Abnormal Fees and Timely Loss Recognition – A Long-Term Perspective

Eli Amir
Tel Aviv University
eliamir@post.tau.ac.il

Yanling Guan
Hong Kong Baptist University
ylguan@hkbu.edu.hk

and

Gilad Livne*
University of Exeter Business School
g.livne@exeter.ac.uk

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Abstract

We examine the relation between timely loss recognition and abnormal audit, non-audit, and total fees over a long period (2001–2007 and 2010–2015). We use positive abnormal audit fees as a measure of abnormal audit effort, and positive abnormal non-audit fees as a measure of economic bond between the auditor and the auditee. Using the Ball and Shivakumar (2006) model, we report some evidence suggesting audit effort is associated with slower loss recognition in accruals before the Sarbanes–Oxley Act (SOX) became effective. However, we find stronger evidence that audit effort is associated with slower loss recognition post-SOX when clients raise substantial external funds or when the auditor is not an industry specialist. Using *C_Score*, we find a negative association between changes in abnormal audit fees and total fees, and changes in *C_Score* post-SOX, but not pre-SOX. We find no sample-wide evidence that abnormal non-audit fees are associated with the speed of loss recognition. Collectively, the results suggest post-SOX auditors exert more effort when losses are delayed and that non-audit services do not compromise auditor independence.

Keywords: Timely loss recognition, Conservatism, Audit fees, Sarbanes-Oxley Act (SOX), Accruals.

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INTRODUCTION

External auditors prefer timely loss recognition because it maintains their reputation and helps them avoid litigation (Watts 2003). Auditors also face external demand for timely loss recognition, because it alleviates agency problems and mitigates information asymmetry between managers and outsiders (DeAngelo 1981; LaFond and Watts 2008). Managers, on the other hand, because of contract-based incentives, such as compensation, debt covenants, and regulation, often prefer delayed recognition of bad news, in the hope of the subsequent arrival of good news (Burgstahler and Dichev 1997; Kothari, Shu, and Wysocki 2009). Prior research provides limited evidence on how this client-auditor conflict of interest affects timely loss recognition.

We examine the relation between abnormal audit, non-audit, and total fees on one hand and timely loss recognition on the other hand. Since auditors require greater verification for recognition of gains than losses (Watts 2003), delaying loss recognition is similar in nature to recognition of gains in that both increase income. Thus, greater verification is required before auditors agree to delay loss recognition. We therefore use positive abnormal audit fees as a measure of abnormal audit effort, and following prior research, positive abnormal non-audit fees as a measure of economic bond between auditors and their clients (Srinidhi and Gul 2007; Knechel 2015). We also use abnormal total (audit plus non-audit) fees as a measure of both audit effort and economic bond, due to potential spillover effects between the two.[1]

We use a long sample period (2001–2007 and 2010–2015), including the period following the enactment of the Sarbanes-Oxley Act (henceforth, SOX), which aimed at improving audit

[1] Effort exerted in the provision of non-audit services may enhance knowledge spill over and, consequently, may result in reduced audit effort (Simunic 1984; Knechel, Krishnan, Pevzner, Shefchik, and Velury 2013). At the same time, high audit fees may also be used as an economic bonding channel.

quality following several high-profile accounting scandals. As SOX was fully implemented in 2004, we denote 2001–2003 as the pre-SOX period and 2004–2007 and 2010–2015 as the post-SOX period. We exclude from our sample the financial-crisis years, 2008–2009, because of their special nature.

Prior literature raises the concern that SOX was politically motivated, not evidence-based (DeFond and Francis 2005; Romano 2005), and that its effect on auditors, if any, was only temporary (Fargher and Jiang 2008; Feldman and Read 2010; Kao, Li and Zhang. 2014). Other studies argue the solutions SOX offers are ineffective in preventing future frauds (Ribstein 2002).[2] By contrast, some studies claim SOX has improved auditing (Carcello, Hollingsworth, and Mastrolia 2011; DeFond and Lennox 2011). Assessing these diverging claims is best achieved by evaluating evidence gathered over a long period as it is more representative of the long-term relations between abnormal fees and loss recognition, as we do here.

We use two measures of timely loss recognition. The first is based on the piece-linear relation between accruals and cash flows, as in Ball and Shivakumar (2006) and Bushman, Lerman, and Zhang (2016). The second is the *C_Score* measure of Khan and Watts (2009). To estimate abnormal fees, we use an expected-fee model that captures a large number of possible drivers of normal fees, and, consistent with prior studies, we use the regression residuals as a measure of abnormal fees.

Using the Ball and Shivakumar (2006) model, we find no evidence that positive abnormal audit or total fees increase the speed of timely loss recognition in either the pre- or post-SOX periods. Tests for the differences between the pre- and post-SOX periods suggest slower loss

[2] The head of the Public Company Accounting Oversight Board (PCAOB) has expressed a similar concern that audit quality has not improved since SOX (Doty 2011). In addition, some studies support the view that SOX is "not working" (e.g., Rice, Weber, and Wu 2015).

recognition for abnormal audit and abnormal total fees, although the differences are significant at the 0.07 and 0.10 levels, respectively. When we use *C_Score*, we find that abnormal audit and total fees are positively related to timely loss recognition pre-SOX, but by contrast, they are negatively related to timely loss recognition post-SOX. The difference between the two periods is highly significant. We find no evidence that abnormal non-audit fees are associated with slower loss recognition in either the pre- or post-SOX periods.

We further examine the association between abnormal fees and timely loss recognition when the client engages in substantial external financing, the auditor is not an industry specialist, and the auditor is one of the Big-4 firms. These contextual analyses reveal that positive abnormal audit fees are associated with slower loss recognition post-SOX when external financing is substantial and when the auditor is not a specialist. We do not find similar evidence in the context of auditor size. The findings for positive abnormal non-audit fees are mixed and weaker, suggesting the economic bond does not influence loss recognition in these contexts. The results for positive abnormal total fees mirror those for positive abnormal audit fees, albeit with lower significance levels. We therefore conclude that post-SOX slower loss recognition is associated with additional audit effort when clients raise external capital and when the auditor is not an industry specialist.

In considering these results, two observations are noteworthy. First, owing to stricter regulation, more audit effort could be expended in firms with poor reporting quality post-SOX (Hribar, Kravet, and Wilson 2014). Our research design may fail to detect the resultant improvement in the timeliness of loss recognition. Nevertheless, finding abnormal audit fees are associated with slower loss recognition is consistent with greater auditor effort to vet an accounting policy that postpones loss recognition to a future period. Second, a contrasting interpretation of audit effort views *all* abnormal fees as a measure of the economic bond. The economic-bond hypothesis posits that the lack of economic independence could detract from an auditor's

willingness to withstand client pressure to withhold adverse information (DeAngelo 1981).[3] However, because we do not find support for the economic-bond hypothesis in abnormal non-audit fees, abnormal audit fees seem unlikely to capture the economic bond either.

Prior studies on audit quality use abnormal accruals as an outcome measure that speaks to how well auditors withstand client pressure. Using absolute abnormal accruals as an inverse measure of audit quality, we find evidence of lower quality post-SOX for positive abnormal audit fees, but not for the other abnormal-fee measures. We also distinguish between positive and negative abnormal accruals, but fail to find consistent evidence that positive abnormal fees are associated with income increasing abnormal accruals more in the post-SOX period than before. The analyses of abnormal accruals provide no compelling evidence that links change in accounting quality between the pre- and post-SOX periods to positive abnormal fees. In interpreting the lack of consistent results between abnormal accruals and timely loss recognition, we should emphasize that the two approaches may not capture the same aspect of accounting quality (Dechow, Ge, and Schrand 2010) and that abnormal accruals do not directly speak to the speed of bad-news recognition in total accruals.

PRIOR LITERATURE

Accounting Conservatism and Timely Loss Recognition

Basu (1997) defines conditional conservatism as the tendency to recognize bad news faster than good news in earnings. Watts (2003) offers a related definition that is based on the higher verifiability required for gains than losses. He argues that accounting conservatism is demanded

[3] To mitigate against this threat to independence, SOX restricted the provision of many non-audit services.

by contracting parties, shareholders, tax authorities, and accounting standard setters. Extant accounting research has provided support for some of Watts's (2003) assertions.[4]

Ball and Shivakumar (2005, 2006) extend the Basu measure to timely loss recognition in accruals and use negative cash flows as an indicator for bad news. Khan and Watts (2009) develop the *C_Score* measure, a firm-year measure of Basu's (1997) conditional conservatism that varies by a firm's market-to-book ratio, size, and leverage. Banker, Basu, and Byzalov (2017) show that several additional indicators for asymmetric timeliness exist, including changes in sales. Beaver and Ryan (2005) explore the interaction between conditional and unconditional conservatism (i.e., conservatism that is not news dependent) and establish that the latter preempts the former. Some studies criticize Basu's (1997) specification in that it biases upwards the measures of timely loss recognition (Givoly, Hayn, and Natarajan 2007; Patatoukas and Thomas 2011, 2015; Banker, Basu, Byzalov, and Chen 2016). However, this criticism has, in turn, been challenged (Ryan 2006; Ball, Kothari and Nikolaev 2013a, 2013b; Collins, Hribar, and Tan 2014).

Prior studies have also examined intertemporal changes in the magnitude of accounting conservatism. For example, Ball and Shivakumar (2006) argue that the incremental speed of loss recognition was higher in the 1990s than in the 1970s and 1980s, while Bushman et al. (2016) find that between 2000 and 2014 an overall *decline* has occurred in the incremental speed of loss recognition. Bandyopadhyay, Chen, Huang, and Jha (2010) use an index of several measures of conservatism and find it increased from 1997 to 2005. By contrast, Khan and Watts (2009) and Callen, Segal, and Hope (2010) find that conservatism has been stable over time.

[4] Timely loss recognition has been linked to litigation (e.g., Huijen and Lubberink 2005; Bushman and Piotroski 2006; Qiang 2007), debt contracting (e.g., Ball, Robin, and Sadka 2008; Beatty, Weber, and Yu 2008; Nikolaev 2010; Aier, Chen, and Pevzner 2014; Haw, J. Lee, and W. Lee 2014), and the agency problem (LaFond and Roychowdhury 2008; Lara, Osma, and Penalva 2009; Ramalingegowda and Yu 2012).

Notwithstanding the rich literature on the determinants and consequences of conservatism, relatively scant research has investigated how client conservatism shapes auditor-induced conservatism (DeFond, Lim, and Zang 2016). The discussion in Watts (2003) suggests auditors benefit from client conservatism through reduced litigation risk. Consistent with this view, Lee, Li, and Sami (2015) find audit fees are negatively related to client conservatism. DeFond et al. (2016) find that client conditional conservatism is negatively related to the incidence of going-concern opinions and auditor resignation. Using the exogenous shock of the collapse of Andersen in 2001, Krishnan (2007) examines ex-Andersen clients and finds that timely loss recognition increased under the auditor replacing Andersen. This evidence supports the conjecture that auditors of clients suspected of aggressive accounting require more conservative reporting.

