# Abnormal Audit Fees and Earnings Management Using Classification Shifting

**Xudong Li (Corresponding Author)**
**Monmouth University**

**Ying Guo**
**California State University - East Bay**

*Unlike accrual-based earnings management, earnings management through classification shifting does not change the bottom-line numbers and thus involves lower litigation costs. Using data from years 2000-2010, we find a significant and positive cross-sectional association between the magnitude of abnormal audit fees and the level of classification shifting, suggesting that greater abnormal audit fees allow for more classification shifting. Further, this result indicates that using abnormal audit fees to purely measure audit effort or economic bonding might be questionable as the effect of abnormal audit fees on opportunistic accounting practices could differ, depending on the specific form of earnings management activities.*

## INTRODUCTION

This study examines the effect of abnormal audit fees (the difference between the actual audit fees and the expected audit fees) on earnings management through classification shifting (hereafter, CS).[1] CS occurs when managers intentionally classify core expenses (cost of goods sold and sales, general and administrative expenses) as noncore expenses (special items and discontinued operations) on the income statement to overstate core earnings without changing GAAP net income (McVay 2006; Barua et al. 2010). Prior research has intensively debated whether abnormal audit fees indicate audit effort or client-auditor economic bonding (Francis 2011).[2] The audit effort view suggests that higher client risks lead to greater audit effort, which in turn can result in higher audit fees. The economic bond view argues that audit fees measure economic bonding between the auditor and the client. As such, higher audit fees result in stronger economic bonds between the auditor and the client, which can lead to more earnings management activities.

However, relevant prior literature investigating the role of audit fees mainly focuses on the context of accruals-based earnings management. Not only is empirical evidence on the association between audit fees and accruals-based earnings management mixed, but also similar results are interpreted differently. Intuitively, research that finds higher audit fees or total fees are associated with lower earnings management activities (proxied by lower likelihood of future restatement, better accruals quality, or smaller discretionary accruals) supports the audit effort view (e.g., Larcker and Richardson 2004; Srinidhi and Gul 2007; Blankely 2012; Lobo and Zhao 2013). However, research that shows higher audit fees are

associated with more accruals-based earnings management has been interpreted to support either view. Some studies argue that higher audit fees strengthen economic bonds between the auditor and the client, which can lead to more earnings management activities (e.g., Choi et al. 2010; Asthana and Booner 2012). Differently, other studies suggest that higher client risks lead to greater audit effort, which in turn can result in higher audit fees (e.g., Bedard and Johnstone 2004; Abbott et al. 2006). In terms of interpreting the positive association between audit fees and accruals-based earnings management, one major difference between the economic bond view and the audit effort view is whether the auditor exercises sufficient professional skepticism to interpret audit evidence correctly or judge the evidence impartially. Specifically, the economic bond view conjectures that impaired auditor independence resulting from higher audit fees leads to lower client earnings quality; whereas the audit effort argument posits that lower client earnings quality (higher client risk characteristics) results in greater audit effort and thus higher audit fees charged by auditors.

The mixed evidence and different interpretations of similar results on the association between audit fees and earnings management with great litigation costs motivate this study. Compared with the accruals-based earnings management, however, CS has three distinct characteristics: (1) it does not change the bottom-line numbers, thus attracting limited scrutiny of auditors and regulators (Nelson et al. 2002; McVay 2006); (2) it tends to be associated with lower litigation risk (McVay 2006; Fan et al. 2010) and is thus unlikely to be a determinant of audit pricing (Simunic and Stein 1996; Higgs and Skantz 2006), which may result in less resource allocated to the audit of CS activities;[3] (3) it is difficult to detect because CS between core expenses and noncore expenses can be ambiguous and involves substantial subjective judgments (McVay 2006). It is arguable that the role of audit fees in auditors' incentives might depend on the context and specific form of accounting practices. Given the distinctions between the two forms of earnings management, the effect of abnormal audit fees on the incentives of auditor in dealing with the behavior of earnings management could be different. Auditors and their clients appear to have conflicting goals. Thus, in order to minimize the conflicts with their clients, auditors might weigh the costs and benefits as to different forms of earnings managements. Given this context, it is interesting to investigate how earnings management activities with lower ligation risks affect the incentives of auditor who charges greater audit fees. Further, examining the effect of audit fees on earnings management behavior with lower litigation costs could provide a broader perspective in regard to the role of audit fees on the specific context of earnings management activities.

On the one hand, the magnitude of abnormal audit fees could be negatively associated with CS if higher audit fees are associated with greater audit effort and such audit effort is effective in limiting the behavior of CS. Further, despite of notable distinctions between accruals earnings management and CS, similarities and overlapping between the two also exist.[4] Therefore, even if auditors do not exert additional effort on the audit of CS due to its potential low litigation risks, the knowledge and experience accumulated through audit effort on the detection of accruals-based management activities can help identify CS activities because the two forms of earnings management could be related. Such inference is supported by the theoretical implication of knowledge transfer, defined as knowledge learned from working on one task can be transferred to enhance the performance of another related task (Joe and Vandervelde 2007).

On the other hand, however, the effect of audit fees on auditors' incentive might differ, depending on the form of earnings management activities associated with the degree of perceived litigation costs associated with. First, as CS does not change the bottom-line numbers and thus involves lower litigation costs, audit firms are likely to allocate less resource to audit this type of earnings management. Second, given that CS can be ambiguous and involves substantial subjective judgments, auditor might have the limited ability to detect such earnings management behavior. For instance, prior research (e.g., Nelson et al. 2002 and Libby et al. 2006) indicates that audit firms are likely to allow for more aggressive accounting practices if the subjective associated with those accounting practices substantially increases. Further, to a possible extent, while making an effort to limit earnings management activities with higher litigation costs (e.g., accruals-based earnings management) auditors might give in to some form of earnings management activities with low litigation risks, such as CS, in order to resolve conflicts in a way

that are perceived to be mutually satisfying and beneficial. Thus, a positive relation between abnormal audit fees and CS should be observed.

To investigate the relationship between abnormal audit fees and CS, we first estimate unexpected core earnings using McVay's (2006) model. We then follow prior literature to develop an audit fee model and estimate abnormal audit fees as the residual value of the normal audit fee model. Finally, we examine the association between abnormal audit fees and classification shifting. Using data from 2000-2010 and controlling for other determinants of unexpected core earnings, we find a significant and positive cross-sectional association between the magnitude of abnormal audit fees and the level of CS. This result suggests that greater abnormal audit fees allow for more earnings management through classification shifting. However, this results should be interpreted cautiously as the role of audit fees in auditors' incentives might differ, depending on the type of earnings management behavior associated with the level of potential litigation risks.

We also conduct several additional tests to extend the results and test their robustness. First, following prior literature (Simunic 1980; Choi et al. 2010; Srinidhi and Gul 2007), we replace abnormal audit fees with the logarithm of gross audit fees and examine the role of audit fees in the behavior of CS. This additional analysis gives results consistent with those of using abnormal audit fees. Second, to ensure that the results are not driven by the systematic differences in audit quality between Big 4 and non-Big 4 auditors, we include a Big 4 variable and its possible interactions and find the results remain quantitatively similar. The results, however, do not suggest that the audit quality (proxied by a Big 4 auditor) could limit CS.

Third, in order to avoid the results driven by the confounding effects of the passage of SOX (SOX404), we add a SOX (SOX404) variable and its possible interactions and find the results are still robust. In addition, the results suggest that the passage of SOX (SOX404) could limit CS. Finally, we limit our sample to observations with positive abnormal audit fees as prior research suggests that positive and negative abnormal fees create different incentive effects (Choi et al. 2010; Asthana and Boone 2012). On the one hand, positive abnormal audit fees indicate that auditors put extra effort on accruals management activities, which could limit classification shifting through knowledge transfer. However, on the other hand, positive abnormal audit fees suggest that while exerting the excessive effort on accruals management activities with greater litigation costs auditors have an incentive to allow for more CS activities with low potential risks, in order to minimize conflicts with their clients. we find that the magnitude of positive abnormal audit fees are positively associated with the level of classification shifting, further suggesting that the level of CS increases as the magnitude of positive abnormal fees increases.

Collectively, our results suggest that excessive high audit fees can give the auditor an incentive to yield to client pressure and allow for more opportunistic accounting practices with low potential litigation costs. Further, it indicates that whether abnormal audit fees can limit a client's earnings management behavior might depend on the specific form of earnings management activities associated with the level of potential litigation costs.

