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ABNORMAL AUDIT FEES AND AUDIT QUALITY POST PCAOB

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Abstract *The purpose of this study is to examine whether mandated introduction of Public Company Accounting Oversight Board in United States of America improves the audit quality for listed companies. The empirical analysis includes the companies listed in NASDAQ stock exchange that constitutes 6,600 firm-year observations for the period from 2008 to 2015. The paper use Modified Jones model to estimate signed discretionary accruals and unsigned discretionary accruals as a proxy for audit quality. It is found that Public Company Accounting Oversight Board improves audit quality and the relationship between abnormal audit fees and audit quality is asymmetric and conditional upon the sign of abnormal fees. It reveals that there is a significant difference between the impact of negative abnormal audit fees and positive abnormal audit fees on audit quality at least in case of unsigned discretionary accruals. The paper admits that the empirical analysis does not capture all the variables to observe the matrix; however, sensitivity analysis is attempted to check the accuracy of the results.*

Keywords: *Audit Quality, Discretionary Accruals, Fee Premium, Normal Audit Fees, Abnormal Audit Fees*

INTRODUCTION

The major scandals like Enron and WorldCom made the regulators, investors, stakeholders and researchers to probe the accountability of such events and observing the consequences on the companies, their management and the auditors. To refurbish the assurance in the marketplace, the Sarbanes-Oxley Act, 2002 (Sarbanes Oxley Act (SOX)) in the United States of America (USA) created Public Company Accounting Oversight Board (PCAOB) to move self-regulated audit practices under peer review to compulsory audit and to promote the public interest. Past empirical studies produce varied views on audit quality post PCAOB. For that reason, this study aims to revisit this and to probe the after effects of the new regulations. For that reason, the research question for the study is:

The study aims to look at the association between abnormal audit fees and audit quality post PCAOB. This study estimates discretionary accrual (DA) using Modified Jones model constructed on the description of Jones (1991) and Dechow, Sloan, and Sweeney (1995) to measure audit quality. The study used both signed and unsigned discretionary accruals as a proxy to measure audit quality. Also, past literature (Choi, Kim, & Zang, 2010) segregated actual audit fees into normal audit fees and abnormal audit fees. Normal audit fees is the expected fees paid to the auditors attributable to their efforts, reputation, litigation risk associated with innate characteristics of the company (DeFond, 2014) whereas abnormal audit fees are identified as idiosyncratic to specific audit-client relationship (Choi et al., 2010; Higgs & Skantz, 2006).

In wake of new regulations framed by PCAOB for inspection of all auditors of the companies whether foreign or domestic, the study anticipates that the association between abnormal audit fees and audit quality post PCAOB to be positive reflecting better audit quality and financial reporting. Therefore, the resulting hypothesis is:

H1: There is a positive association between abnormal audit fees and audit quality, measured by discretionary accruals post PCAOB.

The positive abnormal audit fees should enhance the audit quality to attract the best auditors, however it might be the charge for compromising the independence of auditors. Choi et al. (2010) found that direction of earning management related with positive abnormal audit fee is not one-sided, that is, auditors have a tendency to allow more earning management (income increasing or income decreasing) as positive abnormal audit fee increases. Moreover, the previous literature places focus on positive abnormal fees neglecting negative abnormal audit fees (Asthana & Boone, 2012). This study aims to evaluate the impact of both negative abnormal audit fees and positive abnormal audit fees separately on audit quality. The study has no prediction of association of direction of abnormal fees with audit quality yet believe that the association between audit quality and abnormal fees is

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asymmetric and conditional on the sign of abnormal fee. Therefore, the resulting hypothesis is:

H2: There is significant difference in association of negative abnormal audit fee as compared to positive abnormal audit fee with audit quality post PCAOB.

This study focuses on the analysis of audit fee and audit quality post PCAOB for three major reasons. First, there is no consensus that PCAOB improves audit quality and therefore, this study benefits the existing literature. Second, the association between audit quality and audit fee is not free from ambiguity and further, research evaluating this association post PCAOB are limited. This study aims at extricating this complex relationship between audit fees and audit quality in wake of PCAOB regulations. Third, the literature evaluating negative abnormal audit fees and audit quality is scarce.

Briefly, the regression results disclose the following. First, abnormal audit fee is significantly negatively associated with both signed and unsigned discretionary accruals in eight out of ten regressions in multivariate analysis. DA being an inverse measure of audit quality signifies positive relation between abnormal fees and audit quality post PCAOB. Second, this association becomes insignificant when negative abnormal fee was introduced in the model (in two out of ten regressions in multivariate analysis) and only in case of unsigned DA. Third, the abnormal fees remains significant even after the introduction of positive abnormal fee in the model. It validates that the association between abnormal fees and audit quality is conditional on the sign of abnormal fees. The result also demonstrates that there is a significant difference between the association of negative abnormal fees as compared to positive abnormal fee with audit quality at least in case of unsigned DA and therefore, the negative abnormal audit fees is more likely to affect audit quality than positive abnormal audit fees.