Fees and Audit Quality

Several prior studies view abnormal fees as a measure of independence in appearance (Dopuch, King, and Schwartz 2003; Francis and Ke 2006). Consistent with the economic-bond hypothesis, Frankel, Johnson, and Nelson (2002) document a positive association between non-audit fees and abnormal accruals. Ashbaugh, LaFond, and Mayhew (2003) and Chung and Kallapur (2003), on the other hand, do not find such an association. Srinidhi and Gul (2007) find for the pre-SOX period (2000-2001) that higher audit (non-audit) fees are associated with lower (higher) abnormal accruals, and conclude high audit fees represent audit effort, whereas high non-audit fees suggest an economic bond. Choi, Kim, and Zang (2010), also for the pre-SOX period (2000–2003), find that high abnormal audit fees are associated with larger absolute and signed abnormal accruals. Hoitash, Markelevich, and Barragato (2007) find similar results for the same period. Thus, whereas the results of Srinidhi and Gul (2007) suggest high audit fees capture audit effort, the findings of Choi et al. (2010) and Hoitash et al. (2007) suggest such high fees create an economic bond. By contrast, Larcker and Richardson (2004) find evidence of a negative relation

between abnormal audit and non-audit fees and abnormal accruals. They argue that reputation concerns discipline auditors who exert more audit effort. Kinney, Palmrose, and Scholz (2004) find mixed results for the relation between non-audit fees and restatements, whereas DeFond, Raghunandan, and Subramanyam (2002) and Craswell, Stokes, and Laughton (2002) find no effect of fees on the propensity of auditors to issue going-concern or qualified opinions. Hribar et al. (2014) posit that abnormal audit fees arise when reporting quality is poor, so audit effort, as reflected in higher fees, is auditors' reaction to accounting problems.

SOX-related Studies

Following major accounting scandals and audit failures, US Congress enacted SOX in 2002. However, the bulk of prior research that was available to Congress in 2002 had failed to establish that non-audit services in the pre-SOX period impaired auditor independence. Recently, however, Causholli, Chambers, and Payne (2014) find evidence that audit partners compromise independence in return for growth in non-audit services in the pre-SOX period. The PCAOB has expressed an ongoing concern about the effectiveness of SOX in resolving the fee-dependence problem (Doty 2011).

SOX has changed the environment in which auditors and managers operate and interact (Landsman, Nelson, and Rountree 2009). Ghosh and Pawlewicz (2009) document a rise in audit fees between 2001 and 2005, suggesting greater audit effort, the pricing of higher litigation risk, a stronger economic bond, and/or higher initial SOX-implementation costs. Indeed, the extant literature seems to disagree on whether audit quality has improved since SOX. Supporting the view of poorer audit quality post-SOX, Blay and Geiger (2013) find that clients paying higher total fees in 2004–2006 were issued fewer going-concern modified opinions, but this finding does not hold in 2000. A few studies argue that audit quality may have declined post-SOX because the Act may have lowered auditor reputation risk under the less informative PCAOB-inspection regime

(Lennox and Pittman 2010) relative to the previous peer-review regime (Hilary and Lennox 2005). Another reason for suspecting a weaker inspection regime is that the PCAOB's inspectors are not professional accountants (DeFond and Zhang 2014).

DeFond and Lennox (2011) examine a small sample of small auditors who exited the audit market in 2002–2008. Their findings suggest audit quality *increased* post-SOX as the number of auditors decreased following SOX. SOX could also have affected the demand for high-quality external audit by changing the rules on the composition of audit committees, requiring more independence and financial and legal expertise of the committee members. Krishnan, Wen, and Zhao (2011) examine one year before and one year after SOX and provide evidence indicating these changes to corporate governance have been successful.

Several studies have raised the concern that the abovementioned effects of SOX were short-lived and possibly not driven by the Act itself, but by high media and public attention. For example, Feldman and Read (2010) document an initial increase in the rate of modified audit opinions in 2002–2003, but this rate reverted to pre-Enron levels in subsequent years. Kao et al. (2014) use a longer time series and do not find a strong association between fees and the incidence of going-concern opinions.

In sum, prior research provides inconclusive evidence that SOX was needed and whether any effects on auditors detected in early years persist. Importantly, many of the abovementioned studies have used relatively short time series following SOX, which implies the long-term effects of SOX on auditors are yet to be investigated.[5]

Auditor-Client Conflict over Loss Recognition

[5] For example, Ashbaugh et al. (2003) use a single year (2000), Larcker and Richardson (2004) analyze two years (2000–2001), Li (2009) analyzes three years (2001–2003), Blankley, Hurtt, and MacGregor (2012) use a sample period of eight years (2002–2009), and Kao et al. (2014) also analyze a sample period of eight years (2001 and 2003–2009).

By delaying the recognition of losses, managers decrease transaction costs with stakeholders and regulators (Burgstahler and Dichev 1997; Beatty and Liao 2011), or gain certain personal benefits (Kothari et al. 2009). Several studies provide evidence consistent with delayed loss recognition (e.g., Alciatore, Easton, and Spear 2000; Hirschey and Richardson 2002) and avoiding the reporting of negative earnings (Burgstahler and Dichev 1997; Degeorge, Patel, and Zeckhauser 1999). However, delayed loss recognition may lead to litigation, which provides a countervailing incentive to managers to report them in a timely fashion (Skinner 1994, 1997; Kasznik and Lev 1995; Baginski, Hassell, and Kimbrough 2002). Managers, nonetheless, may reduce the effect of litigation by purchasing directors' and officers' liability insurance. Consistent with this conjecture, Chung and Wynn (2008) find evidence of delayed loss recognition in companies whose managers purchase insurance against litigation.

Watts (2003) argues that, in contrast to managers, external auditors prefer timely loss recognition because it helps them maintain their good reputation and avoid litigation. Absent any distortive incentive, auditors do not gain any additional benefit from aggressive reporting that overstates the client's financial performance and position. In particular, quantifying damages is easier when financial statements overstate rather than understate net assets and profitability (Skinner 1994, 1997). Hence, due to reputation concerns and litigation risk, auditors should ensure delayed loss recognition by their clients is justified. However, auditor incentives to secure high non-audit fees may compromise auditor independence.

Although many studies use abnormal accruals as a measure of audit quality, abnormal accruals may not capture the auditor-client conflict over the *timeliness* of loss recognition in earnings or accruals. The exception is Ruddock, Taylor, and Taylor (2006), who examine whether abnormally high non-audit fees in Australia are associated with timely loss recognition in earnings,

albeit in a pre-SOX period. Their findings do not support the notion that the economic bond results in slower loss recognition.

RESEARCH DESIGN

Measures of Abnormal Fees and Their Interpretation

We use three measures of abnormal fees (*ABFEE*): abnormal audit fees (*ABLAF*), abnormal non-audit fees (*ABLNAF*), and abnormal total fees (*ABLTF*). We regress each fee measure (in log transformation) on a large number of variables identified by prior studies, and use the regression residuals as a measure of abnormal fees, where positive (negative) residuals represent overpayment (underpayment) relative to normal fees. Appendix 2 provides details on the models and variable definitions.

Abnormal fees can be interpreted in different ways. First, high (i.e., positive) abnormal audit fees may be viewed as reflecting additional audit effort needed to resolve reporting problems (Hribar et al. 2014) and maintain reputation (Larcker and Richardson 2004). In our context, auditors exert effort in verifying delayed loss recognition. A contrasting view of abnormal audit effort is that it should lead to *faster* loss recognition.

Alternatively, high abnormal audit fees may represent a fee premium relating to unobserved client risk (Doogar, Sivadasan, and Solomon 2015). One possible manifestation of client risk is under-reporting of loss events. However, as Doogar et al. (2015) argue, client risk is likely a permanent (i.e., time invariant) determinant of fees. We control for this persistence in two ways. First, we include a lagged residual in the fee model, following Doogar et al. (2015) (see Appendix 2). Second, we use firm fixed effects in the main regressions to control for unobserved omitted correlated variables that are time invariant (e.g., underlying audit risk).

High abnormal non-audit fees are a proxy for economic bond (Knechel 2015), which may impair auditor independence (Frankel et al. 2002; Causholli et al. 2014). Finding that high abnormal non-audit fees are associated with slower loss recognition would support the economic-bond hypothesis.

High abnormal audit fees may also represent an economic bond, and without observing billed hours, one cannot safely rule out this possibility. Cameran, Francis, Marra, and Pettinicchio (2015) obtain confidential data on billed hours and find that audit fees and audit hours are highly positively correlated, suggesting abnormal audit fees is a proxy for audit effort rather than economic bond.

Abnormal Fees and Timely Loss Recognition in Accruals

Following Ball and Shivakumar (2006), we use the Jones (1991) model to detect timely loss recognition in the accruals-generating process:

$$ACCR_t = \beta_0 + \beta_1 DCF_t + \beta_2 CF_t + \beta_3 DCF_t * CF_t + \beta_4 \Delta REV_t + \beta_5 GPPE_t + \eta_t \qquad \text{(Jones)}$$

ACCR is total accruals, defined as net income minus cash flow from operations. *CF* denotes operating cash flows, *DCF* is an indicator variable for negative cash flows, and the interaction term *DCF*CF* captures the asymmetric loss recognition in accruals. The Jones model also includes change in revenues (ΔREV), and gross property, plant, and equipment (*GPPE*). We deflate all amounts by average total assets. We expect the coefficient on *CF*, β_2, to be negative, because accruals essentially allocate current cash flows to non-current periods. We expect the coefficient on *DCF*CF*, β_3, to be positive due to conservative accounting (Ball and Shivakumar 2006). If a negative shock in current cash flows is correlated with future declines in cash flows, conservative accounting works to reduce current accruals. Finally, we expect accruals to be positively (negatively) related to ΔREV (*GPPE*).

We add six control variables to the above baseline model (*Control*): (i) firm size (*SIZE*), because larger firms report less conservatively (LaFond and Roychowdhury 2008; LaFond and Watts 2008); (ii) book-to-market ratio (*BM*), following Roychowdhury and Watts (2007) and Hui, Klasa, and Young (2012); (iii) leverage (*LEV*), to capture the demand for conservatism by creditors and to avoid overestimating conditional conservatism in the presence of debt (Amir, Guan, and Livne 2010); (iv) stock return volatility (*RISK*) following LaFond and Watts (2008); (v) firm age (*AGE*) following Khan and Watts (2009); (vi) and industry-based litigation risk (*LIT*) (Francis, Philbrick, and Schipper 1994; Kim and Skinner 2012). These six control variables enter the model on a standalone basis and with their interactions with *DCF*, *CF*, and *DCF*CF*. We also include year and firm fixed effects to control for unobserved heterogeneity.[6] We cluster the standard errors by firm and year following Petersen (2009).

