90)	0.36503* (1.85)
INFLUENCE		0.70216 (1.04)	0.84833 (1.27)	0.73312 (1.10)
ΔNPL <sub>t</sub>	-19.42792*** (2.65)	-19.66604*** (2.64)	-19.38908*** (2.61)	-19.30270*** (2.63)
ΔNPL <sub>t+1</sub>	-17.26540*** (2.61)	-17.34949*** (2.67)	-17.51023*** (2.63)	-17.04105*** (2.59)
CAPITALR1	15.60307*** (3.01)	15.61915*** (3.01)	15.37089*** (2.95)	15.49733*** (2.95)
ΔUNRATE	0.67322*** (4.09)	0.66513*** (3.93)	0.64460*** (3.84)	0.66628*** (3.94)
SIZE	0.16114 (1.02)	-0.01493 (0.08)	-0.03903 (0.21)	-0.02619 (0.14)
DEPOSITS	0.89002 (1.23)	0.57179 (0.79)	0.52729 (0.74)	0.60149 (0.83)
ΔCAPITALR1	-1.94700 (0.32)	-1.48579 (0.25)	-1.09604 (0.18)	-1.86033 (0.31)
$\sigma_{ret}$	-22.18781*** (4.91)	-22.15140*** (4.82)	-21.34199*** (4.63)	-22.39460*** (4.85)
Year controls	Yes	Yes	Yes	Yes
Test of joint significance				
<b>CUT_VAR + CUT_VAR × EXEMPT = 0</b>		<b>-0.54530</b> <b>(0.23)</b>	<b>0.02533</b> <b>(0.01)</b>	<b>-1.34778***</b> <b>(19.01)</b>
N	1089	1089	1089	1089
R <sup>2</sup>	0.10	0.10	0.10	0.09

The dependent variable is SMALLDELAY. Definitions of variables appear in Table 1. For each variable, we report the regression coefficient and z-statistics with the observations clustered by firm identity. For test of joint significance, we report the coefficient sum and  $\chi^2$  statistics. CUT\_VAR is equal to FEECUT, FEECUTD1 and FEECUTD2 in columns (2), (3) and (4), respectively.

\*\*\* Represent 1% significance levels, respectively, two-tailed tests.

\*\* Represent 5% significance levels, respectively, two-tailed tests.

\* Represent 10% significance levels, respectively, two-tailed tests.

In summary, the findings in Table 8 largely support the notion that audit fee cuts did not affect timely loss recognition by banks audited by Big 4 or non-Big 4 auditors.

Finally, we use restatements as a fourth measure of banks' financial reporting quality. We run a regression of restatements on measures of fee cut and the control variables included in model (2) and find that none of the fee cut variables are significant. Untabulated results indicate that restatements by banks are not associated with audit fee cuts.

### 5.5. Sensitivity tests

We conduct a few additional tests to assess the robustness of our results. First, audit fees could be cut due to reduction of bank size, therefore, lower audit efforts demanded. To investigate whether this factor drives our results, we delete observations with a decrease in total assets from the prior year, i.e., 149 observations (with 74 and 75 observations for the Big 4 and non-Big 4 clients respectively) in Table 6, 138 observations (with 68 observations for the Big 4 and non-Big 4 clients respectively) in Table 7 and 521 observations (with 265 and 256 observations for the Big 4 and non-Big 4 clients respectively) in Table 8. We continue to find that audit fee cuts are negatively associated with income-increasing abnormal LLP and higher LLP validity for banks audited by Big 4 auditors and higher LLP validity for banks receiving cuts in audit fees in excess of 25% for non-Big 4 auditees. More importantly, we do not find any evidence that audit fee cuts are associated with lower reporting quality in Tables 6 and 7. Results for the timely recognition of loan losses are qualitatively the same as reported in Table 8.

Second, when companies have merger and acquisitions, audit fees of the prior year may not be comparable to audit fees of the current year. As a sensitivity test, we identify completed merger deals through SDC. We delete 71 observations that merged with another company during the year (with 41 and 30 observations for banks audited by the Big 4 and non-Big 4 respectively) in Table 6 and delete 70 observations and 252 observations with completed mergers in Tables 7 and 8 respectively. We find all the results are qualitatively the same, except that the indicator for fee cut is insignificant in the regression of absolute value of *ALLP* for the partition of income-decreasing *ALLP* for both the Big 4 client firms and the non-Big4 client firms.