This study adds to the audit literature in several important ways. First, it provides evidence concerning the relationship of audit fees with a different form of earnings management through CS with low litigation costs than is discussed in prior literature. This paper finds that unexpectedly high audit fees are positively associated with earnings management behavior through CS. This result seems to support the empirical evidence of prior findings (e.g., Blankley et al. 2012) that suggest abnormal audit fees as an indicator of economic bonding. However, this finding should be interpreted cautiously as the role of abnormal audit fees in auditors' incentives might differ, depending on the context and specific form of earnings management behavior. Second, these results also add new insight to the debate of whether the use of abnormal audit fees purely measures the client-auditor's economic bond or audit effort. Our findings suggest that the role of audit fees in auditors' incentives might depend on the specific form of earnings management activities associated with the level of potential litigation costs. Finally, this paper provides additional evidence that audit firms might allow for more aggressive accounting practices as the

subjective of accounting practices/standards increases and also provides a broader perspective of the role of audit fees in different types of earnings management behavior.

The remainder of this study is organized as follows. Section II discusses the background and hypothesis. Section III discusses research methods and sample selection. Section IV presents descriptive statistics and empirical results. Section V concludes.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Prior Literature

Prior literature holds divergent view on whether (abnormal) audit fees indicate audit effort or economic bond. According to the economic bond explanation, higher audit fees increase the auditor's economic dependence on the client, which could potentially impair audit quality. Separately, professional standards require auditors to assess client related risk and perform auditing procedures to reduce audit risk to an acceptable level (SAS No. 47, AICPA 1983, SAS No. 107, AICPA 2006). As such, under the audit effort explanation, higher risk associated with certain client characteristics such as lower earnings quality and poor control quality triggers more audit effort, leading to higher audit fees. Both analytical/conceptual and empirical work exists to support either view.

Earlier analytical work by DeAngelo (1981) argues that bonding between the auditor and client can be strengthened when significant rents exist for the engagement or when the auditors are overpaid. Further, Dye (1991) analytically demonstrates that when auditors receive excessive audit fees from their clients auditors may impair the quality of audit services. In this view, the auditor's economic dependence on the client gives the auditor an incentive to permit opportunistic earnings management by the client. However, Simunic (1980) argues that if the audit market is competitive audit fees should indicate the expected level of audit service. In a later study, Whisenant et al. (2003) develop an audit fee model and argue that audit fees might indicate the auditor's expected effort since audit fees reflect client characteristics and risks.

Relevant prior literature mainly focuses on accruals-based earnings management to examine the association between audit fees and earnings management behavior. However, empirical results on the association between accruals-based earnings management and audit fees is mixed and even studies finding similar results offer different interpretations. One stream of research documents a positive association and mainly uses economic bonding to interpret this positive relationship. For instance, Choi et al. (2010) show that positive abnormal audit fees are positively related to abnormal accruals (a negative audit quality indicator). They discuss that an abnormal fee, measured as the residual or unexplained audit fee estimated from a standard audit fee model, provides a measure of economic bonding between the auditor and client. Thus, abnormally high audit fees might indicate that the client is economically important to the auditor and therefore the auditor might compromise its independence and be more likely to acquiesce to some forms of earnings management. In a related study, using the level of abnormal audit fees as a proxy for engagement profitability (economic rents), Asthana and Boone (2012) find that audit quality proxied by discretionary accruals declines as actual audit fees exceed normal audit fees. Thus, they suggest that abnormal audit fees indicate economic bonding between the auditor and client. However, Choi et al. (2010) and Asthana and Booner (2012) also acknowledge that because of unobserved client risk characteristics, they cannot rule out the possibility of risk premium (or audit effort) argument although they try to control for several client risk characteristics.

Another stream of research documenting the positive association between accruals-based earnings management and audit fees mainly employs the audit effort view to interpret this positive relationship. Bedard and Johnstone (2004) find that auditors respond to earnings management risk with greater planned audit effort and higher billing rates. In particular, they suggest that auditors charge a higher hourly billing rate to clients with higher earnings manipulation risk to compensate for costs related to potential future litigation. Abbott et al. (2006) find that auditors appear to adjust audit effort or extract risk premium according to the direction of earnings management risk. Specifically, they find a positive association between audit fees and positive discretionary accruals, consistent with the audit effort argument.

Differently, some other studies document a negative association between accruals-based earnings management and audit fees, which supports the audit effort view. For instance, Srinidhi and Gul (2007) document a positive association between accrual quality (higher accruals quality corresponding to lower earnings management) and audit fees and interpret this as more audit effort leading to better audit quality. Using latent class mixture models to identify clusters of firms with a homogenous regression structure, Larcker and Richardson (2004) document a negative relation between total fees and accruals, interpreting this as being consistent with auditor effort argument.

Some other studies do not directly examine the association between audit fees and accruals-based earnings management. However, they provide empirical evidence or conceptual discussions to support the audit effort view. Higgs and Skantz (2006) find that the ERC is higher for firms with unusually high audit fees, suggesting that the market perceives abnormally high audit fees as an indicator of higher earnings quality, which in turn is linked to higher audit effort. Hoitash et al. (2008) find a positive association between internal control over financial reporting (ICFR) problems and audit fees. They argue that this result suggests that auditors work harder on audit engagements for clients that have lower internal control quality and charge higher audit fees to compensate for residual risk. Two recent studies document a negative association between future restatements and abnormal audit fees (Blankely et al. 2012; Lobo and Zhao 2013), suggesting that abnormal audit fees reflect abnormal audit effort reducing the likelihood of material misstatement.

As Francis (2011) points out, however, the mixed research evidence discussed above suggests that the use of audit fees to measure auditor-client economic bonding or audit effort is questionable as abnormal audit fees might partly indicate auditor effort or economic bonding. As such, it is arguable that the role of audit fees in auditors' incentives might depend on the context and specific form of accounting practices.

**Hypothesis Development**

CS is one type of earnings management in which managers deliberately shift core expenses (e.g., cost of goods sold and selling, general, and administrative expenses) to non-core expenses (e.g., special items and discontinued operations) within the income statement to inflate core earnings, while bottom-line net income remains unchanged (McVay 2006; Fan et al. 2010; Barua et al. 2010). Unlike core expenses, special items tend to be nonrecurring in nature and excluded from core earnings by analysts (Lougee and Marquardt 2004) and thus have a lower degree of information content (Bradshaw and Sloan 2002). Prior literature documents that market participants are more interested in core earnings (or pro forma earnings) than GAAP net earnings and that market's reaction to core earnings is stronger than non-core earnings (Bradshaw and Sloan 2002; Lipe 1986).[5] CS is thus a potential earnings management tool for the company to overstate core earnings and to meet the analyst forecast earnings benchmark (e.g., McVay 2006).

Ex ante, the relation between abnormal audit fees and earnings management through CS can be predicted in either direction. The audit effort view predicts a negative association. First, if abnormal audit fees represent additional audit effort/audit resource such audit effort can be exerted on CS audit and thus be effective in limiting the behavior of CS. which help detect and correct CS earnings management activities. Further, prior research (e.g., Novick 1988; Marchant 1989) show that effort/experience increases the opportunity for knowledge transfer because effort/experience enhances the ability to recognize the similarities between two (or) more problems.[6] Therefore, according to the implication of knowledge transfer, even though resources allocated to CS audit can be limited due to its low litigation risk, additional audit effort devoting to audit of other types of earnings management such as accruals-based earnings management can still be helpful to detect and correct CS-based earnings management because the two forms of earnings management could be related. [7]

On the other hand, however, the effect of audit fees on auditors' incentive in dealing with firm behavior of earnings management might differ, depending on the level of perceived litigation costs associated with earnings management activities. Compared with the accruals-based earnings management, CS has three distinct characteristics. First, CS does not change the bottom-line numbers, thus limiting the scrutiny of auditors and regulators (Nelson et al. 2002; McVay 2006). Further, CS is associated with

lower litigation risks (McVay 2006; Fan et al. 2010) and is thus less likely to be a determinant of audit pricing, which may result in less resource allocated to the audit procedures related to CS activities.[8] Finally, CS is more difficult to detect because the CS between core expenses and noncore expenses can be ambiguous and involves substantial subjective judgments. As such, auditors may have limited ability and knowledge to verify the appropriate classification (McVay 2006 and Nelson et al. 2002).