To examine the effect of abnormal fees on timely loss recognition, we further augment the model as follows:

$$\begin{aligned} ACCR_t = {} & \beta_0 + \beta_1 DCF_t + \beta_2 CF_t + \beta_3 DCF_t * CF_t + \beta_4 ABFEE_t + \beta_5 ABFEE_t^{Pos} \\ & + \beta_6 ABFEE_t * ABFEE_t^{Pos} + \beta_7 ABFEE_t * DCF_t + \beta_8 ABFEE_t * CF_t \\ & + \beta_9 ABFEE_t * DCF_t * CF_t + \beta_{10} ABFEE_t * ABFEE_t^{Pos} * DCF_t \\ & + \beta_{11} ABFEE_t * ABFEE_t^{Pos} * CF_t + \beta_{12} ABFEE_t * ABFEE_t^{Pos} * DCF_t * CF_t \\ & + \beta_{13} \Delta REV_t + \beta_{14} GPPE_t + \sum_{j=15}^{20} \beta_j Control_{jt} + \sum_{j=21}^{26} \beta_j Control_{jt} * DCF_t \\ & + \sum_{j=27}^{32} \beta_j Control_{jt} * CF_t + \sum_{j=33}^{38} \beta_j Control_{jt} * DCF_t * CF_t + Years + Firms + \varepsilon_t, \end{aligned} \tag{1}$$

where *ABFEE* is abnormal fee, measured as residual audit fee (*ABLAF*), residual non-audit fee (*ABLNAF*), and residual total fee (*ABLTF*), respectively. Following Choi et al. (2010), we allow

[6] Because we use firm fixed effects, LIT drops out as a standalone variable, but it appears in the interactions.

the coefficient on *ABFEE*DCF*CF* to vary between positive and negative abnormal-fee measures. $ABFEE^{Pos}$ is an indicator variable equal to one for positive *ABFEE*, and zero otherwise.

In equation (1), finding a positive coefficient on *DCF*CF*, β_3, suggests timely loss recognition in accruals. A positive (negative) β_9 indicates faster (slower) loss recognition for negative *ABFEE*. β_{12} captures the incremental speed of timely loss recognition of positive *ABFEE* over that of negative *ABFEE*. Finally, a positive value of the sum of β_9 and β_{12} is consistent with timely loss recognition for positive abnormal fees. We focus on this sum because positive abnormal fees capture unusual audit effort in audit fees and an economic bond in non-audit fees.

SAMPLE, DATA, AND DESCRIPTIVE STATISTICS

The sample includes observations with financial data available on COMPUSTAT, data on audit and non-audit fees available on the Audit Analytics (AA) database, and stock returns available on CRSP (see Panel A of Table 1). We exclude financial institutions and regulated utilities because their financial statements are markedly different, resulting in different types of accruals and cash flows. Because fee data are available on the AA database only from 2000 onward, the initial sample contains 59,703 firm-year observations over the period 2000–2015. This sample decreases by (i) 10,645 firm-year observations owing to missing financial data necessary for calculating abnormal fees and (ii) 7,440 firm-year observations due to the inclusion of lagged residuals in the fee models. It is further reduced by 128 observations due to missing data needed for the main estimation models. We further exclude 5,475 observations for the Global Financial Crisis (GFC) period 2008–2009 in the main analyses because of the special nature of those years. Our final sample comprises 36,015 firm-year observations.

Panel B of Table 1 presents means of inflation-adjusted fees by year for 2000–2015 (59,703 firm-year observations). Audit fees exhibit large real increases up to 2006, whereas non-audit fees

decline significantly up to 2009. The sharpest increase (decrease) in audit (non-audit) fees is in 2004 (2002) by 55% (25%). These observations are consistent with the effects of SOX, including curtailment of non-audit services and the greater cost of audit-related work. The pattern in total fees is more moderate, with the exception of 2004. This moderation occurs because of the often-contrasting trends in audit fees and non-audit fees.

(Table 1 about here)

Panel A of Table 2 reports means of variables used in the timely loss-recognition models for our final sample. Although SOX was enacted in mid-2002, the SEC had the task of setting detailed regulation in place, which took some time to execute. One of the most important rules of the Act that concerns auditors is Section 404 (reporting on the effectiveness of controls over financial reporting), which came into effect in 2004. We therefore define 2001–2003 as the pre-SOX period, and the remaining years as the post-SOX period (2004–2007 and 2010–2015). Panel A shows that audit fees and total fees are higher in the post-SOX period, and that non-audit fees are lower in the post-SOX period. The abnormal-fee measures are indistinguishable between the subperiods by construction. With respect to other variables, several differences exist across the subperiods. Interestingly, mean accruals (*ACCR*) are negative in the entire sample, consistent with conservative reporting. However, financial reporting is less conservative post-SOX (at the 0.01 level).

Panel B compares variable means between *Negative* and *Positive* abnormal-fee groups. Naturally, the various fee measures are largely higher for the *Positive* group than the *Negative* group. Accruals are statistically indistinguishable between the *Positive* and *Negative* groups. The table also reveals that smaller and older firms (*SIZE*, *AGE*), firms with less current cash flows (*CF*), higher book-to-market ratios (*BM*), higher leverage (*LEV*), higher revenue increases (ΔREV), or more long-term assets (*GPPE*) are associated with positive abnormal fees.

Panel C of Table 2 reports the correlation matrix for the abnormal-fee variables and other variables used in our analyses. The correlation between abnormal audit fees and abnormal non-audit fees is positive but rather small. The correlation between abnormal total fees and abnormal audit fees is high, because total fees are the sum of audit and non-audit fees, and audit fees have become the largest fee component over time. Importantly, accruals and the three abnormal-fee measures are uncorrelated. This initial evidence does not support the view that abnormal fees are related to accruals.

(Table 2 about here)

RESULTS

Timely Loss Recognition

Table 3 reports the results of estimating equation (1). For brevity, we report only a subset of estimated coefficients across three pairs of columns: abnormal audit fee (*ABLAF*), abnormal non-audit fee (*ABLNAF*), and abnormal total fee (*ABLTF*). Within each pair, we distinguish between the pre-SOX and post-SOX periods. The coefficient on *DCF*CF*, capturing the underlying speed of timely loss recognition (i.e., a measure of the client's timely loss recognition before the incremental effect of the auditor and the effect of *Control*), is positive and highly significant only in the post-SOX period and across all abnormal-fee measures.

The variables of main interest are the interactive terms *ABFEE*DCF*CF* and *ABFEE*ABFEE*^{Pos}**DCF*CF*. In the pre-SOX period, none of the coefficients on *ABFEE*DCF*CF* or *ABFEE*ABFEE*^{Pos}**DCF*CF* is statistically significant, implying that negative abnormal fees are unrelated to timely loss recognition and that no incremental effect is present for positive abnormal fees. In the post-SOX period, the coefficient on *ABFEE*DCF*CF* is negative and significant at the 8% level only in the last column, suggesting slower loss recognition as abnormal total fees become less negative. With respect to the coefficient on

*ABFEE*ABFEE*^{Pos}**DCF*CF*, which captures the incremental effect of positive abnormal fees, it is negative only for abnormal audit fees post-SOX (*p*-value = 0.08). The results suggest slower loss recognition post-SOX when abnormal audit fees are positive than when they are negative. The sum of the coefficients on *ABFEE*DCF*CF* and *ABFEE*ABFEE*^{Pos}**DCF*CF* is negative only for abnormal total fees (*p*-value = 0.09), consistent with slower loss recognition post-SOX in the presence of positive abnormal total fees.

At the bottom of the table, we report the results of the tests comparing the main coefficients between the pre- and post-SOX periods. Positive abnormal audit fees are associated with slower loss recognition post-SOX than pre-SOX (*p*-value = 0.07). For positive abnormal total fees, the speed of loss recognition is slower post-SOX but the difference is again marginally significant (*p*-value = 0.10).[7]

Overall, we find some evidence that abnormal fees are related to timely loss recognition and no evidence that abnormal non-audit fees are related to timely loss recognition. In addition, we find weak evidence that the pre- and post-SOX periods exhibit different speeds of loss recognition for positive abnormal audit and total fees.

With regards to the six control variables and the related interaction terms, we find the coefficients on *LEV*DCF*CF* are positive and significant at the conventional levels in four out of the six regressions. The findings are consistent with the view that higher-leveraged firms recognize losses in accruals in a timelier manner because creditors demand accounting conservatism. We also find the coefficients on *LIT*DCF*CF* are positive and significant at the conventional levels in all regressions, suggesting litigation risk is a major concern for determining the degree of

[7] Adding change in sales, an indicator for negative change in sales, and an interaction term between these two variables (Banker et al. 2016; Banker et al. 2017) does not change the results.

reporting conservatism. We find no evidence that firm size, book-to-market ratio, firm risk, or firm age is related to reporting conservatism.

(Table 3 about here)

We perform a number of contextual analyses to deepen the analysis presented in Table 3. First, we examine whether the relation between abnormal positive fees and timely loss recognition is more pronounced when firms issue new equity or debt. Auditors may be under greater pressure from managers and the public when the audit client raises capital (Venkataraman, Weber, and Willenborg 2008; Amir et al. 2010). We construct an indicator variable (*FIN*) that takes the value of one for substantial external financing whereby the number of shares increases by at least 10%, or long-term debt by at least 20%, and zero otherwise.

Second, we examine whether the auditor's industry specialization affects the relation between positive abnormal fees and timely loss recognition. Prior research suggests audit quality is positively related to the auditor's industry expertise (e.g., Balsam, Krishnan, and Yang 2003; Burnett, Cripe, Martin, and McAllister 2012). Lacking deep industry-specific knowledge likely requires more audit effort from auditors. Following Burnett et al. (2012), we define an indicator variable, *SPECIALIST*, that takes the value of one when the audit firm has the largest market share of audit fees by at least 10% within a 2-digit SIC, and zero otherwise.

Finally, we distinguish between Big-4 and non-Big-4 auditors. A common argument in the literature is that audit quality is positively related to auditor size (DeAngelo 1981). Early research has also found that audit fees are associated with auditor size (Palmrose 1986), suggesting high fees may result from high effort input in the auditing process by large auditors, in part to protect against loss of reputation and a higher likelihood of litigation. Similarly, we define an indicator variable, *BIG4*, taking the value of one for Big-4 auditors, and zero otherwise.

We repeat the analyses in Table 3 by using the above three indicator variables as partition variables, and then examine whether the relation between positive abnormal fees and timely loss recognition differs between the two subsamples. The results (untabulated) show that, for clients raising substantial external capital, positive abnormal fees are associated with slower loss recognition post-SOX across all abnormal-fee types (*p*-values = 0.01, 0.00, and 0.01, respectively). The pre- versus post-SOX comparisons further show that, for the capital-raising subsample, the association between positive abnormal fees and timely loss recognition significantly differs across the two periods (*p*-values = 0.05, 0.00, and 0.08, respectively).

Turning to auditor industry specialization, we find that positive abnormal audit fees and abnormal total fees are associated with slower loss recognition in the post-SOX period than in the pre-SOX period, when the auditor is not a specialist. This finding is most pronounced for abnormal audit fees (*p*-values = 0.03). Finally, the results are weak and mixed for auditor size. Positive abnormal non-audit (total) fees are associated with slower loss recognition post-SOX for Big-4 (non-Big-4) auditors. The test of the difference between the pre-SOX period and the post-SOX period for these two abnormal fee measures are margina (*p*-values of 0.10 and 0.08, respectively).

Overall, we conclude that positive abnormal audit fees are associated with slower loss recognition in the post-SOX period to a greater extent than in the pre-SOX period in capital-raising firms, and when the auditor is not an industry specialist. The results for non-audit fees are mixed.

C_Score

An alternative measure of timely loss recognition is the firm-level *C_Score* (Kahn and Watts 2009). We first calculate the median and mean *C_Score* for each subperiod, grouped by positive and negative abnormal fees. Untabulated univariate analyses reveal the median and average *C_Score* are lower in the positive abnormal-fee groups than in the negative abnormal-fee groups for *ABLAF* and *ABLNAF* in both the pre- and post-SOX periods. The differences are also highly

significant (*p*-values = 0.00). With regards to *ABLTF*, the *C_Scores* are lower for positive abnormal fees than negative abnormal fees only in the pre-SOX period (*p*-value for difference in means = 0.05; *p*-value for difference in medians = 0.01). Regardless of the fee measure used, the median and mean *C_Scores* are lower post-SOX than pre-SOX for both the positive and negative abnormal-fee groups. Taken together, these results indicate slower loss recognition for higher-abnormal-fee measures and overall slower loss recognition post-SOX.