LITERATURE REVIEW

The previous research enunciates numeral proxies to estimate audit quality, albeit there is no unanimity over the best proxy (DeFond, 2014). There are strong pointers of poor audit quality (DeFond, 2014) such as material misstatements, restatements and accounting scam, albeit are few extreme circumstances (Myers, Myers, & Omer, 2003). Therefore, the study use discretional accruals as a proxy for determining audit quality. However, consistent with studies like Becker, Defond, Jiambalvo, and Subramanyam (1998), DeFond and Subramanyam (1998), Francis, Maydew, and Sparks (1999), the study uses Modified Jones model as a proxy for audit quality.

The dialogues between the auditors and company with respect to the contracting information of auditor- client set up the audit fees (DeFond, 2014) and it may result in fee premium to improve low accounting quality (Hribar, Kravet, & Wilson, 2014); to allocate more time and resources for the extra efforts required for attestation and for the risk of lawsuits that might emerge from substandard financial statements (Griffin & Lont, 2007). Contrary, the fee discounts may deteriorate the audit quality (Barnes, 2004) that may lead to aggressive accounting (Carcello & Nagy, 2004) and consequently, the deterioration becomes larger with large bargaining power of the client (Asthana & Boone, 2012).

The literature has mixed results: Gipper, Leuz, C., and Maffett (2015) argued that PCAOB produce improved benefits in capital market; DeFond (2014) advocated that PCAOB reduces deficiencies in the audit procedure; Lamoreaux (2016) concluded that PCAOB inspection access provide higher quality audits and less earnings management; Aobdia (2016) found that both the companies and audit firms intensely pay attention towards the PCAOB individual engagement process; Robertson and Houston (2010) found the overall increase in perceptions of audit opinions credibility. However, Tackett, Wolf, and Claypool (2004) argued that audit failure in the past decades is attributable to the auditors neglecting existing auditing rules and not because of absence of audit rules. The studies found that the inspection reports of PCAOB are not professed as worthy to indicate audit quality and not much is acknowledged for audit quality in new regulatory regime (Lennox & Pittman, 2010); the audit standard-setting procedure and inspection models of PCAOB are not efficient, dysfunctional and are seriously flawed (Glover, Prawitt, & Taylor, 2009). Hence, it is not ostensible that PCAOB is an upgradation over the prior regime and consequently led to demand for the economic analysis of PCAOB regime (Coates & Srinivasan, 2014; Gipper et al., 2015). Given mixed results, it is imperative to look at the fundamental query whether PCAOB regulations has added value to the auditing or not.

RESEARCH DESIGN

Sample Selection

The data for the study is obtained from Thompson Reuters database and begins with all companies listed in NASDAQ stock exchange in USA except those with less than 10 observations in any sector in any given year. It constitutes 25,905 firm- year observations from 2005 to 2015. From these, the period from 2005 to 2007 was excluded to examine the implementation effects of AS 5 that was introduced in 2008 to get rid of bias which may get introduced by including

years prior to 2008. It reduces the number of observations to 18,840. Going forward, computing discretionary accruals for financial institutions and utilities is problematic and therefore, these are excluded from the study. The study also excludes the firms with insufficient data on total assets to compute discretionary accruals. Finally, to increase comparability, the study dropped the firms with inadequate data on audit fees and parent auditor. The final usable sample size of the study is 6,600 firm year observations with all variables winsorized at the 1st and 99th percentiles.

Estimating Discretionary Accruals: A Proxy for Audit Quality

Total accruals measure the non-cash part of earnings. Past literature has categorized total accruals into discretionary and non- discretionary accruals. Notably, non-discretionary accruals comprise of day-to-day managerial operating decisions as compared to discretionary accruals, latter signify earning management and unscrupulous conduct of the corporations. Banker, Fang, and Jin (2015).Contemporary studies have provided useful insights in evaluating audit quality through measure of discretionary accruals (Ashbaugh, Lafond, & Mayhew, 2003; Choi et al., 2010; Chung & Kallapur, 2003; Kothari, Leone, & Wasley, 2005).

Jones (1991) originally estimated the model as in Equation (1) describing total accruals as a function of property, plant and equipment and change in revenue.

$$TA_{jt}/A_{jt-1}=\beta_1(1/A_{jt-1}) +\beta_2(\Delta REV_{jt}/A_{jt-1}) +\beta_3(PPE_{jt}/A_{jt-1}) +e_{jt} \quad (1)$$

where, for firm j in year t or (t-1),

TA = total accruals in year t scaled by total assets at t-1and are calculated by subtracting operating cash flows from income before extraordinary items.;

A = total assets in year t-1;

ΔREV= change in net revenue (revenue in year t less revenue in year t-1) scaled by total assets at t-1; and

PPE = gross property, plant and equipment respectively scaled by total assets at t-1.