Auditors and their clients appear to have conflicting goals. Thus, in order to minimize the conflicts with their clients, auditors might weigh the costs and benefits in regard to different forms of earnings managements. As such, while making an effort to limit earnings management activities with higher litigation costs (e.g., accruals-based earnings management) auditors might give in to some form of earnings management activities with low litigation risks in order to resolve conflicts in a way that are perceived to be mutually satisfying and beneficial. Further, prior literature (e.g, Hackenbrack and Nelson 1996; Libby et al. 2006) suggests that auditors are more likely to justify a client's aggressive reporting when the engagement risk (i.e., the client-specific risk of litigation and reputation loss) is lower. As such, the economic bond view suggests that increases in audit fees strengthen the economic bond between the auditor and client and thus could motivate auditors to allow for more CS activities. Thus, a positive relation between abnormal audit fees and CS should be observed.

Given the two competing views discussed above, it is an empirical question of whether and in what direction abnormal audit fees are related to CS-based earnings management. The main hypothesis is thus stated in null form as follows:

> ***H1: All else equal, the magnitude of abnormal audit fees is not associated with the level of earnings management through classification shifting.***

## DATA AND RESEARCH METHODS

### Data

We obtain data from the Compustat and AuditAnalytics databases. In line with prior research (e.g., McVay 2006; Fan et al. 2010), first we obtain data for 1988-2010 from the Compustat database to estimate unexpected core earnings. We eliminate firm-year observations with annual sales less than $1 million to avoid the small deflator problem as sales is used as a scalar for most of the variables. We also exclude firm-year observations that had a fiscal-year-end change to ensure the comparability of years. Each firm-year must supply all variables necessary to estimate unexpected core earnings by industry and by fiscal year. Industry categories are based on Fama and French (1997). Special items with missing data are set to zero. At least 15 observations per industry-year are required to ensure a large enough sample to estimate expected core earnings. After following these procedures, we obtained a sample with 110,105 firm-year observations to estimate unexpected core earnings.

Following other prior studies (Simunic 1980; Whisenant et al. 2003; Srinidhi and Gul 2007; Choi et al. 2010; Blankley et al. 2012), we then obtain data for years 2000 - 2010 from the AuditAnalytics database and, as above, require each firm-year to have the variables necessary to estimate abnormal audit fees. We begin with year 2000 as audit fee data are available from then on. After various sample attrition procedures, we obtained a sample with 27,051 firm-year observations to estimate abnormal audit fees.

We then merge the two data sets, resulting in a final sample of 18,029 firm-year observations to test the relationship between abnormal audit fees and classification shifting. Following prior literature (McVay 2006; Fan et al. 2010), we winsorize all continuous variables at the 1st and 99th percentiles. The Appendix lists the definitions of all variables used in the models and the empirical analyses.

### Research Methods

*Audit Fee Model – Measurement of Abnormal Audit Fees*

Abnormal audit fees are defined as the difference between actual audit fees (i.e., fees paid to auditors for financial statement audits) and the expected amount of audit fees. Following prior literature, we decompose audit fees into expected and unexpected components using simultaneous expectation models (Craswell et al. 1995; Whisenant et al. 2003; Choi et al. 2010; Blankley et al. 2012). Building upon the

extant literature on audit-fee determinants, we use the following model to estimate abnormal audit fees by year and industry:

$$LnAFEE_t = a_0 + b_1 LnAT_t + b_2 REVAT_t + b_3 LEV_t + b_4 ROA_t + b_5 LOSS_t + b_6 MB_t + b_7 ARAT_t + b_8 INVAT_t + b_9 BIG4_t + b_{10} LnDELAY_t + b_{11} GC_t + b_{12} LnSEG_t + b_{13} RESTRUCT_t + b_{14} BUSY_t + b_{15} RESTATE_t + b_{16} AUDCHG_t + b_{17} ICMW_t + b_{18} NUMMW_t + INDUSTRYDUMMIES + YEARDUMMIES + \varepsilon_{i,t} \quad (1)$$

Where:

LNAFEE = the natural log of the audit fee;
LNAT = the natural log of the firm's total assets (AT) measured in millions of dollars;
REVAT = Revenue (SALE) divided by total assets (AT);
LEV = the firm's total assets (AT) less its book value (CEQ) divided by its total assets;
ROA = the firm's return-on-asset ratio calculated as net income before extraordinary items (WeB) divided by beginning of the year total assets (AT);
LOSS =1 if the firm's net income before extraordinary items (IB) is negative, and 0 otherwise;
MB = the firm's market-to-book ratio defined as its market value of equity (CSHO*PRCC_F) divided by book value (CEQ);
ARAT = receivables (RECT) divided by its total assets;
INVAT = inventory (INVT) divided by its total assets;
BIG4 = 1 if the firm is audited by Deloitte Touche, Ernst & Young, KPMG, or PricewaterhouseCoopers (AU) and 0 otherwise;
LNDELAY = Natural logarithm of number of days from a company's fiscal year-end to the date the auditor signs the audit report;
GC = 1 if the auditor issues a going concern opinion, 0 otherwise;
LNSEG = logarithm of the sum of the number of business segments reported by the Compustat Segments database;
RESTRUCT = 1 if aggregate restructuring charges (RCP) in years t and t–1 is negative, 0 otherwise;
BUSY = 1 if client fiscal year end is between December 1 and March 31, 0 otherwise;
RESTATE = 1 if the firm restates its financial statements, 0 otherwise;
AUDCHG = 1 if the firm changes its auditor, 0 otherwise;
ICMW = 1 if companies reported internal control material weakness, 0 if companies reported effective internal control;
NUMMW = The number of material weaknesses identified.
Industry dummies = Fama French 48 industries classifications
Year dummies = Year dummies

The industry dummies control for fixed industry effects. To control for the potential effects of time-specific factors on the regression results, we include year dummies in the audit fee model as well. We use a two-stage method to obtain the abnormal audit fee. First, we regress audit fees on the determinants of audit fees; then, we calculate the abnormal audit fee as the residual from the above model.

*McVay (2006) Model – Measurement of Unexpected Core Earnings*

We follow McVay (2006) to measure core earnings, expected core earnings, and unexpected core earnings.[9] Unexpected core earnings are the difference between actual core earnings and expected core earnings. McVay (2006) notes that her expectation model may have a bias because it uses contemporary accruals that include special items. Thus, she cautions that the association between income-decreasing special items and unexpected core earnings in her model may be due to the use of current-period accruals model. Also, Fan et al. (2010) argue that the evidence of classification shifting in McVay (2006) may be

biased because noncash special items are included in total accruals, which are an independent variable in the model. For that reason, Fan et al. (2010) remove contemporaneous accruals from their model when using it to estimate unexpected core earnings.

We estimate unexpected core earnings by excluding current-period accruals, using the following expectation model:

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 \Delta SALES_t + \beta_5 NEG\_SALES_t + \varepsilon_{i,t} \quad (2)$$

Where:

$SALES_t$ = Sales revenue in millions;

$CE_t$ = Core Earnings (before Special Items and Depreciation), calculated as (Sales - Cost of Goods Sold - Selling, General, and Administrative Expenses) /Sales;

$ATO_t$ = Asset Turnover Ratio, measured as $Sales_t$ /(($NOA_t - NOA_{t-1}$) / 2), where NOA (Net Operating Assets) is measured as the difference between Operating Assets and Operating Liabilities[10];

$ACCRUALS_t$ = Operating Accruals, calculated as [Net Income before Extraordinary Wetems - Cash from Operations]/Sales;

$\Delta SALES_t$ = Percent Change in Sales, defined as ($Sales_t$ - $Sales_{t-1}$) /$Sales_{t-1}$;

NEG_ $\Delta SALES_t$ = Percent Change in Sales ($\Delta SALES_t$) if $\Delta SALES_t$ is less than 0, and 0 otherwise.

We obtain coefficients from the core earnings model by industry-year and use them to measure expected core earnings. We then obtain unexpected core earnings, calculated as the difference between reported and predicted core earnings. After obtaining unexpected core earnings, we regress unexpected earnings on income-decreasing special items based on the following regression[11]:

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \varepsilon_{i,t} \quad (3)$$

Where:

$UE\_CE_t$ = Unexpected Core Earnings, calculated as the difference between reported and predicted Core Earnings;

$\%SI_t$ = Income-Decreasing Special Items scaled by sales and multiplied by (-1), when Special Items are income-decreasing, and 0 otherwise;

Consistent with the concept of classification shifting (McVay 2006; Fan et al. 2010) and after the exclusion of current-period accruals, we expect a negative association between unexpected core earnings and income decreasing special items ($\beta_1 < 0$), as evidenced in prior studies (e.g., McVay 2006, Table 10; Fan et al. 2010, Table 4)[12], suggesting that managers shift core expenses to special items in an attempt to increase core earnings.