We also regress changes in *C_Score* on changes in abnormal fees. We use a model similar to that used by Ramalingegowda and Yu (2012):

$$\Delta C\_Score_t = \beta_0 + \beta_1 \Delta ABFEE_t + \beta_2 \Delta SIZE_t + \beta_3 \Delta BM_t + \beta_4 \Delta LEV_t + \beta_5 \Delta RISK_t + \beta_6 \Delta AGE_t + Years + \varepsilon_t \quad (2)$$

All variables are defined as before. The model includes year fixed effects, but not firm fixed effects, owing to the changes specification we use. The results, reported in Table 4, suggest an increase in abnormal audit or total fees is *positively* related to the change in *C_Score* pre-SOX. By contrast, an increase in abnormal audit or total fees is *negatively* related to the change in *C_Score* post-SOX. The differences in the coefficient on *ΔABFEE* between the pre- and post-SOX period are also statistically significant for both fee measures (*p*-values = 0.00). We find no association between changes in abnormal non-audit fees and changes in *C_Scores*. Overall, the results suggest greater audit effort is associated with decreased reporting conservatism, measured by *C_Score* in the post-SOX period.

As to the controls, we find that changes in firm size (leverage) are strongly and negatively (positively) related to changes in the speed of loss recognition across all fee measures and periods. Changes in firm risk (firm age) are strongly and positively (negatively) related to changes in the speed of loss recognition in the pre-SOX period only. We find mixed evidence on the association between changes in the book-to-market ratio and changes in *C_Score*.

(Table 4 about here)

Discretionary Accruals

Prior studies have examined the relation between *abnormal* accruals and various fee measures, although for short periods. Ashbaugh et al. (2003), for instance, examine the association between performance-adjusted abnormal accruals and several fee measures, using data from only the year 2000. Although abnormal accruals and timely loss recognition in total accruals likely capture different aspects of accounting quality, for completeness and comparison with prior research, we also examine the association between abnormal accruals and our abnormal-fee measures.

In Table 5, we use a model similar to that of Ashbaugh et al. (2003), replacing their fee measures with our abnormal-fee measures. We also allow the coefficient on abnormal fees to vary between negative and positive values (Choi et al. 2010). The dependent variable is the absolute value of the discretionary element in current accruals after adjusting for performance, as derived in equations (4) and (5) in Ashbaugh et al. (2003).[8] Starting with abnormal audit fees, in both periods, we find no relation between the negative abnormal audit fees and absolute discretionary accruals. The incremental effect of positive abnormal audit fees is positive and significant in the post-SOX period only. Moreover, as reported at the bottom of the table, the coefficient on *ABFEE* + *ABFEE*ABFEE*^{Pos} is positive and highly significant (0.004; *p*-value = 0.00), and statistically larger post-SOX than its value pre-SOX (*p*-value = 0.03).

The results in the middle two columns reveal no relation between negative abnormal non-audit fees and absolute discretionary accruals in either period, because the coefficients on *ABFEE*

[8] We also include firm fixed effects. Because Ashabuagh et al. (2003) use a single year, firm fixed effects are irrelevant. Choi et al. (2010) examine a longer period (2000–2003), but only control for industry fixed effects.

are not statistically different from zero. In addition, we find no evidence of a significant relation between positive abnormal non-audit fees and absolute abnormal accruals in either period.

The rightmost pair of columns report the results for abnormal total fees. Consistent with abnormal audit fees, the incremental effect of positive abnormal total fees on absolute abnormal accruals is positive post-SOX (*p*-value = 0.00). We also find that positive abnormal total fees are positively related to absolute abnormal accruals post-SOX (coefficient on *ABFEE* + *ABFEE*ABFEE*^{Pos} = 0.005, *p*-value = 0.00). However, the pre- versus post-SOX difference is insignificant. Overall, the results in this panel suggest positive abnormal audit and total fees are positively related to the magnitude of discretionary accruals in the post-SOX period. Although we do not find similar relations pre-SOX, the two periods are statistically different only in the case of positive abnormal audit fees.[9]

(Table 5 about here)

Ashbaugh et al. (2003) also examine the relation between fee measures and *signed* abnormal accruals. They find no relation between their fee measures and income-increasing abnormal accruals. However, they find a negative relation between a higher ratio of non-audit fees to total fees and income-decreasing abnormal accruals. In Table 6, we repeat the analyses in Table 5 but distinguish between positive (Panel A) and negative (Panel B) abnormal accruals.

In Panel A, we find no significant association between positive (income-increasing) abnormal accruals and abnormal audit fees. The results reveal a negative association between positive abnormal accruals and positive abnormal non-audit fees post-SOX (*ABFEE* + *ABFEE** *ABFEE*^{Pos} = -0.001, *p*-value = 0.02). That is, after SOX, when positive abnormal non-audit fees become larger, income-increasing abnormal accruals decrease. Finally, we find a positive effect

[9] The finding that positive abnormal fees are unrelated to absolute discretionary accruals pre-SOX stands in contrast to the positive relation reported by Choi et al. (2010) for the years 2000–2003.

of abnormal total fees on abnormal accruals post-SOX, as indicated by the significantly positive coefficient on *ABFEE* + *ABFEE** $ABFEE^{Pos}$ (0.003, *p*-value = 0.03). The test of this coefficient equality between the two periods reports a *p*-value of 0.06.

Panel B shows that in the post-SOX period, positive abnormal audit fees are negatively related to negative abnormal accruals (*ABFEE* + *ABFEE*** $ABFEE^{Pos}$ = -0.005, *p*-value = 0.02). Similar result holds, albeit more moderately, for positive abnormal total fees (coefficient = -0.005, *p*-value = 0.06). These results suggest that, as these abnormal-fee measures increase, abnormal accruals become more negative in the post-SOX period. However, the difference in the value of the coefficient for *ABFEE* + *ABFEE** $ABFEE^{Pos}$ between the two periods is insignificant across all three abnormal-fee types.

Overall, the evidence in Tables 5 and 6 on the relation between abnormal fees and the magnitude of absolute accruals is mixed and inconclusive. The strength of the findings varies with the sign of abnormal accruals and the period examined.

(Table 6 about here)

SUMMARY

We provide evidence on the relations between abnormal audit, non-audit and total fees and timely loss recognition in the post-SOX period. We extend the literature on the consequences of SOX by examining these relations using a 13-year period, which spans the pre-SOX period of 2001–2003 and the post-SOX period of 2004–2015, excluding the financial crisis years of 2008–2009. In the entire sample using the Ball and Shivakumar (2006) model, we find weak evidence that loss recognition in accruals is less timely post-SOX than pre-SOX when abnormal audit or total fees are positive. Conducting several contextual analyses, in the post-SOX period we find slower loss recognition is associated with abnormal positive audit fees when the client raises substantial external capital or when the auditor is not an industry specialist. The evidence suggests

that auditors exert effort to verify delayed losses when auditors are under greater pressure to perform high-quality audits. Using the firm-level *C_Score* as an alternative measure of timely loss recognition, we find that higher abnormal audit and total fees are negatively related to *C_Score* post-SOX, but that these relations are positive pre-SOX. Finally, we estimate the relations between abnormal fees and abnormal accruals and find mixed and inconclusive evidence on the relation between abnormal fees and the magnitude of absolute accruals.

Overall, our results are consistent with the view that auditors exert greater effort in verifying delayed loss recognition post-SOX. In the analysis of non-audit fees, we find no support for the economic-bond hypothesis. To the best of our knowledge, Ruddock et al. (2006) is the only study that examines the association between abnormal non-audit fees and timely loss recognition. Their focus was on the period before SOX in Australia. Like us, they find no evidence that non-audit fees are associated with timely loss recognition. In contrast, our main result is that additional *audit* effort is exerted in verifying delayed loss recognition post-SOX, but not before.

Our study is subject to three caveats. First, estimating abnormal fee models depends on correctly specifying expected fee models. Second, positive abnormal audit and non-audit fees may be inaccurate measures of additional audit effort and economic bond, respectively. Audit hours is possibly a more accurate measure of audit effort. In addition, there could be other links between auditors and their clients not captured by non-audit services. Third, any detected differences between the pre- and post-SOX periods may not be exclusively attributed to SOX, but to other legislations and events during the same period (e.g., the Dodd-Frank Act of 2010).

REFERENCES

Aier, J.K., L. Chen, and M. Pevzner. 2014. Debtholders' demand for conservatism: Evidence from changes in directors' fiduciary duties. *Journal of Accounting Research* 52(5): 993-1027.

Alciatore, M., P. Easton, and N. Spear. 2000. Accounting for the impairment of long-lived assets: Evidence from the petroleum industry. *Journal of Accounting and Economics* 29(2): 151-172.

Amir, E., Y. Guan, and G. Livne. 2010. Auditor independence and the cost of capital before and after Sarbanes–Oxley: The case of newly issued public debt. *European Accounting Review* 19(4): 633-664.

Ashbaugh, H., R. LaFond, and B.W. Mayhew. 2003. Do non-audit services compromise auditor independence? Further evidence. *The Accounting Review* 78(3): 611-639.

Baginski, S., J. Hassell, and M. Kimbrough. 2002. The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in U.S. and Canadian markets. *The Accounting Review* 77(1): 25-50.

Ball, R., S. P. Kothari, and V. A. Nikolaev. 2013a. On estimating conditional conservatism. *The Accounting Review* 88(3): 755-787.

Ball, R., S. P. Kothari, and V. A. Nikolaev. 2013b. Econometrics of the Basu asymmetric timeliness coefficient and accounting conservatism. *Journal of Accounting Research* 51(5): 1071-1097.

Ball, R. A., Robin, and G. Sadka. 2008. Is financial reporting shaped by equity markets or by debt markets? An international study of timeliness and conservatism. *Review of Accounting Studies* 13(2-3): 168-205.

Ball, R., and L. Shivakumar. 2005. Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics* 39(1): 83-128.

Ball, R., and L. Shivakumar. 2006. The role of accruals in asymmetrically timely gain and loss recognition. *Journal of Accounting and Research* 44(2): 207-242.

Balsam, S., J. Krishnan, and J.S. Yang. 2003. Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory* 22(2): 71-97.

Bandyopadhyay, S.P., C. Chen, A.G. Huang, and R. Jha. 2010. Accounting conservatism and the temporal trends in current earnings' ability to predict future cash flows versus future earnings: evidence on the trade-off between relevance and reliability. *Contemporary Accounting Research* 27(2): 413-460.

Banker, R.D., S. Basu, S., D. Byzalov, and J.Y. Chen. 2016. The confounding effect of cost stickiness on conservatism estimates. *Journal of Accounting and Economics* 61(1): 203-220.

Banker, R.D., S. Basu, S., and D. Byzalov. 2017. Implications of Impairment Decisions and Assets' Cash-Flow Horizons for Conservatism Research. *The Accounting Review* 92(2): 41-67.

Basu, S. 1997. The conservatism principle and the asymmetric timeliness of earnings. *Journal of Accounting and Economics* 24(1): 3-37.