In Jones Model, total accruals encompassed changes in working capital such as accounts receivable, inventory, account payable and are included in changes in revenue. Property, plant and equipment are used to adjust for the share of total accruals pertaining to non-discretionary depreciation expenses. This model is deflated by lagged asset to moderate heteroskedasticity and accepts that there is stationary association between explanatory variables and non-discretionary accruals.

Nevertheless, Jones stated that there is tendency for revenues to get influenced by accelerating or postponing the amount because it is not being completely exogenous. As a result in equation (2), Dechow et al. (1995) modified the Jones model by altering revenue for change in receivables on the assumption that all changes in credit sales results from earning management. This is because of the fact that it is easier to manipulate revenue recognition on credit sales than exercising discretion over cash sales.

$$TA_{jt}/A_{jt-1}=\beta_1(1/A_{jt-1}) +\beta_{2[} (\Delta REV_{jt}-\Delta REC_{jt})/A_{jt-1}]+\beta_3(PPE_{jt}/A_{jt-1})+e_{jt} \quad (2)$$

where, for firm j in year t or (t-1),

ΔREC = change in net receivables (receivables in year t less receivables in year t-1) scaled by total assets at t-1.

Dechow et al. (1995) attuned the original Jones Model by adjusting change in revenue with change in receivables and assumes that all change in credit sales result from earning management. The residuals from the equation (2) are taken as an approximation of discretionary accruals.

Estimating Abnormal Audit Fees

The paper aims to decompose audit fees into normal and abnormal audit fee and estimate it with the specification given by Choi et al. (2010).

$$\begin{aligned} AFEE_{jt} &= \alpha_0 + \alpha_1 LNTA_{jt} + \alpha_2 NBS_{jt} + \\ &\alpha_3 NGS_{jt} + \alpha_4 INVREC_{jt} + \alpha_5 \\ &EMPLOY_{jt} + \alpha_6 ISSUE_{jt} + \alpha_7 \\ &FOREIGN_{jt} + \alpha_8 EXORD_{jt} + \\ &\alpha_9 LOSS_{jt} + \alpha_{10} LOSSLAG_{jt} + \alpha_{11} \\ &LEVE_{jt} + \alpha_{12} ROA_{jt} + \alpha_{13} LIQUID_{jt} \\ &+ \alpha_{14} BIG4_{jt} + \alpha_{15} SHORT\_TEN_{jt} \\ &+ \alpha_{16} BTM_{jt} + \alpha_{17} CHGSALE_{jt} + \alpha_{18} \\ &PENSION_{jt} + \alpha_{19} REPORT\_LAG_{jt} + \\ &\alpha_{20} RESTATE_{jt} + \alpha_{21} REPORATBLE_{jt} \\ &+ \alpha_{22} D.Year_{jt} + \alpha_{23} D.Ind_{jt} + e_{jt} \end{aligned} \quad (3)$$

where, for firm j in year t or (t-1),

AFEE= Natural log of actual fees paid to auditors for their financial statement audits;

LNTA = Natural log of total assets;

NBS= Natural log of 1 plus the number of business segments;

NGS= Natural log of 1 plus the number of geographic segments;

INVREC= Inventory and Receivables divided by total assets;

EMPLOY= Square root of the number of employees;

ISSUE= 1 if the sum of long term debt or equity issued during the past three years is more than 5% of the total assets and 0 otherwise;

FOREIGN= 1 if the firm pays any foreign income tax and 0 otherwise;

EXORD= 1 if the firm reports any extraordinary gains or losses and 0 otherwise;

LOSS= 1 if the firm reported a loss during the year and 0 otherwise;

LOSSLAG= 1 if the firm reported a loss during the prior year and 0 otherwise;

LEVE= Leverage, that is, total liabilities divided by total assets;

ROA= Return on assets (income before extraordinary items divided by average total assets);

LIQUID= Current assets divided by current liabilities;

BIG4= 1 if the auditor is one of the Big 4 and 0 otherwise;

SHORT_TEN= 1 if the auditor is in the first or second year of the audit engagement and 0 otherwise;

BTM= Book to market ratio;

CHGSALE= Sales change from the prior year divided by prior year's beginning total assets;

PENSION= 1 if the firm has a pension or post-retirement plan and 0 otherwise;

REPORT_LAG= Number of days between the current fiscal year end and the annual earnings announcement date;

RESTATE=1 if the firm restates net income or assets for reasons other than accounting method changes or adoptions of new standards and 0 otherwise;

REPORATBLE= 1 if the auditor change announcement disclosed in Form 8-K contains reportable events or disagreements between the auditor and the client firm and 0 otherwise;

$D.Year_{jt}$ = Year dummy for firm j in year t; and

$D.Ind_{jt}$ = Industry dummy for firm j in year t.