*Research Model – Association between Abnormal Audit Fees and Classification Shifting*

To test the association of abnormal audit fees and earnings management through classification shifting, we expand McVay's (2006) model to include abnormal audit fees and the interaction of special items with abnormal audit fees. Based on prior research (McVay 2006; Fan et al. 2010; Barua et al. 2010) suggesting that firm performance variables can affect the magnitude of unexpected core earnings, we include several measure of firm performance: firm size ($SIZE_t$), book-to-market ratio ($BM_t$), operating cash flow ($OCF_t$), and return on assets ($ROA_t$). We also control for leverage ($LEV_t$), measured as the ratio of total liabilities to total assets, because leverage might be associated with unexpected core earnings. Finally, we control for industry and year fixed effects. We use the following OLS regression model to test our main hypothesis[13]:

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 ABAFEE_t * \%SI_t + \beta_4 SIZE_t + \beta_5 ROA_t + \beta_6 OCF_t + \beta_7 BM_t + \beta_8 LEV_t + INDUSTRYDUMMIES + YEARDUMMIES + \varepsilon_{i,t} \quad (4)$$

Where:

$UE\_CE_t$ = Unexpected Core Earnings, calculated as the difference between reported and predicted Core Earnings;
$\%SI_t$ = Income-Decreasing Special Items scaled by sales and multiplied by (-1), when Special Items are income-decreasing, and 0 otherwise;
$ABAFEE_t$ = Abnormal audit fees, defined as the difference between actual audit fees and the expected level of audit fees;
$SIZE_t$ = The natural logarithm of a firm's total assets;
$ROA_t$ = Income before extraordinary items divided by average total assets;
$OCF_t$ = Operating cash flow divided by sales;
$BM_t$ = Ratio of book value to market value;
$LEV_t$ = Ratio of total liabilities to total assets;
Industry dummies = Fama French 48 industries classifications
Year dummies = Year dummies

Our main test examines the association between abnormal audit fees and classification shifting. Unexpected core earnings (*UE_CE*) is the dependent variable of interest and the interaction term between abnormal audit fees and special item (*ABAFEE*%SI*) is the independent variable of interest. If $\beta_3$ is negative, it suggests that abnormal audit fees can constrain earnings management through classification shifting, consistent with the notion that abnormal audit fees indicate abnormal audit effort in the context of CS. In contrast, if $\beta_3$ is positive it suggests a positive relationship between abnormal audit fees and classification shifting, consistent with the idea that abnormal audit fees allow for more earnings management activities through CS, in support of the economic bonding between the auditor and client in a context and specific form of earnings management with potential low litigation costs.

## EMPIRICAL RESULTS

### Univariate Analysis

Table 1 provides descriptive statistics for selected variables used in the empirical analyses. The table is divided into two panels based on two different regression models. Panel A presents descriptive statistics for regression variables used to estimate unexpected core earnings, and panel B provides descriptive statistics for regression variables used to estimate abnormal audit fees.

In Panel A mean annual sales for the final sample is $2,550.39 million; Mean core earnings scaled by sales for all firm-year observations is approximately 0.04; mean income-deceasing special items as a percentage of sales is approximately 0.04 percent;[14] Mean unexpected core earnings (reported core earnings minus expected core earnings) is approximately -0.01[15]. Panel B shows that mean logged audit fees for the final sample is 13.64; mean abnormal audit fees is 0.004[16]; and Big 4 firms on average audited 87.4% (100.0%) of the firm-year observations in the final sample.

The correlation matrix (Table 2) presents the univariate relations between variables with respect to our main test in the final sample. Specifically, the Pearson correlation between *UE_CE* and *%SI* is -0.2060 (*p-value* < 0.001). This univariate result is consistent with the multi-analysis of the negative association between unexpected core earnings (*UE_CE*) and special items (*%SI*).

**TABLE 1**
**DESCRIPTIVE STATISTICS FOR THE FINAL SAMPLE**

| **Panel A: Descriptive Statistics for the Core Earnings Expectation Model** | | | | | | |
|---|---|---|---|---|---|---|
| **Variable** | **N** | **Mean** | **Std. Dev.** | **Min** | **Median** | **Max** |
| $SALE_t$ *(in millions)* | 18029 | 2550.39 | 7079.12 | 1.93 | 464.63 | 55500 |
| $CE_t$ | 18029 | 0.04 | 0.6 | -3.75 | 0.13 | 0.78 |
| $CE_{t-1}$ | 18029 | 0 | 0.87 | -6.45 | 0.13 | 0.79 |
| $ATO_t$ | 18029 | 2.63 | 3.76 | 0.1 | 1.62 | 29.39 |
| $ACCURALS_{t-1}$ | 18029 | -0.16 | 0.44 | -3.09 | -0.06 | 0.64 |
| $\Delta SALES_t$ | 18029 | 0.17 | 0.56 | -0.61 | 0.09 | 5.62 |
| $NEG\_\Delta SALES_t$ | 18029 | -0.05 | 0.11 | -0.61 | 0 | 0 |
| $UE\_CE_t$ | 18029 | -0.01 | 0.27 | -1.66 | 0.01 | 0.67 |
| $\%SI_t$ | 18029 | 0.04 | 0.13 | 0 | 0 | 0.85 |
| **Panel B: Descriptive Statistics for the Audit Fee Model** | | | | | | |
| **Variable** | **N** | **Mean** | **Std. Dev.** | **Min** | **Median** | **Max** |
| $LNAFEE_t$ | 18029 | 13.64 | 1.18 | 10.55 | 13.64 | 16.99 |
| $LNAT_t$ | 18029 | 6.54 | 1.79 | 0.44 | 6.37 | 12.04 |
| $REVAT_t$ | 18029 | 0.95 | 0.74 | 0 | 0.77 | 4.4 |
| $LEV_t$ | 18029 | 0.51 | 0.3 | 0.03 | 0.49 | 8.86 |
| $ROA_t$ | 18029 | 0 | 0.19 | -3.73 | 0.04 | 2.92 |
| $LOSS_t$ | 18029 | 0.29 | 0.46 | 0 | 0 | 1 |
| $BM_t$ | 18029 | 0.01 | 0.27 | 0 | 0 | 29.87 |
| $ARAT_t$ | 18029 | 0.14 | 0.13 | 0 | 0.11 | 0.85 |
| $INVAT_t$ | 18029 | 0.09 | 0.12 | 0 | 0.04 | 0.61 |
| *BIG4* | 18029 | 0.87 | 0.33 | 0 | 1 | 1 |
| *LNDELAY* | 18029 | 4.07 | 0.39 | 2.77 | 4.11 | 5.28 |
| $GC_t$ | 18029 | 0.017 | 0.128 | 0 | 0 | 1 |
| $LNSEG_t$ | 18029 | 0.62 | 0.68 | 0 | 0 | 1.95 |
| $RESTRUCT_t$ | 18029 | 0.34 | 0.47 | 0 | 0 | 1 |
| $BUSY_t$ | 18029 | 0.84 | 0.36 | 0 | 1 | 1 |
| $RESTATE_t$ | 18029 | 0.15 | 0.36 | 0 | 0 | 1 |
| $AUDCHG_t$ | 18029 | 0.1 | 0.3 | 0 | 0 | 1 |
| $ICMW_t$ | 18029 | 0.12 | 0.33 | 0 | 0 | 1 |
| $NUMMW_t$ | 18029 | 0.27 | 0.92 | 0 | 0 | 6 |
| $ABAFEE_t$ | 18029 | 0 | 0.56 | -3.79 | 0.01 | 2.93 |
| Note: the descriptive statistics are reported based on a final sample of 18,029 firm-year observations. See the Appendix for the definition of each variable. | | | | | | |

The bivariate correlations between control variables are generally modest (most of them are less than 0.50), which suggests that multicollinearity is not a major problem in our setting.[17]

**TABLE 2**
**CORRELATIONS AMONG VARIABLES OF MAIN TEST IN THE FINAL SAMPLE**

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| *1.UE_CE* | 1 | | | | | | | |
| *2. %SI* | -0.2060*** | 1 | | | | | | |
| *3. ABAFEE* | 0.0212*** | -0.0285*** | 1 | | | | | |
| *4. SIZE* | 0.1533*** | -0.0923*** | -0.0107 | 1 | | | | |
| *5. ROA* | 0.3908*** | -0.5644*** | -0.0149** | 0.2801*** | 1 | | | |
| *6. OCF* | 0.6450*** | -0.2880*** | 0.0135* | 0.2639*** | 0.5651*** | 1 | | |
| *7. BM* | 0.0012 | 0.0239*** | -0.0414*** | 0.0333*** | -0.0091 | 0.0380*** | 1 | |
| *8. LEV* | 0.0022 | 0.0486*** | -0.0363*** | 0.2689*** | -0.0993*** | -0.0121 | -0.1548*** | 1 |

*, **, and *** indicate significance at the 10 percent, 5 percent, and 1 percent level, respectively, for two-tailed tests. Note: the correlations are reported based on a final sample of 18,029 firm-year observations. See the Appendix for the definition of each variable.