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

Beatty, A., J. Weber, and J.J. Yu. 2008. Conservatism and debt. *Journal of Accounting and Economics* 45(2-3): 154-174.

Beaver, W.H. and S.G. Ryan. 2005. Conditional and unconditional conservatism: Concepts and modeling. *Review of Accounting Studies* 10(2-3): 269-309.

Blankley, A.I., D.N. Hurtt, and J.E. MacGregor. 2012. Abnormal audit fees and restatements. *Auditing: A Journal of Practice & Theory* 31(1): 79-96.

Blay, A. D., and M.A. Geiger. 2013. Auditor Fees and Auditor Independence: Evidence from Going Concern Reporting Decisions. *Contemporary Accounting Research* 30(2): 579-606.

Burgstahler, D., and I. Dichev. 1997. Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics* 24: 99-126.

Burnett, B.M., B.M. Cripe, G.W. Martin, and B.P. McAllister. 2012. Audit quality and the trade-off between accretive stock repurchases and accrual-based earnings management. *The Accounting Review* 87(6): 1861-1884.

Bushman, R. M., A. Lerman, and X. Zhang. 2016. The changing landscape of accrual accounting. *Journal of Accounting Research* 54(1): 41-78.

Bushman, R.M. and J.D. Piotroski. 2006. Financial reporting incentives for conservative accounting: The influence of legal and political institutions. *Journal of Accounting and Economics* 42(1-2): 107-148.

Callen, J.L., D. Segal, and O-K, Hope. 2010. The pricing of conservative accounting and the measurement of conservatism at the firm-year level. *Review of Accounting Studies* 15: 145-178.

Cameran, M., J.R. Francis, A, Marra, and A. Pettinicchio. 2015. Are there adverse consequences of mandatory auditor rotation? Evidence from the Italian experience. *Auditing: A Journal of Practice & Theory* 34(1): 1-24.

Carcello, J.V., C. Hollingsworth, and S.A. Mastrolia. 2011. The effect of PCAOB inspections on Big 4 audit quality. *Research in Accounting Regulation* 23(2): 85-96.

Causholli, M., D.J. Chambers, and J.L. Payne. 2014. Future nonaudit service fees and audit quality. *Contemporary Accounting Research* 31(3): 681-712.

Choi, J.H., J.B. Kim, and Y. Zang. 2010. Do abnormally high audit fees impair audit quality? *Auditing: A Journal of Practice & Theory*, 29(2): 15-140.

Chung, H., and S. Kallapur. 2003. Client importance, non-audit services and abnormal accruals. *The Accounting Review* 78(4): 931-55.

Chung, H., and J.P. Wynn. 2008. Managerial legal liability coverage and earnings conservatism. *Journal of Accounting and Economics* 46(1): 135-153.

Collins, D.W., P. Hribar, and X.S. Tian. 2014. Cash flow asymmetry: Causes and implications for conditional conservatism research. *Journal of Accounting and Economics 58*(2-3): 173-200.

Craswell, A., D.J. Stokes, and J. Laughton. 2002. Auditor independence and fee dependence. *Journal of Accounting and Economics* 33(2): 253-75.

DeAngelo, L. 1981. Auditor size and audit quality. *Journal of Accounting and Economics* 3: 183-199.

Dechow, P., W. Ge, and C. Schrand. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50(2-3): 344-401.

DeFond, M., and J.R. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory* 24 (Supplement): 5-30.

DeFond, M.L. and C.S. Lennox. 2011. The effect of SOX on small auditor exits and audit quality. *Journal of Accounting and Economics* 52(1): 21-40.

DeFond, M.L., C.Y. Lim, and Y. Zang. 2016. Client conservatism and auditor-client contracting. *The Accounting Review* 91(1): 69-98.

DeFond, M., K. Raghunandan, and K.R. Subramanyam. 2002. Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions. *Journal of Accounting Research* 40: 1247-1274.

DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58(2-3): 275-326.

Degeorge, F., J. Patel, and R. Zeckhauser. 1999. Earnings management to exceed thresholds. *The Journal of Business* 72: 1-33

Doogar, R., P. Sivadasan, and I. Solomon. 2015. Audit fee residuals: Costs or rents? *Review of Accounting Studies* 20(4): 1-40.

Dopuch, N., R.R. King and R. Schwartz. 2003. Independence in appearance and in fact: An experimental investigation. *Contemporary Accounting Research* 20(1): 79-114.

Doty, J.R. 2011. Keynote Address: The global dimension conference on audit policy. Available at: http://pcaobus.org/News/Speech/Pages/06302011_DotyKeynoteAddress.aspx.

Fargher, N. L., and L. Jiang. 2008. Changes in the audit environment and auditors' propensity to issue going-concern opinions. *Auditing: A Journal of Practice & Theory* 27(2): 55-77.

Feldman, D. A., and W. J. Read. 2010. Auditor conservatism after Enron. *Auditing: A Journal of Practice & Theory* 29(1): 267-278.

Francis, J.R., and B. Ke. 2006. Disclosure of fees paid to auditors and the market valuation of earnings surprises. *Review of Accounting Studies* 11(4): 495-523.

Francis, J., D. Philbrick, and K. Schipper. 1994. Shareholder litigation and corporate disclosures. *Journal of Accounting Research* 32: 137-164.

Frankel, R., M. Johnson, and K. Nelson. 2002. The relation between auditors' fees for non-audit services and earnings management. *The Accounting Review* 77 (Supplement): 71-105.

Ghosh, A. and R. Pawlewicz. 2009. The impact of regulation on auditor fees: Evidence from the Sarbanes-Oxley Act. *Auditing: A Journal of Practice & Theory* 28(2): 171-197.

Givoly, D., C. Hayn, and A. Natarajan. 2007. Measuring reporting conservatism. *The Accounting Review* 82(1): 65-106.

Haw, I.M. J.J. Lee, and W.J. Lee. 2014. Debt financing and accounting conservatism in private firms. *Contemporary Accounting Research* 31(4): 1220-1259.

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

Hirschey, M., and V.J. Richardson. 2002. Information content of accounting goodwill numbers. *Journal of Accounting and Public Policy* 21(3): 173-191.

Hoitash, R., A. Markelevich, and C.A. Barragato, 2007. Auditor fees and audit quality. *Managerial Auditing Journal* 22(8): 761-786.

Hribar, P., T. Kravet, and R. Wilson. 2014. A new measure of accounting quality. *Review of Accounting Studies* 19(1): 506-538.

Hui, K.W., S. Klasa, and E. Yeung. 2012. Corporate suppliers and customers and accounting conservatism. *Journal of Accounting and Economics* 53: 115-135.

Huijgen, C., and M. Lubberink. 2005. Earnings Conservatism, Litigation and Contracting: The Case of Cross-Listed Firms. *Journal of Business Finance & Accounting* 32(7-8): 1275-1309..

Jones, J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29: 193-228.

Kao, J. L., Y. Li., and W. Zhang. 2014. Did SOX Influence the Association between fee dependence and auditors' propensity to issue going-concern opinions? *Auditing: A Journal of Theory & Practice* 33(2): 165-185.

Kasznik, R., and B. Lev. 1995. To warn or not to warn: Management disclosures in the face of an earnings surprise. *The Accounting Review* 70(1): 113-134.

Khan, M., and R. Watts. 2009. Estimation and empirical properties of a firm-year measure of accounting conservatism. *Journal of Accounting and Economics* 48(2-3): 321-339.

Kim, I., and D. J. Skinner. 2012. Measuring securities litigation risk. *Journal of Accounting and Economics* 53: 290-310.

Kinney, W., Z-V, Palmrose, and S. Scholz. 2004. Auditor independence, non-audit services, and restatements: Was the U.S. government right? *Journal of Accounting Research* 42(3): 561-588.
Knechel, W.R. 2015. Audit research in the wake of SOX. *Managerial Auditing Journal* 30(8/9): 706-726.
Knechel, W.R., G.V. Krishnan, M. Pevzner, L.B. Shefchik, and U.K. Velury. 2013. Audit quality: Insights from the academic literature. *Auditing: A Journal of Practice & Theory* 32 (Supplement): 385-421.
Kothari, S., S. Shu, and P. Wysocki. 2009. Do managers withhold bad news? *Journal of Accounting Research* 47(1): 241-276.
Krishnan, G.V. 2007. Did earnings conservatism increase for former Andersen clients? *Journal of Accounting, Auditing & Finance* 22(2): 141-163.
Krishnan, J., Y. Wen, and W. Zhao. 2011. Legal expertise on corporate audit committees and financial reporting quality. *The Accounting Review* 86(6): 2099-2130.
LaFond, R., and S. Roychowdhury. 2008. Managerial ownership and accounting conservatism. *Journal of Accounting Research* 46: 101-135.
LaFond, R., and R. L. Watts. 2008. The information role of conservative financial statements. *The Accounting Review* 83: 447-478.
Landsman, W.R., K.K. Nelson, and B.R. Rountree. 2009. Auditor switches in the pre- and post-Enron Eras: risk or realignment? *The Accounting Review* 84(2): 531-558.
Lara, J.M.G., B.G. Osma, and F. Penalva. 2009. Accounting conservatism and corporate governance. *Review of Accounting Studies* 14(1): 161-201.
Larcker, D.F., and S.A. Richardson. 2004. Fees paid to audit firms, accrual choices and corporate governance. *Journal of Accounting Research* 42(3): 625-658.
Lee, H.S., X. Li, and H. Sami. 2015. Conditional conservatism and audit fees. *Accounting Horizons* 29(1): 83-113.
Lennox, C., and J. Pittman. 2010. Auditing the auditors: Evidence on the recent reforms to the external monitoring of audit firms. *Journal of Accounting and Economics* 49: 84-103.
Li, C. 2009. Does client importance affect auditor independence at the office level? Empirical evidence from going-concern opinions. *Contemporary Accounting Research* 26: 201-230.
Nikolaev, V.V. 2010. Debt covenants and accounting conservatism. *Journal of Accounting Research* 48(1): 51-89.
Palmrose, Z.V. 1986. Audit fees and auditor size: Further evidence. *Journal of Accounting Research* 24(1): 97-110.
Patatoukas, P. N., and J. K. Thomas. 2011. More evidence of bias in differential timeliness estimates of conditional conservatism. *The Accounting Review* 86(5): 1765-1793.
Patatoukas, P. N., and J. K. Thomas. 2015. Placebo tests of conditional conservatism. *The Accounting Review* 91(2): 625-648.
Petersen, M.A. 2009. Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies* 22(1): 435-480.
Qiang, X. 2007. The effects of contracting, litigation, regulation, and tax costs on conditional and unconditional conservatism: Cross-sectional evidence at the firm level. *The Accounting Review* 82(3): 759-796.
Ramalingegowda, S., and Y. Yu. 2012. Institutional ownership and conservatism. *Journal of Accounting and Economics* 53(1): 98-114.
Ribstein, L.E. 2002. Market vs. regulatory responses to corporate fraud: A critique of the Sarbanes-Oxley Act of 2002. *Journal of Corporation Law* 28: 1-67.