Choi et al. (2010) include LNTA and EMPLOY to control for client size, as demand for audit services is likely to increase with firm size. To control for client complexity that might result in increasing audit fees, the variables like NBS, NGS, INVREC, FOREIGN, EXORD are included in the model. The audit fees is higher for risky companies and to control for this effect, LOSS, LOSSLAG, LEVE, LIQUID and ROA are included to proxy for client's risk characteristics. BIG4 is added to capture the audit quality differentiation on audit fees. SHORT_TEN captures fee discounting at initial audit engagements and ISSUE, CHGSALE and BTM control for growth firms. The indicator variables, PENSION, REPORTABLE and RESTATE are included to characterise for pension plans, reportable actions or discrepancies and the accounting restatements issued by the client firms.

In this regression, there are sixteen dummy variables, eight each for years and industry. Due to limited availability of data, some of the variables could not be included, namely PENSION, RESTATE, SHORT_TEN and REPORTABLE. The calculations which are done with respect to equation (3) to calculate normal and abnormal audit fee are: First, the estimated coefficients values of the variables are assessed. Second, the fitted values are calculated to use them as 'normal audit fees'. Third, abnormal audit fee (ABAFEE) is calculated by subtracting normal audit fee from AFEE.

Association Between Abnormal Audit Fees and Audit Quality Post PCAOB

In lines with Choi et al. (2010), the following equation (4) is estimated to know the association between abnormal audit fees and audit quality. This association is analysed to see whether the audit quality is asymmetric in light of positive abnormal fees and negative abnormal fees, and conditional upon the sign of abnormal fees.

$$|DA| \text{ or } DA = \alpha_0 + \alpha_1 POS\_ABAF + \alpha_2 ABAFEE + \alpha_3 (POS\_ABAF*ABAFEE) + \alpha_4 LNTA + \alpha_5 BIG4 + \alpha_6 BTM + \alpha_7 CHGSALE + \alpha_8 LOSS + \alpha_9 LEVE + \alpha_{10} ISSUE + \alpha_{11} AUDCHG + \alpha_{12} CFO + \alpha_{13} LAGACCR + \alpha_{14} STD\_CFO + \alpha_{15} STD\_REV_{+} \text{ industry and year dummies} + \text{error term} \quad (4)$$

where,

ABAFEE = abnormal audit fees estimated in equation (3);

POS_ABAF =1 if the firm has positive abnormal fees (ABAFEE>0) and 0 otherwise;

AUDCHG= 1 if the firm's auditor is in the first year of an audit engagement and 0 otherwise;

CFO= cash flow from operations divided by lagged total assets;

LAGACCR= one – year lagged total accruals (deflated by total assets at the end of the previous fiscal years);

STD_CFO= standard deviations of operating cash flow (deflated by lagged total assets) for the years t-3 to t; and

STD_REV= standard deviations of cash – based revenues (sales + change in accounts receivable) (deflated by lagged total assets) for the year t-3 to t.

Notably, equation (4) analyses the effect of positive abnormal fees (ABAFEE) and the interaction term (POS_

ABAF*ABAFEE) on signed and unsigned DA. Besides this equation, Equation (5) is estimated to look separately at the impact of negative abnormal audit fee and the interaction term on signed and unsigned DA.

$$|DA| \text{ or } DA = \alpha_0 + \alpha_1 NEG\_ABAF + \alpha_2 ABAFEE + \alpha_3 (NEG\_ABAF*ABAFEE) + \alpha_4 LNTA + \alpha_5 BIG4 + \alpha_6 BTM + \alpha_7 CHGSALE + \alpha_8 LOSS + \alpha_9 LEVE + \alpha_{10} ISSUE + \alpha_{11} AUDCHG + \alpha_{12} CFO + \alpha_{13} LAGACCR + \alpha_{14} STD\_CFO + \alpha_{15} STD\_REV_{+} \text{ industry and year dummies} + \text{error term} \quad (5)$$

where,

NEG_ABAF = 1 if the firm has negative abnormal fee(ABAFEE<0) and 0 otherwise.

The equation (4) and (5) has 16 dummies, eight for years and industry each. Further, due to limited availability of data and time constraints, AUDCHG variable could not be included.