## Empirical Analyses

*Audit Fee Model Regression Results*

Table 3 presents regression results for the audit fee model using the robust cluster technique for heteroscedasticity and firm-level clustering suggested by Petersen (2009). Table 3 shows that the explanatory power of the audit fee model is about 79 %, suggesting that our audit fee model can explain a significant portion of audit fees. As expected, all individual coefficients for the fee determinants in the model except for *RESTATE* are consistent with predicted signs. Also, all individual fee determinant coefficients except *INVAT* are significant and generally consistent with prior literature (Craswell et al. 1995; Whisenant et al. 2003; Choi et al. 2010; Blankley et al. 2012).

Therefore, the regression results in Table 3 show that the audit fee model reliably estimates expected and abnormal audit fees.

**TABLE 3**
**AUDIT FEE MODEL REGRESSION RESULTS**

Equation (1):

$$LnAFEE_t = a_0 + b_1 LnAT_t + b_2 REVAT_t + b_3 LEV_t + b_4 ROA_t + b_5 LOSS_t + b_6 BM_t + b_7 ARAT_t + b_8 INVAT_t + b_9 BIG4_t + b_{10} LnDELAY_t + b_{11} GC_t + b_{12} LnSEG_t + b_{13} RESTRUCT_t + b_{14} BUSY_t + b_{15} RESTATE_t + b_{16} AUDCHG_t + b_{17} ICMW_t + b_{18} NUMMW_t + \varepsilon_{i,t}$$

| Variables | Predicted Sign | Coefficient | t-value | p-value |
|---|---|---|---|---|
| *Intercept* | ? | 8.025 | 24.04 | 0 |
| $LNAT_t$ | + | 0.485 | 189.98 | 0 |
| $REVAT_t$ | + | 0.183 | 28.17 | 0 |
| $LEV_t$ | + | 0.077 | 7.34 | 0 |
| $ROA_t$ | - | -0.149 | -12.86 | 0 |
| $LOSS_t$ | + | 0.133 | 14.8 | 0 |
| $BM_t$ | + | 0.003 | 5.42 | 0 |
| $ARAT_t$ | + | 0.319 | 9.94 | 0 |
| $INVAT_t$ | + | 0.014 | 0.34 | 0.731 |
| *BIG4* | + | 0.228 | 19.77 | 0 |
| *LNDELAY* | + | 0.237 | 22.76 | 0 |
| $GC_t$ | + | 0.11 | 4.66 | 0 |
| $LNSEG_t$ | + | 0.139 | 23.49 | 0 |
| $RESTRUCT_t$ | + | 0.252 | 31.18 | 0 |
| $BUSY_t$ | + | 0.089 | 9.42 | 0 |
| $RESTATE_t$ | + | -0.036 | -3.53 | 0 |
| $AUDCHG_t$ | - | -0.083 | -6.83 | 0 |
| $ICMW_t$ | + | 0.083 | 4.85 | 0 |
| $NUMMW_t$ | + | 0.048 | 7.88 | 0 |
| | | | | |
| *Industry and Year Controls* | | Yes | | |
| *N* | | 27,051 | | |
| *Adjusted* $R^2$ | | 79.42% | | |
| See the Appendix for the definition of each variable. | | | | |

*Core Earnings Model Regression Results*

Panel A in Table 4 presents regression results for the core earnings regression model based on McVay (2006). The explanatory power of the model is about 72%, suggesting that the model can explain a

significant portion of core earnings, and all individual coefficients are significant and consistent with the predicted sign and prior research (e.g., McVay 2006; Fan et al. 2010).

**TABLE 4**
**CORE EARNINGS MODEL REGRESSION RESULTS**

**Panel A: Core Earnings Model Regression Results**
Equation (2):

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 \Delta SALES_t + \beta_5 NEG\_SALES_t + \varepsilon_{i,t}$$

| Variables | Predicted Sign | Coefficient | t-value | p-value |
|---|---|---|---|---|
| *Intercept* | ? | 0.077 | 20.65 | 0.000 |
| $CE_{t-1}$ | + | 0.553 | 90.56 | 0.000 |
| $ATO_t$ | - | -0.005 | -4.26 | 0.000 |
| $ACCRUALS_{t-1}$ | - | -0.184 | -17.66 | 0.000 |
| $\Delta SALES_t$ | + | 0.129 | 15.75 | 0.000 |
| $NEG\_\Delta SALES_t$ | + | 0.553 | 16.28 | 0.000 |
| | | | | |
| *N* | | 110,105 | | |
| *Adjusted* $R^2$ | | 71.77% | | |

Panel B in Table 4 provides results on the association between unexpected core earnings and special items with and without performance control.[18] For the regression without performance control, the coefficient for $\%SI_t$ is negative and significant ($\beta_1$ = -0.430; p-value <0.001); for the regression with performance control, the coefficient for $\%SI_t$ is also negative and significant ($\beta_1$ = -0.022; p-value <0.003). Both regression results are quantitatively similar and consistent with prior findings (McVay 2006, Table 10; Fan et al. 2010, Table 4) that suggest that firms shift core expenses to special items when they desire to report higher core earnings.[19] In general, the regression results in Panel B of Table 4 are consistent with those of McVay (2006, Table 10) and of Fan et al. (2010, Table 4), after the exclusion of current-period accruals.

**Panel B: Association between Unexpected Core Earnings and Special Items**

Equation (3):

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + (Controls_t) + \varepsilon_{i,t}$$

| | | Without Controls | | With Controls | |
|---|---|---|---|---|---|
| **Variables** | **Predicted Sign** | **Coefficient** | **p-value** | **Coefficient** | **p-value** |
| *Intercept* | ? | 0.007 | 0.001 | 0.023 | 0.000 |
| ***%SI$_t$*** | **-** | **-0.430** | **0.000** | **-0.022** | **0.003** |
| *SIZE$_t$* | | | | -0.007 | 0.000 |
| *ROA$_t$* | | | | 0.086 | 0.000 |
| *OCF$_t$* | | | | 0.305 | 0.000 |
| *BM$_t$* | | | | -0.008 | 0.000 |
| *LEV$_t$* | | | | 0.037 | 0.000 |
| | | | | | |
| *N* | | 18,029 | | 18,029 | |
| *Adjusted R$^2$* | | 4.24% | | 37.47% | |

Note: the regression results on Panel B are based on a final sample of 18,029 firm-year observations. Nevertheless, the results based on a full sample of 110,105 remain quantitatively similar. See the Appendix for the definition of each variable.

*Association between Abnormal Audit Fees and Classification Shifting*

Table 5 presents regression results with and without performance control for the association between abnormal audit fees and classification shifting. For the regression without performance control, the coefficient of interaction term between abnormal audit fees and special items *(ABAFEE*%SI*) is positive and significant ($\beta_3$ = 0.161; *p-value*<0.001); for the regression with performance control, the coefficient of interaction term between abnormal audit fees and special items *(ABAFEE*%SI*) is also positive and significant ($\beta_3$ = 0.127; *p-value*<0.001). Both regression results are quantitatively similar, implying that abnormal audit fees allow for more earnings management activities through classification shifting with low litigation costs. Other control variables are consistent with prior research (Barua et al. 2010).

Results in Tale 5 support the argument that abnormal audit fees reflect the economic bonding between the auditor and client in a context of earnings management with potential low litigation risks.

**TABLE 5**
**ASSOCIATION BETWEEN ABNORMAL AUDIT FEES AND CLASSIFICATION SHIFTING**

Equation (4):

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 ABAFEE_t * \%SI_t + (Controls_t) + \varepsilon_{i,t}$$

| | | Without Controls | | With Controls | |
|---|---|---|---|---|---|
| **Variables** | **Predicted Sign** | **Coefficient** | **p-value** | **Coefficient** | **p-value** |
| *Intercept* | ? | 0.024 | 0.894 | 0.546 | 0.000 |
| $\%SI_t$ | - | -0.379 | 0.000 | -0.004 | 0.803 |
| $ABAFEE_t$ | | 0.001 | 0.707 | 0.004 | 0.202 |
| ***ABAFEE*%SI*** | **?** | **0.161** | **0.000** | **0.127** | **0.001** |
| $SIZE_t$ | | | | -0.001 | 0.142 |
| $ROA_t$ | | | | 0.068 | 0.000 |
| $OCF_t$ | | | | 0.336 | 0.000 |
| $BM_t$ | | | | -0.004 | 0.101 |
| $LEV_t$ | | | | 0.044 | 0.000 |
| | | | | | |
| *Industry and year control* | | Yes | | Yes | |
| *N* | | 18,029 | | 18,029 | |
| *Adjusted* $R^2$ | | 8.19% | | 42.97% | |
| See the Appendix for the definition of each variable. | | | | | |

**Additional Analyses**

*Analysis of Audit Fees*

Following prior literature (Simunic 1980; Srinidhi and Gul 2007), we replace abnormal audit fees with the logarithm of audit fees (AUDIT_FEE). Table 6 shows that the coefficient of interaction term between audit fees and special items (AUDIT_FEE*%SI) is positive and significant ($\beta_3$ = 0.110; p-value = 0.002). This ensuing analysis gives results similar to those of the main tests, suggesting that audit fees reflect the economic bonding between the auditor and client in a context of earnings management with potential low litigation costs.