Rice, S., D. Weber, and B. Wu. 2015. Does SOX 404 have teeth? Consequences of the failure to report existing internal control weaknesses. *The Accounting Review* 90(3): 1169-1200.
Romano, R. 2005. The Sarbanes-Oxley Act and the making of quack corporate governance. *Yale Law Journal* 114(7): 1521-1611.
Roychowdhury, S., and R.L. Watts. 2007. Asymmetric timeliness of earnings, market-to-book and conservatism in financial reporting. *Journal of Accounting and Economics* 44: 2-31.
Ruddock, C., S.J. Taylor, and S.L. Taylor. 2006. Non-audit services and earnings conservatism: Is auditor independence impaired? *Contemporary Accounting Research* 23(3): 701-746.
Ryan, S. G. 2006. Identifying conditional conservatism. *European Accounting Review* 15(4): 511-525.
Simunic, D. A. 1984. Auditing, consulting, and auditor independence. *Journal of Accounting Research* 22(2): 679-702.
Skinner, D.J. 1994. Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32 (Spring): 38-60.
Skinner, D.J. 1997. Earnings disclosures and stockholder lawsuits. *Journal of Accounting and Economics* 23(1): 249-282.
Srinidhi, B.N., and F.A. Gul. 2007. The differential effects of auditors' nonaudit and audit fees on accrual quality. *Contemporary Accounting Research* 24(2): 595-629.
Venkataraman, R., J. P. Weber, and M. Willenborg. 2008. Litigation risk, audit quality, and audit fees: Evidence from initial public offerings. *The Accounting Review* 83(5): 1315-1345.
Watts, R. 2003. Conservatism in accounting part I: Explanations and implications. *Accounting Horizons* 17(3): 207-221.

Table 1
Sample Selection and Fee Trend

Panel A: Sample Selection

Initial sample: Intersection of Audit Analytics, Compustat, and CRSP 2000-2015	88,384
Less: utilities and financial firms	(28,681)
	59,703
Less: missing financial data for estimating economic bond	(10,645)
	49,058
Less: missing lagged residuals for estimating economic bond	(7,440)
	41,618
Less: missing financial data for timely loss recognition model	(128)
Final Sample before the exclusion of 2008–2009	**41,490**
Less: The Global Financial Crisis 2008–2009	(5,475)
Final Sample	**36,015**

Panel B: Audit Fees, Non-audit Fees, and Total Fees by Year

Year	Obs.	Audit Fees ($000)		Non-Audit Fees ($000)		Total Fees ($000)	
		Mean	Change	Mean	Change	Mean	Change
2000	2,889	508		1,156		1,664	
2001	3,988	512	1%	1,080	-7%	1,592	-4%
2002	4,200	722	41%	814	-25%	1,536	-4%
2003	4,112	938	30%	680	-17%	1,618	5%
2004	4,139	1,458	55%	582	-14%	2,040	26%
2005	4,102	1,657	14%	480	-17%	2,138	5%
2006	4,046	1,792	8%	437	-9%	2,229	4%
2007	3,985	1,732	-3%	440	1%	2,172	-3%
2008	3,699	1,751	1%	416	-6%	2,166	0%
2009	3,508	1,668	-5%	372	-11%	2,039	-6%
2010	3,527	1,635	-2%	406	9%	2,041	0%
2011	3,430	1,621	-1%	411	1%	2,032	0%
2012	3,427	1,699	5%	435	6%	2,134	5%
2013	3,471	1,730	2%	434	0%	2,165	1%
2014	3,593	1,711	-1%	440	1%	2,150	-1%
2015	3,587	1,753	2%	437	-1%	2,190	2%
Total	59,703	1,429		563		1,991	

Panel A presents the sample selection criteria. Panel B presents the mean of audit fees, non-audit fees, and total fees (in $000) by year for all firms with available fee data. All fees, obtained from the Audit Analytics database, are inflation adjusted using 2000 as the base year. We obtain the consumer price index from ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt.

Table 2
Variable Means and Correlations

Panel A: Variable Means by Period

	Full Sample	Pre-SOX 2001-03	Post-SOX excluding GFC (2004-07 & 2010-15)	Test of Difference in Means
	N=36,015	**N=7,951**	**N=28,064**	***p*-value**
LAF	13.29	12.56	13.49	0.00
LNAF	10.62	11.45	10.39	0.00
LTF	13.60	13.14	13.73	0.00
ABLAF	0.00	0.00	0.00	0.53
ABLNAF	0.00	0.00	0.00	0.84
ABLTF	0.00	0.00	0.00	0.74
ACCR	-0.07	-0.10	-0.06	0.00
CF	0.05	0.04	0.06	0.00
DCF	0.20	0.24	0.19	0.00
SIZE	6.24	5.47	6.45	0.00
BM	0.69	0.78	0.67	0.00
LEV	0.61	0.82	0.55	0.00
RISK	0.15	0.20	0.14	0.00
AGE	31.20	27.78	32.17	0.00
LIT	0.21	0.22	0.21	0.01
∆***REV***	0.06	0.01	0.07	0.00
GPPE	0.53	0.53	0.54	0.09

Panel B: Variable Means by Fee Type

	ABLAF		***ABLNAF***		***ABLTF***	
	***Negative* (16,684 obs.)**	***Positive* (19,331 obs.)**	***Negative* (13,499 obs.)**	***Positive* (22,516 obs.)**	***Negative* (17,965 obs.)**	***Positive* (18,050 obs.)**
LAF	12.85	13.66***	13.29	13.28	12.92	13.65***
LNAF	10.44	10.78***	8.20	12.08***	9.93	11.31***
LTF	13.25	13.90***	13.45	13.69***	13.22	13.98***
ABLAF	-0.37	0.34***	-0.08	0.05***	-0.29	0.30***
ABLNAF	-0.19	0.16***	-2.06	1.23***	-0.60	0.59***
ABLTF	-0.27	0.24***	-0.19	0.12***	-0.30	0.31***
ACCR	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07
CF	0.06	0.05***	0.06	0.05***	0.06	0.05**
DCF	0.20	0.21	0.20	0.21	0.21	0.20
SIZE	6.34	6.15***	6.42	6.13***	6.27	6.21**
BM	0.65	0.73***	0.68	0.70***	0.66	0.73***
LEV	0.56	0.65**	0.62	0.60	0.56	0.66***
RISK	0.15	0.15*	0.15	0.16***	0.15	0.15
AGE	30.86	31.50***	31.39	31.09*	30.87	31.53***
LIT	0.21	0.21	0.21	0.21	0.21	0.21
ΔREV	0.07	0.05***	0.07	0.05***	0.07	0.05***
GPPE	0.57	0.50***	0.55	0.52***	0.56	0.51***

Panel C: Correlation Matrix

	ABLAF	*ABLNAF*	*ABLTF*	*ACCR*	*CF*	*DCF*	*SIZE*	*BM*	*LEV*	*RISK*	*AGE*	*LIT*	*ΔREV*	*GPPE*
ABLAF		**0.16**	**0.82**	0.01	**-0.09**	0.01	**-0.06**	**0.15**	**0.11**	**0.04**	-0.01	0.00	**-0.07**	**-0.10**
ABLNAF	**0.09**		**0.45**	-0.02	**-0.06**	**0.03**	**-0.12**	**0.05**	**0.04**	**0.06**	**-0.02**	0.00	**-0.04**	**-0.04**
ABLTF	**0.83**	**0.30**		0.00	**-0.07**	-0.01	-0.02	**0.11**	**0.12**	0.02	0.00	0.00	**-0.07**	**-0.08**
ACCR	0.00	0.00	0.00		**-0.25**	**0.06**	**0.09**	**-0.05**	**-0.07**	**-0.16**	**0.11**	**-0.06**	**0.18**	**-0.21**
CF	**-0.02**	0.00	-0.01	-0.02		**-0.70**	**0.41**	**-0.20**	**-0.09**	**-0.36**	**0.13**	**-0.14**	**0.22**	**0.24**
DCF	0.01	-0.01	-0.01	-0.01	**-0.73**		**-0.38**	**-0.04**	**-0.11**	**0.39**	**-0.19**	**0.22**	**-0.15**	**-0.21**
SIZE	**-0.04**	0.00	-0.01	**0.14**	**0.37**	**-0.37**		**-0.31**	**0.06**	**-0.54**	**0.22**	**-0.08**	**0.16**	**0.07**
BM	**0.11**	0.00	**0.08**	**-0.07**	0.00	-0.02	**-0.34**		**0.42**	**0.09**	**0.07**	**-0.27**	**-0.22**	**0.17**
LEV	0.00	0.00	0.00	**-0.09**	-0.02	**0.02**	**-0.11**	**0.14**		**-0.05**	**0.09**	**-0.29**	**-0.11**	**0.31**
RISK	0.01	0.00	0.00	**-0.20**	**-0.38**	**0.39**	**-0.46**	**0.07**	**0.09**		**-0.37**	**0.20**	**-0.07**	**-0.12**
AGE	0.02	**0.02**	**0.02**	**0.11**	**0.14**	**-0.18**	**0.28**	0.02	**-0.02**	**-0.29**		**-0.20**	**-0.04**	**0.16**
LIT	0.00	0.00	0.00	**-0.07**	**-0.24**	**0.22**	**-0.07**	**-0.24**	**-0.07**	**0.20**	**-0.18**		**-0.04**	**-0.36**
ΔREV	**-0.04**	-0.02	**-0.05**	**0.20**	**0.17**	**-0.13**	**0.15**	**-0.18**	**-0.06**	**-0.07**	**-0.03**	**-0.04**		-0.02
GPPE	**-0.08**	**-0.02**	**-0.07**	**-0.15**	**0.21**	**-0.19**	**0.06**	**0.15**	**0.08**	**-0.09**	**0.11**	**-0.32**	-0.02	

Panel A presents means for the variables used in estimating equation (1). We partition the entire sample into two subperiods: (1) the pre-SOX period (2001–2003) and (2) the post-SOX period excluding GFC (2004–2007 and 2010–2015). We also report *p*-values for tests of differences in means. Panel B reports means for the variables based on the positive/negative abnormal fees. Panel C presents the Bonferroni-adjusted Pearson (Spearman) correlation coefficients below (above) the diagonal. We report correlations significant at the 0.10 level in boldface. We winsorize all continuous variables at 1% and 99%. See Appendix 1 for variable definitions.