EMPIRICAL ANALYSIS

Descriptive Statistics

Table 1 presents descriptive statistics for signed and unsigned discretionary accruals[1] for the aggregate sample of 6600 firm year observations. The results for descriptive statistics are consistent and comparable to certain extent with other studies such as Choi et al. (Choi), Whisenant, Sankaraguruswamy and Raghunandan (2003) and Chung and Kallapur (Chung and Kallapur).The unsigned discretionary accruals average 26% of lagged total assets. The mean |DA| are more than its median indicating skewness in the distribution. As anticipated, the signed DA has mean close to zero indicating no evidence of earning management. Further, the standard deviation (S.D.) is larger in signed DA (41.57%) as compared to unsigned DA (39.87%), projecting that unsigned DA is more effective than signed DA. Comparing the mean and median values for AFEE and LNTA, it was observed that these variables nearly exhibit equitable distribution.

Table 1: Descriptive Statistics

	Mean	S.D.	p1	p50	p99
|DA|	.2570473	.3987499	.0021178	.1362962	2.662219
DA	-.0004017	.4157933	-2.10757	.0557762	.975971
AFEE	6.690772	1.123995	3.806663	6.727432	9.657907
LNTA	12.48967	1.888159	7.252762	12.50389	17.43147
NBS	1.006622	.3909428	.6931472	.6931472	1.94591
NGS	1.168558	.5071821	.6931472	1.098612	2.397895
INVREC	.2303185	.1915182	0	.1913751	.7676997
EMPLOY	44.61901	51.9305	0	27.30384	291.6967
ISSUE	.3404676	.4738958	0	0	1
FOREIGN	.4950037	.5000063	0	0	1
EXORD	.0299394	.1704306	0	0	1
LOSS	.4159347	.4929129	0	0	1
LOSSLAG	.4114809	.4921324	0	0	1
LEVE	.4680999	.3770128	.0130762	.4028847	2.676056
ROA	-.1144963	.448408	-2.945717	.0238497	.4013052
LIQUID	3.57552	3.582029	.2269113	2.422612	22.75074
BIG4	.6751206	.4683587	0	1	1
BTM	.536953	.553105	-.7692308	.4132231	3.225806
CHGSALE	.1277519	.3858289	-.776024	.0555373	2.224561
REPORT_LAG	-57.20846	20.94008	-146	-56	-19
CFO	-.0254541	.4708877	-3.203031	.0635844	.6488256
LAGACCR	-.1313057	.6228428	-4.364162	.0198863	.5590047
STD_CFO	.2806374	.8527792	.0020792	.0776578	7.034221
STD_REV	.721412	1.405597	0	.3274708	11.09787

[1] Equation (2) is used to estimate DA and |DA| as a proxy for audit quality and then, these estimates are used to observe descriptive statistics.

Other statistics is also note-worthy. For instance, on an average, nearly 34% of sample firms have issued long term debt or equity during the last three years, about 49% paid foreign tax to the authorities outside U.S. prerogative, around 41% incurred a loss in the current year and 67% had employed Big 4 auditors to audit their financial statements.

Audit Fee Model - Estimation of Normal Fees and Abnormal Fees

The regression results for audit fee model are presented in Table 2. Investigating the individual coefficients of the variables and their statistical significance, it is noted that fifteen individual coefficients of the variables out of total seventeen variables are significant except EMPLOY and LEVE. Consequently, the fee model can be used reliably to estimate normal fees. Specifically, it was observed that the explanatory power of the model is 74.7% indicating that the model explains significant portion of audit fees variation. Further, it is observed that BIG4 is significantly associated with AFEE at 0.1% level that suggest that BIG4 are able to claim higher fees than non-big 4 auditors. To put it differently, the companies under PCAOB regime are ready to pay higher fees to the Big 4 auditors to improve audit quality.

Next, the fitted values of normal audit fees was computed using estimated coefficients of the model as displayed in Table 2. Finally, abnormal audit fees (ABAFEE) is computed by taking difference between actual audit fees (AFEE) and normal audit fees.

Table 2: Regression Result for Normal Audit Fee Model

	AFEE
LNTA	0.452***
	(33.21)
NBS	0.0794*
	(2.32)
NGS	0.185***
	(6.11)
INVREC	0.246**
	(3.16)
EMPLOY	0.000665
	(1.68)
ISSUE	-0.0553*
	(-2.08)
FOREIGN	0.254***
	(8.59)
EXORD	0.138*
	(2.48)
LOSS	0.105***
	(4.90)
LOSSLAG	0.134***
	(6.73)
LEVE	-0.0230
	(-0.53)
ROA	-0.187***
	(-4.20)
LIQUID	-0.0201***
	(-4.84)
BIG4	0.353***
	(10.55)
BTM	-0.0925***
	(-4.18)
CHGSALE	-0.0618*
	(-2.24)
REPORT_LAG	-0.00334***
	(-3.79)
_cons	0.249
	(1.16)
Industry and Year Dummies Included	Yes
R^2	0.747
N	6600

t statistics in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

All t values are adjusted using standard errors corrected for heteroscedasticity and firm-level clustering.