**TABLE 6**
**ANALYSIS OF AUDIT FEES**

$$UE_{CE_t} = \beta_0 + \beta_1 \%SI_t + \beta_2 AUDIT_{FEE_t} + \beta_3 AUDIT_{FEE_t} * \%SI_t + \beta_4 SIZE_t + \beta_5 ROA_t + \beta_6 OCF_t + \beta_7 BM_t + \beta_8 LEV_t + \varepsilon_{i,t}$$

| Variables | Coefficient | t-value | p-value |
|---|---|---|---|
| *Intercept* | 0.543 | 3.77 | 0.000 |
| *%SIt* | -0.008 | -0.51 | 0.611 |
| *AUDIT_FEEt* | 0.001 | 0.31 | 0.759 |
| ***AUDIT_FEE*%SI*** | **0.110** | **3.05** | **0.002** |
| $SIZE_t$ | -0.001 | -1.47 | 0.141 |
| $ROA_t$ | 0.066 | 5.27 | 0.000 |
| $OCF_t$ | 0.336 | 88.40 | 0.000 |
| $BM_t$ | -0.004 | -1.67 | 0.095 |
| $LEV_t$ | 0.044 | 5.65 | 0.000 |
| | | | |
| *Industry and Year Controls* | Yes | | |
| *N* | 18,029 | | |
| *Adjusted* $R^2$ | 42.94% | | |
| See the Appendix for the definition of each variable. | | | |

*Auditor Type*

To ensure that the results are not driven by the systematic differences in audit quality between Big 4 and non-Big 4 auditors, we control this difference by including a Big 4 indicator (BIG4) and its possible interactions. The results in Table 7 show that the coefficient of interaction term between abnormal audit fees and special items (ABAFEE*%SI) still remains positive and significant ($\beta_4 = 0.219$; p-value = 0.027). However, the interaction term of ABAFEE*BIG4*%SI is negative but insignificant ($\beta_7 = -0.114$; p-value = 0.337), suggesting that the audit quality (proxied by a Big 4 auditor) cannot limit the behavior of CS.

**TABLE 7**
**ANALYSIS OF AUDITOR TYPE**

$$UE_{CE\,t} = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 BIG4_t + \beta_4 ABAFEE_t * \%SI_t + \beta_5 ABAFEE_t * BIG4_t + \beta_6 BIG4_t * \%SI_t + \beta_7 ABAFEE_t * BIG4_t * \%SI_t + \beta_8 SIZE_t + \beta_9 ROA_t + \beta_{10} OCF_t + \beta_{11} BM_t + \beta_{12} LEV_t + \varepsilon_{i,t}$$

| **Variables** | **Coefficient** | **t-value** | **p-value** |
|---|---|---|---|
| *Intercept* | 0.544 | 3.77 | 0.000 |
| *%SI$_t$* | -0.022 | -0.62 | 0.534 |
| *ABAFEE$_t$* | 0.025 | 3.20 | 0.001 |
| *BIG4$_t$* | 0.004 | 0.78 | 0.436 |
| ***ABAFEE*%SI*** | **0.219** | **2.21** | **0.027** |
| *ABAFEE*BIG4* | -0.025 | -2.91 | 0.004 |
| *BIG4*%SI* | 0.020 | 0.57 | 0.566 |
| ***ABAFEE*BIG4*%SI*** | **-0.114** | **-0.96** | **0.337** |
| *SIZE$_t$* | -0.002 | -1.61 | 0.107 |
| *ROA$_t$* | 0.068 | 5.40 | 0.000 |
| *OCF$_t$* | 0.336 | 88.20 | 0.000 |
| *BM$_t$* | -0.004 | -1.61 | 0.107 |
| *LEV$_t$* | 0.044 | 5.73 | 0.000 |
| | | | |
| *Industry and Year Controls* | Yes | | |
| *N* | 18,029 | | |
| *Adjusted $R^2$* | 42.98% | | |
| See the Appendix for the definition of each variable. | | | |

*SOX and SOX 404*

In order to control for the potential confounding effects of the passage of SOX, which became effective in 2002, and for the potential confounding effects of the disclosure of internal control quality under SOX section 404, which became effective in 2004, we add a SOX variable and a SOX404 variable, separately, and its possible interactions. The rationale is that in the post-SOX and post-SOX 404 environment, audit firms are more likely to make conservative risk assessments, place more appropriate reliance on internal controls, and charge higher fees reflecting greater audit effort, which would lead to higher reporting quality. The results in Tables 8 and 9 show that after controlling for the SOX and SOX 404, separately, the coefficient of interaction term between abnormal audit fees and special items (ABAFEE*%SI) still remains quantitatively similar ($\beta_4$ = 0.306, p-value < 0.001, Table 8; $\beta_4$ = 0.221, p-value < 0.001, Table 9).

Further, the interaction term of *ABAFEE*SOX*%SI* (*ABAFEE*SOX404*%SI* ) is negative and significant ($\beta_7$ = -0.415, *p-value* < 0.001, Table 8; $\beta_7$ = -0.306, *p-value* = 0.007, Table 9), suggesting that that the passage of SOX (SOX404) could limit CS, consistent with Li (2016).

**TABLE 8**
**ANALYSIS OF SOX PERIOD**

$$UE_{CE\,t} = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 SOX_t + \beta_4 ABAFEE_t * \%SI_t + \beta_5 ABAFEE_t * SOX_t + \beta_6 SOX_t * \%SI_t + \beta_7 ABAFEE_t * SOX_t * \%SI_t + \beta_8 SIZE_t + \beta_9 ROA_t + \beta_{10} OCF_t + \beta_{11} BM_t + \beta_{12} LEV_t + \varepsilon_{i,t}$$

| **Variables** | **Coefficient** | **t-value** | **p-value** |
|---|---|---|---|
| *Intercept* | 0.539 | 3.74 | 0.000 |
| *%SI$_t$* | 0.052 | 2.36 | 0.018 |
| *ABAFEE$_t$* | 0.011 | 1.59 | 0.112 |
| *SOX$_t$* | -0.577 | -4.05 | 0.000 |
| ***ABAFEE*%SI*** | **0.306** | **5.20** | **0.000** |
| *ABAFEE*SOX* | -0.007 | -0.91 | 0.362 |
| *SOX*%SI* | -0.086 | -3.37 | 0.001 |
| ***ABAFEE*SOX*%SI*** | **-0.415** | **-4.08** | **0.000** |
| *SIZE$_t$* | -0.002 | -1.59 | 0.112 |
| *ROA$_t$* | 0.069 | 5.47 | 0.000 |
| *OCF$_t$* | 0.336 | 88.41 | 0.000 |
| *BM$_t$* | -0.004 | -1.66 | 0.098 |
| *LEV$_t$* | 0.044 | 5.68 | 0.000 |
| | | | |
| *Industry and Year Controls* | Yes | | |
| *N* | 18,029 | | |
| *Adjusted R$^2$* | 43.05% | | |
| See the Appendix for the definition of each variable. | | | |