Table 3
Abnormal Fees and Timely Loss Recognition in Accruals

	ABFEE=ABLAF		***ABFEE=ABLNAF***		***ABFEE=ABLTF***	
	2001-03	**2004-07 &2010-15**	**2001-03**	**2004-07 &2010-15**	**2001-03**	**2004-07 &2010-15**
DCF	0.007	-0.036	-0.002	-0.033	0.010	-0.032
	(0.78)	(0.01)	(0.93)	(0.01)	(0.70)	(0.01)
CF	-0.826	-0.489	-0.771	-0.492	-0.766	-0.484
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DCF*CF	**0.314**	**0.220**	0.244	**0.191**	0.249	**0.236**
	(0.07)	**(0.01)**	(0.17)	**(0.02)**	(0.16)	**(0.00)**
$ABFEE^{Pos}$	0.008	0.003	0.007	0.002	0.004	-0.003
	(0.01)	(0.08)	(0.01)	(0.23)	(0.25)	(0.04)
ABFEE	0.017	0.006	0.001	-0.000	0.013	0.011
	(0.04)	(0.21)	(0.48)	(0.53)	(0.16)	(0.04)
ABFEE*DCF	-0.015	-0.004	-0.000	0.003	-0.001	-0.003
	(0.29)	(0.57)	(0.92)	(0.00)	(0.96)	(0.70)
ABFEE*CF	-0.104	-0.028	-0.005	0.009	-0.039	-0.021
	(0.06)	(0.35)	(0.63)	(0.05)	(0.51)	(0.55)
ABFEE*DCF*CF	0.166	-0.041	0.011	0.012	0.045	**-0.074**
	(0.22)	(0.25)	(0.39)	(0.32)	(0.54)	**(0.08)**
$ABFEE*ABFEE^{Pos}$	-0.015	0.007	-0.004	0.000	-0.008	0.007
	(0.26)	(0.32)	(0.26)	(1.00)	(0.58)	(0.41)
$ABFEE*\ ABFEE^{Pos}*DCF$	-0.009	-0.003	0.008	-0.004	-0.008	-0.023
	(0.70)	(0.77)	(0.12)	(0.06)	(0.74)	(0.08)
$ABFEE*\ ABFEE^{Pos}*CF$	0.161	-0.026	0.007	-0.004	0.023	-0.068
	(0.11)	(0.61)	(0.78)	(0.65)	(0.82)	(0.25)
$ABFEE*\ ABFEE^{Pos}\ *DCF*CF$	0.221	**-0.059**	-0.010	-0.013	0.101	-0.114
	(0.55)	**(0.08)**	(0.71)	(0.20)	(0.43)	(0.12)
Year and firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	7,951	28,064	7,951	28,064	7,951	28,064
Adj. R^2	0.274	0.190	0.265	0.191	0.266	0.190
ABFEE*DCF*CF	0.387	-0.100	0.001	-0.001	0.146	**-0.188**
$+ABFEE*ABFEE^{Pos}*DCF*CF$	(0.14)	(0.29)	(0.98)	(0.89)	(0.45)	**(0.09)**
<u>Pre- vs. Post-SOX</u>:						
ABFEE*DCF*CF	**0.09**		0.95		0.35	
$ABFEE*ABFEE^{Pos}*DCF*CF$	0.25		0.96		**0.08**	
ABFEE*DCF*CF $+ABFEE*ABFEE^{Pos}*DCF*CF$	**0.07**		0.97		**0.10**	

The table reports the results of estimating equation (1). For brevity, we report the results for the variables of our main interests only. *ABFEE* = {*ABLAF*, *ANLNAF*, *ABLTF*} is the fee residual from estimating the system of equations (A1)-(A3) (see Appendix 2). $ABFEE^{Pos}$ = 1 if *ABFEE* > 0, and zero otherwise. We winsorize all continuous variables at 1% and 99%. We cluster the standard errors by firm and year (Petersen 2009). We present *p*-values below the coefficient estimates in parentheses. For variable definitions, see Appendix 1.

Table 4
Changes in *C_Scores* and Changes in Abnormal Fees

	ABFEE=ABLAF		***ABFEE=ABLNAF***		***ABFEE=ABLTF***	
	2001-03	**2004-07 &2010-15**	**2001-03**	**2004-07 2010-15**	**2001-03**	**2004-07 &2010-15**
ΔABFEE	**0.008**	**-0.006**	-0.000	0.000	**0.004**	**-0.004**
	(0.00)	**(0.00)**	(0.97)	(0.82)	**(0.04)**	**(0.00)**
ΔSIZE	-0.047	-0.065	-0.048	-0.065	-0.048	-0.065
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
ΔBM	-0.022	0.049	-0.020	0.049	-0.020	0.049
	(0.01)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)
ΔLEV	0.048	0.003	0.047	0.003	0.047	0.003
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
ΔRISK	0.318	0.022	0.310	0.025	0.315	0.024
	(0.00)	(0.13)	(0.00)	(0.09)	(0.00)	(0.11)
ΔAGE	-0.206	-0.000	-0.202	-0.000	-0.214	-0.000
	(0.03)	(0.98)	(0.03)	(0.99)	(0.02)	(0.98)
ΔABFEE (pre- vs. post-)	**0.00**		0.93		**0.00**	
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4,236	25,934	4,236	25,934	4,236	25,934
Adj. R^2	0.287	0.139	0.285	0.138	0.285	0.138

The table reports the results of regressing changes in *C_Scores* on changes in abnormal fees (*ABFEE*), firm size (*SIZE*), book-to-market ratio (*BM*), leverage (*LEV*), firm risk (*RISK*), and firm age (*AGE*). Abnormal fees are the residuals from estimating the system of equations (A1)–(A3) (see Appendix 2). We winsorize all continuous variables at 1% and 99% and cluster the standard errors by firm and year (Petersen 2009). *p*-values are below the coefficient estimates in parentheses. For variable definitions, see Appendix 1.

Table 5
Abnormal Fees and Absolute Abnormal Accruals

	ABFEE=ABLAF		*ABFEE=ABLNAF*		*ABFEE=ABLTF*	
	2001-03	**2004-07 &2010-15**	**2001-03**	**2004-07 &2010-15**	**2001-03**	**2004-07 &2010-15**
ABFEE^{Pos}	0.000	-0.001	0.001	-0.001	-0.001	0.000
	(0.99)	(0.35)	(0.47)	(0.19)	(0.30)	(0.99)
ABFEE	0.004	-0.000	-0.001	-0.000	0.004	**-0.003**
	(0.16)	(0.85)	(0.15)	(0.97)	(0.16)	**(0.07)**
ABFEE*ABFEE^{Pos}	**-0.007**	**0.004**	**0.002**	0.000	-0.001	**0.008**
	(0.08)	**(0.04)**	**(0.08)**	(0.36)	(0.70)	**(0.00)**
AUDDUM	-0.003	0.003	-0.001	0.003	-0.002	0.003
	(0.00)	(0.44)	(0.00)	(0.41)	(0.00)	(0.42)
L1ACCRUAL	0.030	-0.002	0.031	-0.003	0.030	-0.003
	(0.33)	(0.01)	(0.59)	(0.02)	(0.42)	(0.01)
MVE	-0.001	-0.004	-0.001	-0.004	-0.001	-0.004
	(0.20)	(0.00)	(0.24)	(0.00)	(0.24)	(0.00)
MERGER	0.003	0.002	0.002	0.002	0.003	0.002
	(0.29)	(0.01)	(0.29)	(0.02)	(0.26)	(0.02)
FINANCING	0.001	0.002	0.001	0.002	0.001	0.002
	(0.15)	(0.00)	(0.18)	(0.00)	(0.19)	(0.00)
LEVERAGE	0.001	0.001	0.001	0.001	0.001	0.001
	(0.64)	(0.19)	(0.71)	(0.14)	(0.73)	(0.20)
MB	0.001	0.004	0.001	0.004	0.000	0.004
	(0.40)	(0.00)	(0.42)	(0.00)	(0.44)	(0.00)
INST_HOLDING	-0.020	-0.022	-0.020	-0.022	-0.020	-0.022
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
LOSS	0.003	0.005	0.003	0.004	0.003	0.005
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CFO	-0.021	-0.000	-0.022	-0.000	-0.022	0.000
	(0.00)	(0.99)	(0.00)	(0.98)	(0.00)	(0.95)
Year and firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
ABFEE+ABFEE*ABFEE^{Pos}	-0.003	**0.004**	0.001	0.000	0.003	**0.005**
	(0.30)	**(0.00)**	(0.15)	(0.24)	(0.33)	**(0.00)**
Pre- vs. Post-SOX:						
ABFEE	0.18		0.22		**0.03**	
ABFEE*ABFEE^{Pos}	**0.02**		0.25		**0.04**	
ABFEE+ABFEE*ABFEE^{Pos}	**0.03**		0.49		0.38	
Obs.	7,043	25,058	7,043	25,058	7,043	25,058
Adj. R^2	0.028	0.030	0.028	0.029	0.028	0.030

The table replicates Ashbaugh et al. (2003) using their *unsigned* discretionary accruals (*REDCA*) as the dependent variable. *REDCA* is the discretionary current accruals controlling for performance by including the prior year's return on assets in the estimation of expected accruals, as in equations (4) and (5) in Ashbaugh et al. (2003). The three *ABFEE* measures are abnormal audit fees (*ABLAF*), abnormal non-audit

fees (*ABLNAF*), and abnormal total fees (*ABLTF*) derived from estimating the system of equations (A1)-(A3) (see Appendix 2). *AUDDUM* is an indicator variable for Big-4 auditors; *L1ACCRUAL* is last year's total current accruals. *MVE* is the market value of equity; *MERGER* is an indicator variable for mergers and acquisitions; *FINANCING* is an indicator variable for debt and equity financing; *LEVERAGE* is financial leverage; *MB* is the market-to-book ratio; *INST_HOLDING* is the percentage of shares held by institutional owners; *LOSS* is an indicator variable for net loss; *CFO* is cash flow from operations. We measure all these control variables following Table 3 in Ashbaugh et al. (2003). We winsorize all continuous variables at 1% and 99%. We cluster the standard errors by firm and year (Petersen 2009). We present *p*-values below the coefficient estimates in parentheses.

Table 6
Abnormal Fees and Signed Abnormal Accruals

Panel A – Positive Abnormal Accruals

	ABFEE=ABLAF		***ABFEE=ABLNAF***		***ABFEE=ABLTF***	
Pre-/Post-SOX	Pre.	Post.	Pre.	Post.	Pre.	Post.
ABFEE^{Pos}	-0.001	0.000	0.002	0.000	0.002	-0.001
	(0.33)	(0.87)	(0.14)	(0.99)	(0.22)	(0.13)
ABFEE	0.003	-0.002	**-0.002**	0.000	-0.002	-0.002
	(0.33)	(0.32)	**(0.01)**	(0.20)	(0.52)	(0.37)
ABFEE*ABFEE^{Pos}	-0.002	0.003	0.001	**-0.001**	-0.002	**0.005**
	(0.55)	(0.16)	(0.21)	**(0.01)**	(0.70)	**(0.04)**
AUDDUM	-0.000	0.003	0.000	0.002	-0.000	0.003
	(0.02)	(0.96)	(0.99)	(0.04)	(0.02)	(0.89)
L1ACCRUAL	-0.049	-0.043	-0.049	-0.043	-0.049	-0.043
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
MVE	0.006	-0.003	0.006	-0.003	0.006	-0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
MERGER	-0.002	0.000	-0.002	-0.000	-0.002	-0.000
	(0.43)	(0.97)	(0.36)	(0.94)	(0.37)	(0.93)
FINANCING	0.001	0.001	0.001	0.001	0.001	0.001
	(0.16)	(0.02)	(0.16)	(0.01)	(0.17)	(0.02)
LEVERAGE	0.002	-0.003	0.002	-0.002	0.002	-0.003
	(0.40)	(0.01)	(0.38)	(0.01)	(0.40)	(0.01)
MB	0.004	0.006	0.004	0.006	0.004	0.006
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
INST_HOLDING	-0.007	-0.026	-0.007	-0.026	-0.007	-0.026
	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)
LOSS	-0.018	-0.027	-0.018	-0.027	-0.018	-0.027
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CFO	-0.238	-0.193	-0.239	-0.193	-0.238	-0.192
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year and firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
ABFEE+ ABFEE*ABFEE^{Pos}	0.001	0.001	-0.001	**-0.001**	-0.004	**0.003**
	(0.83)	(0.28)	(0.85)	**(0.02)**	(0.20)	**(0.03)**
Pre- vs. Post-SOX:						
ABFEE	0.25		**0.03**		0.96	
ABFEE*ABFEE^{Pos}	0.31		0.11		0.23	
ABFEE+ ABFEE*ABFEE^{Pos}	0.76		0.49		**0.06**	
Obs.	3,828	13,520	3,828	13,520	3,828	13,520
Adj. R^2	0.223	0.186	0.224	0.186	0.223	0.186