Correlation Matrix

Table 3 presents correlation matrix for the variables included in equation (4). It is observed from the matrix that all the independent variables observed are significantly correlated to both signed DA and unsigned |DA| at p= 0.000. It is consistent with studies like Choi et al. (Bhimani, Horngren, & Foster, 2008, 2010), where most of the control variables were significantly correlated with discretionary accrual that recommend the need to control for their effects in the multivariate analysis. ABAFEE is also found to be significantly correlated with DA or |DA| unlike Choi et al. (2010), where only one measure of DA that they used was found significantly correlated with ABAFEE. Observing the correlations among explanatory variables, it is noted that firm

size (LNTA) is significantly associated with BIG4 (ρ=0.51), LOSS (ρ= -0.40), ISSUE (ρ= 0.34) and CFO (ρ=0.40). It suggests that large firms are more likely to appoint big 4 auditors, involve in fund raising operations, have high cash flows and less likely to incur loss. The correlation coefficients for other variables are not large and show that the results of the multivariate regressions are not likely to be affected from multicollinearity problems.

Table 3: Correlation Matrix

	|DA|	**DA**	**ABAFEE**	**LNTA**	**BIG4**	**BTM**	**CHGSALE**	**LOSS**	**LEVE**	**ISSUE**	**CFO**	**LAGACCR**
|DA|	1.00											
DA	-0.51	1.00										
	(0.00)											
ABAFEE	-0.07	-0.06	1.00									
	(0.00)	(0.00)										
LNTA	-0.43	0.24	0.03	1.00								
	(0.00)	(0.00)	(0.01)									
BIG4	-0.18	0.04	0.01	0.51	1.00							
	(0.00)	(0.00)	(0.25)	(0.00)								
BTM	-0.20	0.14	0.00	0.05	-0.08	1.00						
	(0.00)	(0.00)	(0.70)	(0.00)	(0.00)							
CHGSALE	0.05	0.04	-0.00	0.02	-0.02	-0.10	1.00					
	(0.00)	(0.00)	(0.94)	(0.14)	(0.14)	(0.00)						
LOSS	0.24	-0.37	-0.01	-0.40	-0.13	0.00	-0.14	1.00				
	(0.00)	(0.00)	(0.59)	(0.00)	(0.00)	(0.66)	(0.00)					
LEVE	0.22	-0.14	-0.01	-0.06	-0.01	-0.29	0.05	0.16	1.00			
	(0.00)	(0.00)	(0.55)	(0.00)	(0.63)	(0.00)	(0.00)	(0.00)				
ISSUE	-0.11	0.11	0.00	0.34	0.13	0.04	-0.05	-0.12	0.30	1.00		
	(0.00)	(0.00)	(0.96)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			
CFO	-0.63	0.76	0.02	0.40	0.16	0.15	0.02	-0.35	-0.24	0.10	1.00	
	(0.00)	(0.00)	(0.05)	(0.00)	(0.00)	(0.00)	(0.07)	(0.00)	(0.00)	(0.00)		
LAGACCR	-0.51	0.43	0.03	0.39	0.16	0.17	-0.03	-0.34	-0.27	0.10	0.68	1.00
	(0.00)	(0.00)	(0.04)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	

Note: P-values in parentheses

Univariate Analysis

Table 3 shows that ABAFEE is negatively correlated with DA and |DA|. In figure 1, an attempt is made to further investigate the association between discretionary accrual and abnormal fee (when ABAFEE>0 and ABAFEE<0). For this examination, the abnormal fee is segregated in 15 equal intervals and then for each interval, the mean value for signed and unsigned DA is computed. It is to be noted here that DA is winsorized (both signed and unsigned) at 1% and 99% before calculating their mean values. Next, these mean values of signed and unsigned DA are plotted against the midpoint of ABAFEE for each interval.