**TABLE 9**
**ANALYSIS OF SOX404 PERIOD**

$$UE_{CE_t} = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 SOX404_t + \beta_4 ABAFEE_t * \%SI_t + \beta_5 ABAFEE_t * SOX404_t + \beta_6 SOX404_t * \%SI_t + \beta_7 ABAFEE_t * SOX404_t * \%SI_t + \beta_8 SIZE_t + \beta_9 ROA_t + \beta_{10} OCF_t + \beta_{11} BM_t + \beta_{12} LEV_t + \varepsilon_{i,t}$$

| Variables | Coefficient | t-value | p-value |
|---|---|---|---|
| *Intercept* | 0.541 | 3.75 | 0.000 |
| $\%SI_t$ | 0.040 | 2.01 | 0.044 |
| $ABAFEE_t$ | 0.010 | 1.95 | 0.051 |
| $SOX404_t$ | -0.578 | -4.06 | 0.000 |
| ***ABAFEE*%SI*** | **0 .221** | **4.35** | **0.000** |
| *ABAFEE*SOX404* | -0.008 | -1.25 | 0.211 |
| *SOX404*%SI* | -0.091 | -3.20 | 0.001 |
| ***ABAFEE*SOX404*%SI*** | **-0.306** | **-2.70** | **0.007** |
| $SIZE_t$ | -0.002 | -1.66 | 0.097 |
| $ROA_t$ | 0.068 | 5.37 | 0.000 |
| $OCF_t$ | 0.337 | 88.33 | 0.000 |
| $BM_t$ | -0.004 | -1.61 | 0.107 |
| $LEV_t$ | 0.044 | 5.73 | 0.000 |
| | | | |
| *Industry and Year Controls* | Yes | | |
| *N* | 18,029 | | |
| *Adjusted* $R^2$ | 43.02% | | |
| See the Appendix for the definition of each variable. | | | |

*Analysis of Positive Abnormal Audit Fees*

Finally, we limit our sample to observations with positive abnormal audit fees as prior research suggests that positive and negative abnormal fees (P_ABAFEE) create different incentive effects (Choi et al. 2010; Asthana and Boone 2012). On the one hand, positive abnormal audit fees indicate that auditors put extra effort on accruals management activities, which could limit classification shifting through knowledge transfer. However, on the other hand, positive abnormal audit fees suggest that while exerting the excessive effort on accruals management activities with greater litigation costs auditors have an incentive to allow for more CS activities with low potential risks, in order to minimize conflicts with their clients.

Table 10 indicates that the magnitude of positive abnormal audit fees are positively associated with the level of classification shifting ($\beta_3$ = 0.667; p-value < 0.001), further suggesting that the level of CS increases as the magnitude of positive abnormal fees increases.

**TABLE 10**
**ANALYSIS OF POSITIVE ABNORMAL AUDIT FEES**

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \beta_2 P\_ABAFEE_t + \beta_3 P\_ABAFEE_t * \%SI_t + \beta_4 SIZE_t + \beta_5 ROA_t + \beta_6 OCF_t + \beta_7 BM_t + \beta_8 LEV_t + \varepsilon_{i,t}$$

| Variables | Coefficient | t-value | p-value |
|---|---|---|---|
| *Intercept* | 1.250 | 6.37 | 0.000 |
| $\%SI_t$ | -0.147 | -4.04 | 0.000 |
| $P\_ABAFEE_t$ | -0.002 | -0.29 | 0.772 |
| ***P_ABAFEE*%SI*** | **0.677** | **5.57** | **0.000** |
| $SIZE_t$ | -0.003 | -0.94 | 0.345 |
| $ROA_t$ | 0.062 | 3.70 | 0.000 |
| $OCF_t$ | 0.342 | 59.94 | 0.000 |
| $BM_t$ | -0.003 | -0.94 | 0.345 |
| $LEV_t$ | 0.021 | 2.00 | 0.046 |
| | | | |
| *Industry and Year Controls* | Yes | | |
| *N* | 9,106 | | |
| *Adjusted* $R^2$ | 41.67% | | |
| See the Appendix for the definition of each variable. | | | |

*Alternative Audit Fee Model*

First, to address the concern that special items could be a potential explanatory variable of normal audit fees we include it in the audit fee model. Further, to control for the effect of accruals-based earnings management on normal audit fees we include abnormal accruals[20] in the audit fee model. The results in Table 11 show that after adding these two additional variables to obtain abnormal audit fees to rerun the main regression, the conclusion remains unchanged. Specifically, the coefficient of interaction term between abnormal audit fees and special items (ABAFEE*%SI) remains quantitatively similar for both with and without performance control (for without performance control, $\beta_3 = 0.214$, p-value < 0.001; for performance control, $\beta_3 = 0.151$, p-value < 0.001).

**TABLE 11**
**ASSOCIATION BETWEEN ABNORMAL AUDIT FEES AND CLASSIFICATION SHIFTING**

Equation (4):

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 ABAFEE_t * \%SI_t + (Controls_t) + \varepsilon_{i,t}$$

| | | Without Controls | | With Controls | |
|---|---|---|---|---|---|
| **Variables** | **Predicted Sign** | **Coefficient** | **p-value** | **Coefficient** | **p-value** |
| *Intercept* | ? | 0.007 | 0.000 | -0.018 | 0.619 |
| $\%SI_t$ | - | -0.428 | 0.000 | -0.016 | 0.279 |
| $ABAFEE_t$ | | 0.004 | 0.378 | 0.003 | 0.480 |
| ***ABAFEE*%SI*** | **?** | **0.139** | **0.037** | **0.120** | **0.065** |
| $SIZE_t$ | | | | -0.001 | 0.164 |
| $ROA_t$ | | | | 0.063 | 0.000 |
| $OCF_t$ | | | | 0.337 | 0.000 |
| $BM_t$ | | | | -0.004 | 0.101 |
| $LEV_t$ | | | | 0.046 | 0.000 |
| | | | | | |
| *Industry and year control* | | Yes | | Yes | |
| *N* | | 18,029 | | 18,029 | |
| *Adjusted* $R^2$ | | 8.02% | | 42.84% | |
| See the Appendix for the definition of each variable. | | | | | |

Second, as the unexpected core earnings model is estimated by industry and year we regress the audit fee model by industry and year instead to obtain abnormal audit fees to rerun the main regression. The results in Table 12 remain quantitatively similar (for without performance control, $\beta_3$ = 0.139, *p-value* < 0.001; for performance control, $\beta_3$= 0.120, *p-value* < 0.065).

**TABLE 12**
**ASSOCIATION BETWEEN ABNORMAL AUDIT FEES AND CLASSIFICATION SHIFTING**

Equation (4):

$$UE\_CE_t = \beta_0 + \beta_1 \%SI_t + \beta_2 ABAFEE_t + \beta_3 ABAFEE_t * \%SI_t + (Controls_t) + \varepsilon_{i,t}$$

| | | Without Controls | | With Controls | |
|---|---|---|---|---|---|
| **Variables** | **Predicted Sign** | **Coefficient** | **p-value** | **Coefficient** | **p-value** |
| *Intercept* | ? | 0.019 | 0.911 | 0.614 | 0.000 |
| $\%SI_t$ | - | -0.325 | 0.000 | 0.015 | 0.292 |
| $ABAFEE_t$ | | 0.009 | 0.023 | 0.008 | 0.012 |
| ***ABAFEE*%SI*** | **?** | **0.214** | **0.000** | **0.151** | **0.000** |
| $SIZE_t$ | | | | -0.003 | 0.001 |
| $ROA_t$ | | | | -0.003 | 0.815 |
| $OCF_t$ | | | | 0.381 | 0.000 |
| $BM_t$ | | | | -0.002 | 0.457 |
| $LEV_t$ | | | | 0.023 | 0.004 |
| | | | | | |
| *Industry and year control* | | Yes | | Yes | |
| *N* | | 18,029 | | 18,029 | |
| *Adjusted* $R^2$ | | 6.88% | | 46.77% | |
| See the Appendix for the definition of each variable. | | | | | |

## CONCLUSIONS

This paper examines the impact of abnormal audit fees on earnings management behavior through classification shifting. Prior research bases on two opposing views to investigate the association between abnormal audit fees and a client's earnings management behavior. Specifically, the audit effort view suggests that higher client risks lead to greater audit effort, which in turn can result in higher audit fees. The economic bond view argues that audit fees measure economic bonding between the auditor and the client. As such, higher audit fees result in stronger economic bonds between the auditor and the client, which can lead to more earnings management activities.

Relevant prior literature investigating the role of audit fees mainly focuses on the context of accruals-based earnings management. However, empirical results on the association between accruals-based earnings management and audit fees is mixed and even studies finding similar results offer different interpretations. Given the mixed research evidence, Francis (2011) argues that using audit fees as a proxy purely for auditor-client economic bonding or audit effort might be questionable as abnormal audit fees might partly indicate auditor effort or economic bonding. As such, it is arguable the role of audit fees in auditors' incentives might depend on the context and specific form of accounting practices.

Using data from years 2000-2010, we find a significant and positive cross-sectional association between the magnitude of abnormal audit fees and the level of classification shifting, a result supporting the notion that abnormally high audit fees can create an incentive for the auditor to permit more earnings

management through classification shifting. However, this finding should be interpreted cautiously as the indicator of abnormal audit fees might differ, as the role of audit fees in auditors' incentives might depend on the context and specific form of accounting practices.