Third, we also examine the relation between abnormal LLP and audit fee cut using an alternate estimate of abnormal LLP. Ahmed et al. (1999) indicate that the earnings management through LLP documented in prior studies is sensitive to the inclusion of beginning non-performing loans (*BEGNPL*) in the expected LLP model. Our results in Table 6 are largely unchanged after excluding *BEGNPL* from model (1).<sup>15</sup>

## 6. Conclusions

As a result of the global financial crisis, many audit clients were able to negotiate lower audit fees for the years 2008 and 2009. However, the PCAOB and others have expressed concern that lower audit fees might lead to lower audit effort and have a negative impact on audit quality and financial reporting quality. This study examines the relation between audit fee cuts and several measures of banks' financial reporting quality. First, we examine whether audit fee cuts are associated with earnings management via abnormal loan loss provisions. Second, we examine whether the ability of current period loan loss provisions to predict future loan charge-offs is impaired as the audit fee cut increases. We find that cuts in audit fees were more common for banks audited by Big 4 auditors relative to banks audited by non-Big 4 auditors. However, for banks audited by Big 4 auditors, we find that income-increasing abnormal LLP are *decreasing* in audit fee cuts and LLP validity, i.e., the relation between current period LLP and future loan charge-offs is *increasing* in audit fee cuts. For banks audited by non-Big 4 auditors, LLP validity is *higher* for banks that received a fee cut of more than

<sup>15</sup> In Table 6 we find in Panel B, the coefficient on *FEECUTD1* is insignificant in the partition of income-decreasing *ALLP* and in Panel C, the coefficient on *FEECUTD2* × *EXEMPT* is negative and significant at  $p < 0.01$  in the partition of income-increasing *ALLP* and insignificant in the income-decreasing *ALLP*. Other than these three exceptions, all the other results about the test variables are qualitatively the same as reported in Table 6.

25% relative to other banks audited by non-Big 4 auditors. We also find that there is largely no association between audit fee cuts and timely recognition of loan losses or restatement of financial statements. Overall, our findings do not support the PCAOB's concern that audit fee cuts could affect audit quality.

Our results are consistent with auditors responding to market-based incentives (preserving reputation capital) employed a variety of strategies to ensure that fee cuts did not reduce audit quality. We believe our findings are potentially important to regulators, investors, and others since the earnings quality of banks has received much attention during the global financial crisis. Future research could examine whether our findings extend to other industries.

Our study extends prior research on auditor independence (Ghosh et al., 2009) by providing empirical evidence on whether fee concessions offered to existing clients contribute to diminished financial reporting quality. We also extend prior literature on the quality of audits performed by Big 4 and non-Big 4 auditors (Boone et al., 2010) by providing evidence that Big 4 auditors constrained income-increasing earnings management via loan loss provisions. Finally, we also contribute to the growing literature on the role of auditing in financial institutions (Fields et al. (2004).

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## Appendix A

Descriptive statistics for loan loss provision model.

Variable	Mean	Std. dev.	Minimum	p25	Median	p75	Maximum
LLP	0.0136	0.0120	0.0003	0.0044	0.0099	0.0186	0.0592
BIG 4	0.4278	0.4952	0	0	0	1	1
BEGLLA	0.0102	0.0043	0.0011	0.0074	0.0095	0.0119	0.0274
BEGNPL	0.0125	0.0121	0.0002	0.0043	0.0086	0.0165	0.0730
CHNPL	0.0122	0.0155	-0.017	0.0026	0.0080	0.0169	0.0808
LCO	0.0095	0.0094	0	0.0027	0.0063	0.0130	0.0485
CHLOANS	0.0294	0.1134	-0.2113	-0.0342	0.0185	0.0690	0.7766
LOANS	0.7410	0.1682	0.1605	0.6583	0.7368	0.8272	1.5486
COMM	0.1170	0.0844	0.0021	0.0620	0.1011	0.1443	0.6066
CONSUME	0.0366	0.0454	0.0002	0.0083	0.0192	0.0430	0.2271
REALEST	0.5613	0.1685	0.0618	0.4587	0.5721	0.6602	1.1248
AGRI	0.0056	0.0116	0	0	0.0006	0.0048	0.0708
FBG	0.0002	0.0008	0	0	0	0	0.0064
DEPINS	0.0006	0.0023	0	0	0	0	0.0155

Descriptive statistics for timely loss recognition model.

Variable	Mean	Std. dev.	Minimum	p25	Median	p75	Maximum
SMALLDELAY	0.4995	0.5001	0	0	0	1	1
$\Delta NPL_t$	0.0051	0.0089	-0.0216	0.0003	0.0028	0.0075	0.0448
$\Delta NPL_{t+1}$	0.0050	0.0093	-0.0220	0.0002	0.0027	0.0074	0.0467
CAPITALR1	0.1110	0.0231	0.0500	0.0950	0.1078	0.1247	0.1785
$\Delta UNRATE$	0.6132	0.4553	0.1000	0.3000	0.5000	0.8000	1.4000

(continued on next page)

**Appendix A (continued)**

Variable	Mean	Std. dev.	Minimum	p25	Median	p75	Maximum
SIZE	8.0392	1.4459	6.0988	6.9677	7.7113	8.7525	14.0656
DEPOSITS	1.0820	0.2026	0.7163	0.9566	1.0425	1.1487	2.0689
$\Delta$ CAPITALR1	0.0013	0.0107	-0.0297	-0.0030	-0.0001	0.0031	0.0421
$\sigma_{ret}$	0.0472	0.0240	0.0107	0.0284	0.0411	0.0605	0.1341

See Table 1 for variable definitions.

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