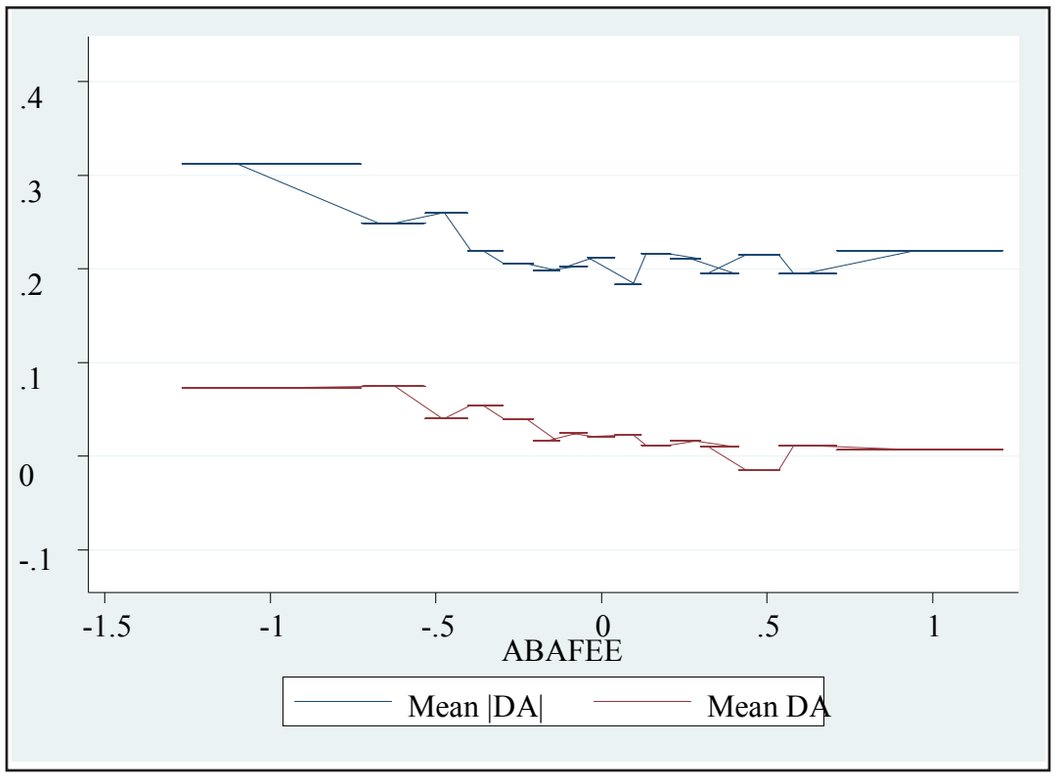

Fig. 1: Distribution of DA and |DA| Characterized by Abnormal Audit Fees

As exemplified in Fig. 1, the mean DA (signed and unsigned) is on vertical axis and ABAFEE is on horizontal axis. It is seen that the magnitude of unsigned DA increases as the negative abnormal fees increases unlike signed DA that do not increase at such accelerating pace. While there is no clear trend and no high fluctuations observed at mean point of DA (signed and unsigned) when there is increase in positive abnormal audit fees as compared to negative abnormal audit fees.

Then, the companies taking subsamples with ABAFEE > 0 and ABAFEE< 0 are compared to understand the presence of any systematic differences between the samples pertaining to client complexity, for instance, LNTA, ROA, LEVE & LOSS. Not tabularized for brevity, it was found that the firms with positive abnormal fees are not significantly different from firms with negative abnormal fees in terms of their size LNTA (0.0020041 versus .0067115, t= -0.62), loss incurred LOSS (0.008111 versus -.0099402, t = 0.82) and operating performance CFO (0.0034924 versus .0237021, t -0.63). It is to be noted here that the difference in ROA (-0.0408045 versus .0294796, t = -1.92) between these two group of firms is significant at p = 5.6%. Also, they are significantly different with respect to LEVE (0.0441107 versus -0.0367199, t = 2.12). Overall, the firms with positive abnormal audit fees are not significantly different from firms with negative abnormal audit fees in their respective size, loss incurred and their operating activities. It indicates that the asymmetric effect of ABAFEE on audit quality conditional upon ABAFEE sign (as depicted in Fig. 1) is not likely to be characterized by the difference in size, profitability and operating performance between firms with positive and negative abnormal audit fees.

Multivariate Analysis - Association Between Audit Quality and Abnormal Fees

This section investigates the dependent variable, signed as well as unsigned discretionary accrual as a proxy for earnings management to measure audit quality post PCAOB. In total, there are 10 regressions for unsigned and signed depicted in Panel A and Panel B respectively summarized in Table 4. First, separate estimations are made by taking negative abnormal audit fee and positive abnormal audit fee in 1A, 3A and 1B, 3B of Panel A and Panel B in Table 4. Next, standard deviation of operating cash flows (STD_CFO) and cash based revenue (STD_REV) are excluded from the regression analysis (2A, 4A and 2B, 4B). Finally, NEG_ABAF, NEG_ABAF*ABAFEE, POS_ABAF, POS_ABAF*ABAFEE, STD_CFO & STD_REV are excluded to

analyse ABAFEE irrespective of its sign (5A and 5B). This is similar to (Choi et al., 2010) to a certain extent except that negative abnormal fee is introduced in the regression analysis in light of recent changing circumstances in U.S. audit market. This study reports t-value adjusted using robust standard errors corrected for heteroscedasticity and firm- level clustering.

Table 4 Panel A and Panel B reveals that ABAFEE is significant in eight out of ten regressions and it is not significant when negative abnormal fees are included in the model to estimate unsigned DA. The significant abnormal fees is inconsistent with Choi et al. (2010) whereas consistent with Frankel, Johnson, and Nelson (2002). Furthermore, the coefficient of abnormal fees is negative that indicates the negative association between abnormal fees and (signed and unsigned) discretionary accrual. Also, discretionary accrual is inverse measure of audit quality. Consequently, the results demonstrate that the association between audit quality and abnormal fees is positive in PCAOB regime and hence supports H1. To put it differently, higher the abnormal fees, higher would be the quality of audit. Evidently, the PCAOB improves audit quality and promote the interest of the users of accounting information.