Panel B – Negative Abnormal Accruals

	ABFEE=ABLAF		***ABFEE=ABLNAF***		***ABFEE=ABLTF***	
Pre-/Post-SOX	Pre.	Post.	Pre.	Post.	Pre.	Post.
ABFEE^{Pos}	0.002	0.001	-0.000	0.001	0.003	-0.001
	(0.39)	(0.38)	(0.99)	(0.14)	(0.10)	(0.34)
ABFEE	-0.005	-0.002	**0.002**	0.000	**-0.013**	0.002
	(0.21)	(0.40)	**(0.01)**	(0.75)	**(0.00)**	(0.32)
ABFEE*ABFEE^{Pos}	0.004	-0.003	**-0.004**	-0.001	**0.011**	**-0.007**
	(0.52)	(0.41)	**(0.00)**	(0.16)	**(0.05)**	**(0.05)**
AUDDUM	0.012	-0.001	0.009	-0.001	0.013	-0.001
	(0.00)	(0.54)	(0.03)	(0.56)	(0.00)	(0.59)
L1ACCRUAL	-0.091	-0.030	-0.093	-0.030	-0.091	-0.030
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
MVE	0.009	0.005	0.009	0.005	0.009	0.005
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
MERGER	-0.009	-0.005	-0.009	-0.005	-0.010	-0.005
	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
FINANCING	-0.006	-0.003	-0.005	-0.003	-0.006	-0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
LEVERAGE	0.005	-0.004	0.005	-0.004	0.005	-0.004
	(0.06)	(0.00)	(0.03)	(0.00)	(0.07)	(0.00)
MB	0.003	-0.003	0.003	-0.003	0.003	-0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
INST_HOLDING	0.037	0.010	0.036	0.010	0.036	0.010
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
LOSS	-0.024	-0.038	-0.024	-0.037	-0.024	-0.038
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CFO	-0.164	-0.169	-0.163	-0.169	-0.161	-0.169
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year and firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
ABFEE+ABFEE*ABFEE^{Pos}	-0.001	**-0.005**	**-0.002**	**-0.001**	-0.002	**-0.005**
	(0.65)	**(0.02)**	**(0.03)**	**(0.10)**	(0.72)	**(0.06)**
<u>Pre- vs. Post-SOX</u>:						
ABFEE	0.61		**0.10**		**0.01**	
ABFEE*ABFEE^{Pos}	0.47		0.13		**0.03**	
ABFEE+ABFEE*ABFEE^{Pos}	0.58		0.36		0.61	
Obs.	3,215	11,538	3,215	11,538	3,215	11,538
Adj. R^2	0.167	0.157	0.169	0.156	0.169	0.157

The table replicates Ashbaugh et al. (2003) using their *signed* discretionary accruals (*REDCA*) as the dependent variable. *REDCA* is the discretionary current accruals controlling for performance by including the prior year's return on assets in the estimation of expected accruals, as in equations (4) and (5) in Ashbaugh et al. (2003). Panel A (B) presents results for positive (negative) discretionary accruals. The three *ABFEE* measures are abnormal audit fees (*ABLAF*), abnormal non-audit fees (*ABLNAF*), and

abnormal total fees (*ABLTF*) derived from estimating the system of equations (A1)-(A3) (see Appendix 2). *AUDDUM* is an indicator variable for Big-4 auditors; *L1ACCRUAL* is last year's total current accruals. *MVE* is the market value of equity; *MERGER* is an indicator variable for mergers and acquisitions; *FINANCING* is an indicator variable for debt and equity financing; *LEVERAGE* is financial leverage; *MB* is the market-to-book ratio; *INST_HOLDING* is the percentage of shares held by institutional owners; *LOSS* is an indicator variable for net loss; *CFO* is cash flow from operations. We measure all these control variables following Table 3 in Ashbaugh et al. (2003). We winsorize all continuous variables at 1% and 99%. We cluster the standard errors by firm and year (Petersen 2009). We present *p*-values below the coefficient estimates in parentheses.

Appendix 1: Variable Definitions

(Firm subscript *i* and year subscript *t* are omitted)

Variable	Definition
Fee measures:	
LAF	The natural logarithm of audit fees
LNAF	The natural logarithm of non-audit fees
LTF	The natural logarithm of total fees
ABFEE	Abnormal fees, measured by *ABLAF*, *ABLNAF*, and *ABLTF* as below
$ABFEE^{Pos}$	An indicator variable set to 1 if *ABFEE* > 0, and zero otherwise
ABLAF	Abnormal audit fee, measured by the residual of estimating equation (A1) in Appendix 2
ABLNAF	Abnormal non-audit fee, measured by the residual of estimating equation (A2) in Appendix 2
ABLTF	Abnormal total fee, measured by the residual of estimating equation (A3) in Appendix 2
Independent variables used in the fee models (Appendix 2):	
ROA	Return on assets, measured as net income divided by total assets
SIZE	The natural logarithm of market value of equity
LEV	Long-term plus short-term debt divided by market value of equity
CRATIO	Current assets divided by current liabilities
INVREC	Inventory plus accounts receivable divided by total assets
CF	Cash flows from operations divided by average total assets
LOSS	Indicator variable equal to one if the firm reports negative net income, and zero otherwise
MRET	Market-adjusted annual stock return
SALESGRO	Average percentage change in sales over the last three years
MA	Indicator variable equal to one if there is merger and acquisition activity, and zero otherwise
SEG	Number of business segments
DAUD	Indicator variable equal to one if the auditor is Big-4, and zero otherwise
SW	Indicator variable equal to one if there is an auditor switch, and zero otherwise
OPIN	Indicator variable equal to one if the firm receives a qualified opinion or an adverse opinion, and zero otherwise
RESTAT	Indicator variable equal to one if the firm has restated the retained earnings, and zero otherwise
RISK	Firm risk, measured as the standard deviation of monthly returns for the past 36 months
LAG	Reporting lag, measured as the number of days between fiscal year end and earnings announcement date
FILER	Indicator variable equal to one if the firm is an accelerated filer, and zero otherwise
LIT	litigation risk: an indicator variable equal to one if the firm is in the biotech (SIC codes 2833-2836, 8731-8734), computer (3570-3577 and 7370-7374), electronics (3600-3674), or retail (5200-5961) industry, and zero otherwise
FORE	Indicator variable equal to one if the firm has foreign operations, and zero otherwise

PLAN	Indicator variable equal to one if the firm sponsors a defined benefit plan, and zero otherwise
DISC	Indicator variable equal to one if extraordinary items and discontinued operations exceed 1% of pre-tax income, and zero otherwise
EMPL	The natural logarithm of the number of employees
FIN	Indicator variable equal to one if there are no mergers and acquisitions and the number of shares outstanding increases by at least 10%, or long-term debt increases by at least 20%, and zero otherwise
TAX	Tax expense divided by pre-tax income
LC_SCORE	Firm-specific conservatism measured following Khan and Watts (2009) for the previous year
ε_{t-1}	The lagged residual from the first-step regressions of equations (A1)-(A3) in Appendix 2
Variables used in equation (1) and definition of C_Score:	
ACCR	Accruals, defined as net income minus cash flow from operations, scaled by average total assets
DCF	Indicator variable, equal to one if cash flow from operations is negative, and zero otherwise
BM	Book-to-market ratio, measured as book value of equity over market value of equity
AGE	Firm age, obtained from Professor Jay Ritter at University of Florida; if missing, measured as the number of years a firm is listed on CRSP
ΔREV	Change in sales revenue, scaled by average total assets
GPPE	Gross property, plant, and equipment, scaled by average total assets
C_Score	Firm-specific conservatism measured following Khan and Watts (2009) for the current year

Appendix 2: Fee Models

The audit-fee model is

$$\begin{aligned} LAF_t &= \beta_0 + \beta_1 ROA_t + \beta_2 SIZE_t + \beta_3 LEV_t + \beta_4 CRATIO_t + \beta_5 INVREC_t \\ &+ \beta_6 CF_t + \beta_7 LOSS_t + \beta_8 MRET_t + \beta_9 SALESGRO_t + \beta_{10} MA_t + \beta_{11} SEG_t \\ &+ \beta_{12} DAUD_t + \beta_{13} SW_t + \beta_{14} OPIN_t + \beta_{15} RESTAT_t + \beta_{16} RISK_t + \beta_{17} LAG_t \\ &+ \beta_{18} FILER_t + \beta_{19} LIT_t + \beta_{20} FORE_t + \beta_{21} PLAN_t + \beta_{22} DISC_t \\ &+ \beta_{23} EMPL_t + \beta_{24} FIN_t + \beta_{25} LC\_SCORE_t + \beta_{26} \varepsilon_{t-1} + \varepsilon_t \end{aligned} \quad \text{(A1)}$$

The non-audit-fee model is

$$\begin{aligned} LNAF_t &= \beta_0 + \beta_1 ROA_t + \beta_2 SIZE_t + \beta_3 LEV_t + \beta_4 CRATIO_t + \beta_5 INVREC_t \\ &+ \beta_6 CF_t + \beta_7 LOSS_t + \beta_8 MRET_t + \beta_9 SALESGRO_t + \beta_{10} MA_t + \beta_{11} SEG_t \\ &+ \beta_{12} DAUD_t + \beta_{13} SW_t + \beta_{14} RESTAT_t + \beta_{15} RISK_t + \beta_{16} LIT_t \\ &+ \beta_{17} FORE_t + \beta_{18} PLAN_t + \beta_{19} DISC_t + \beta_{20} EMPL_t + \beta_{21} FIN_t \\ &+ \beta_{22} TAX_t + \beta_{23} \varepsilon_{t-1} + \varepsilon_t \end{aligned} \quad \text{(A2)}$$

The dependent variable in equations (A1)–(A2) is the natural logarithm of *audit* fees (*LAF*), and the natural logarithm of *non-audit* fees (*LNAF*), respectively. We also regress log of total fee (*LTF*) with similar independent variables.

We measure all fee variables in inflation-adjusted dollars using 2000 as the base year. Appendix 1 provides related variable definitions. We estimate each equation **annually** and control for industry effects using the Fama and French 12-industry classification. To account for a possible common factor in the error term, we estimate these equations as one system using the seemingly unrelated regressions (SUR) technique. First, we estimate the SUR system annually without the lagged residual. Then we re-run the SUR system annually including the lagged residuals obtained from the first step.

The audit-fee model (equation (A1)) shares most of the independent variables of the non-audit-fee model (equation (A2)). Nevertheless, the audit-fee model also features variables that are not related to non-audit work, namely, auditor opinion (*OPIN*), the reporting lag (*LAG*), and the accelerated-filer indicator (*FILER*). The non-audit-fee model includes effective tax rate (*TAX*) as a unique variable to capture the effect of tax-related services. To mitigate a possible endogeneity problem, we include in the audit-fee model the lagged *C_Score* (*LC_SCORE*), which is a firm-specific measure of conditional conservatism (Kahn and Watts, 2009). The results are available from the authors upon request.