The results remain quantitatively similar after we perform a battery of additional test. Overall, our results suggest that excessive high audit fees can give the auditor an incentive to yield to client pressure and allow for more opportunistic accounting practices with low potential litigation costs. Further, it indicates that whether abnormal audit fees could limit a client's earnings management behavior might depend on the specific form of earnings management activities associated with the level of potential litigation costs.

One major limitation of this study is that we cannot completely rule out the possibility that our findings are driven by measurement errors and/or omitted, correlated variables involved in the estimation of unexpected core earnings and abnormal audit fees using prior empirical models. Future research can focus on how to improve the core earnings expectation model and audit risk model to address this issue.

## ENDNOTES

1. The expected audit fees are the residuals calculated from a standard audit fee model controlling for client specific factors (e.g., client size, client complexity, and other client-specific risk factors).
2. Alternatively, abnormal audit fees could purely represent risk premium the auditor charges on risky clients.
3. Simunic and Stein (1996) argue that the resource allocation by auditors is, in part, determined by the level of litigation risk associated with an audit task engagement. Further, Higgs and Skantz (2006) find that the auditor allocates resources based on the profitability of the engagement, which is, in part, determined by the level of litigation risk.
4. For instance, total accruals include changes in working capital accounts, such as inventory (Jones 1991). According to the principle of accounting, decreases in inventory accounts (credit) should be equal to increases in cost of goods sold (debit). However, if clients engage in CS by classifying cost of goods sold as noncore expense, which results in the discrepancy between these two accounts, auditors should be likely to detect such type of classification shifting and thus correct it.
5. In general, the closer a line item is to sales, the more permanent this item tends to be viewed and the more heavily this item tends to be weighted. Please see McVay (2006) for a summary of literature that supports such argument.
6. Knowledge transfer can be defined as knowledge learned from working on one task can be transferred to enhance the performance of another related task (Joe and Vandervelde 2007).
7. Haw et al. (2009) is one of few studies to examine the role of auditors in limiting classification shifting, however, within an international setting. Using Big 4 auditors as an indicator variable of high audit quality, they find Big 4 audit firms play an effective role in curbing classification shifting in common law countries with strong investor protection, but not in civic law countries with weak investor protection. Haw et al. do not examine the fee effect.
8. Simunic and Stein (1996) argue that the resource allocation by auditors is, in part, determined by the level of litigation risk associated with the task engagement. Further, Higgs and Skantz (2006) find that the auditor allocates resources based on the profitability of the engagement, which is, in part, determined by the level of litigation risk.
9. We remove current-period accruals from McVay's (2006) model because of arguments based on prior research (McVay 2008; Fan et al. 2010). I keep current-period accruals in the model and re-run the regressions. The main results are similar. Overall, the main tests are robust to the exclusion or inclusion of current-period accruals.
10. Operating Assets is defined as Total Assets - Cash and Short-Term Investments. Operating liabilities is defined as Total Assets - Total Debt - Book Value of Common and Preferred Equity - Minority Interests
11. This model is to follow McVay's (2006) model without adding any control variables to examine whether the results are consistent with prior findings (See McVay 2006, Table 10; Fan et al. 2010). We add a few additional performance-adjustment variables, including firm size (SIZEt), book-to-market ratio (BMt), operating cash flow (OCFt), return on assets (ROAt), and leverage (LEVt), and rerun the tests. The results (tabulated in Table 4) remain quantitatively similar.

12. As a performance-driven effect is greater than a classification shifting effect a negative association occurs, after the exclusion of current-period accruals (McVay 2006; Fan et al. 2010).
13. We rerun the regression without the performance control and the results (reported in Table 5) remain quantitatively similar.
14. Since this study only examines income-decreasing special items, income-increasing special items are not included in the analyses and are set to zero.
15. The reason that the mean of unexpected core earnings (UE_CE) is not close to 0 is that we obtain UE_CE from a full sample with 110,105 firm-year observations but only report its statistics for a final sample with 18,029 firm-year observations.
16. Similarly, the reason that the mean of abnormal audit fees (ABAFEE) is not close to 0 is that we obtain ABAFEE from a sample of 27,051 firm-year observations but only report its statistics for a final sample with 18,029 firm-year observations.
17. The average VIF is below 2 and no individual factor is greater than 10, a conventional level for significant multicollinearity.
18. Note that the regression results are based on a final sample of 18,029 firm-year observations. Nevertheless, the results based on a full sample of 110,105 remain quantitatively similar.
19. A negative association is because the performance-driven effect is greater than a classification shifting effect (McVay 2006; Fan et al. 2010). In other words, firms with extremely poor performance dominate the effect of classification shifting.
20. Abnormal accruals measure is based on the Dechow & Dichev 2002 model. The model is a regression of working capital accruals on one-year-lagged, current, and one-year-ahead cash flows from operations, the change in revenue, and property, plant, and equipment (PPE). We estimate the Dechow & Dichev 2002 model cross-sectionally by industry-year and obtain the absolute residual as abnormal accruals. All variables are scaled by lagged total assets.

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## APPENDIX

### Description of Variables

The table below summarizes the variables used in the models and empirical analyses.

| Variables | Description |
|---|---|
| LNAFEE(LNNAFEE) | Natural log of the (non-audit) audit fee. |
| LNAT | Natural log of the firm's total assets (AT) measured in millions of dollars. |
| REVAT | Revenue (SALE) divided by total assets (AT). |
| LEV | Firm's total assets (AT) less its book value (CEQ) divided by its total assets. |
| ROA | Firm's return-on-asset ratio calculated as net income before extraordinary items (IB) divided by beginning of the year total assets (AT). |
| LOSS | 1 if the firm's net income before extraordinary items (IB) is negative, and 0 otherwise. |
| BM | Ratio of book value to market value. |
| ARAT | Firm's receivables (RECT) divided by its total assets. |
| INVAT | Firm's inventory (INVT) divided by its total assets. |
| BIG4 | 1 if the firm is audited by Deloitte & Touche, Ernst & Young, KPMG, or PricewaterhouseCoopers (AU) and 0 otherwise. |
| LNDELAY | Natural logarithm of number of days from a company's fiscal year-end to the date that auditor sign the audit report. |
| GC | 1 if auditor issues going concern opinion, 0 otherwise. |
| LNSEG | Nature logarithm of the sum of the number of business segments reported by the Compustat Segments database. |
| RESTRUCT | 1 if aggregate restructuring charges (RCP) in years t and t–1 is negative, 0 otherwise. |
| BUSY | 1 if client fiscal year end is between December 1 and March 31, 0 otherwise. |
| RESTATE | 1 if the firm restates its financial statements, 0 otherwise. |
| AUDCHG | 1 if the firm changes its auditor, 0 otherwise. |
| ICMW | 1 if companies reported internal control material weakness, 0 if companies reported effective internal control. |
| NUMMW | Number of material weaknesses identified. |
| SALES | Sales revenue in millions. |
| CE | Core Earnings (before Special Items and Depreciation), calculated as (Sales - Cost of Goods Sold - Selling, General, and Administrative Expenses) /Sales. |
| ATO | Asset Turnover Ratio, measured as Salest /(($NOA_t$ – $NOA_{t-1}$) / 2), where NOA, or Net Operating Assets, is measured as the difference between Operating Assets - Operating Liabilities. Operating Assets is defined as Total Assets - Cash and Short-Term Investments. Operating liabilities is defined as Total Assets - Total Debt - Book Value of Common and Preferred Equity - Minority Interests. |
| ACCRUALS | Operating Accruals, calculated as [Net Income before Extraordinary Items - Cash from Operations]/Sales. |
| ΔSALES | Percent Change in Sales, defined as ($Sales_t$ - $Sales_{t-1}$) /$Sales_{t-1}$. |
| NEG_ΔSALES | Percent Change in Sales (ΔSALES) if ΔSALES is less than 0, and 0 otherwise. |
| UE_CE | Unexpected Core Earnings, calculated as the difference between reported and predicted Core Earnings. |
| %SI | Income-Decreasing Special Items scaled by sales and multiplied by (-1), when Special Items are income-decreasing, and 0 otherwise. |
| ABAFEE | Abnormal audit fees, defined as the difference between actual audit fees and the expected level of audit fees. |
| SIZE | A nature logarithm of a firm's total assets. |
| OCF | Operating cash flow divided by sales. |
| ****All continuous variables are winsorized at the 1st and 99th percentile.*** | |