Going forward, the coefficient of abnormal fee turned insignificant in regression 1A and 2A of Panel A when negative abnormal fees (NEG_ABAF & NEG_ABAF*ABAFEE) was introduced in absolute discretionary accrual model. At the same time, the interaction effect of negative abnormal audit fee and abnormal audit fee (NEG_ABAF*ABAFEE) with negative coefficient is significant at 1% and 0.1% level respectively. However, Choi et al. (Choi) pinpointed no significant association between negative abnormal audit fee and audit quality. Similarly, Krauß, Pronobis, and Zülch (2015) found that fee discounts (negative abnormal audit fee) do not impair audit quality. Nonetheless, there are few studies that analyse the negative abnormal audit fees and audit quality. For instance, Asthana and Boone (2012) that found that audit quality measured by absolute DA decreases as increase in magnitude of negative abnormal audit fees.

Introducing positive abnormal audit fee in 3A and 4A & 3B and 4B of Panel A and B respectively, it is observed that the positive abnormal fees is significant when introduced in interaction with abnormal fees (POS_ABAF*ABAFEE) while estimating absolute DA (Panel A – 3A and 4A) only. But the abnormal fees continued to be significant in both signed and unsigned DA. It is in contrast with Choi et al. (2010), where after introduction of positive abnormal fees variable, the interaction term (POS_ABAF*ABAFEE) was significant whilst abnormal fees remained insignificant. Notably, for signed DA, neither POS_ABAF nor the interaction term POS_ABAF*ABAFEE are significant whereas ABAFEE remain significant.

While analysing the audit quality conditional upon sign of abnormal fees by taking positive abnormal audit fees and negative abnormal audit fees, the results are unusually dissimilar. First, as discussed above for estimation of unsigned DA, the significant NEG_ABAF*ABAFEE made ABAFEE insignificant whereas significant POS_ABAF*ABAFEE do not affect the significance of ABAFEE that continued to remain significant. Second, the coefficient of abnormal fees 3A & 4A of Panel A indicates the marginal effect of abnormal audit fees on audit quality for companies with negative abnormal fees (ABAFEE < 0) whereas the marginal effect for companies with positive abnormal audit fee on audit quality is captured by combined coefficient of ABAFEE and POS_ABAF*ABAFEE. The results for 3A and 4A are qualitatively similar, therefore, results of 3A is discussed here. Looking at table 3A, the coefficients of ABAFEE is -0.0560 (t=-3.12) significant at 1% level suggest that the marginal effect of firms with negative abnormal fees (in magnitude) on audit quality is more than the marginal effects of firms with positive abnormal audit fees (in magnitude) on audit quality, captured by combined coefficients of ABAFEE and POS_ABAF*ABAFEE, -0.0057 (-0.0560+ 0.0503) significant at 1% level. Therefore, the above results provide evidence to support H2 that there is a significant difference between the association of negative abnormal audit fees as compared to positive abnormal audit fees at least in case of unsigned DA with audit quality post PCAOB.

The other results which came out of this multivariate analysis are as follows. Looking at the relation between BIG4 and discretionary accruals, it is observed that BIG4 is not significant in all 5 regressions in panel A for unsigned DA whereas it is significant at 0.1% in all five regressions in Panel B for signed DA. The study finds that BIG4 is significantly negatively associated with signed DA in Panel B (all regressions), that is, the companies audited by BIG4 have income decreasing accruals signalling improvement in audit quality. While the results in Panel A suggest that BIG4 is insignificant while estimating unsigned DA, that is, BIG4 has no significant effect on absolute magnitude of discretionary accrual of the companies audited and hence, do not improve audit quality. These results are inconclusive on whether BIG4 positively affects audit quality or not and needs further research.

Overall, the results in Table 4 indicate that abnormal audit fees positively affect audit quality post PCAOB. However, the association between audit quality and abnormal fees is asymmetric and conditional upon the sign of abnormal fees. Moreover, the negative abnormal audit fee is more likely to affect audit quality than positive abnormal audit fee.

Table 4: Panel A: Regression Results of Multivariate Analysis for |DA|- Modified Jones Model

	(1A)	(2A)	(3A)	(4A)	(5A)
NEG_ABAF	-0.00163	-0.00242			
	(-0.14)	(-0.21)			
ABAFEE	0.0138	0.0154	-0.0560**	-0.0671***	-0.0315***
	(0.84)	(0.93)	(-3.12)	(-3.59)	(-3.42)
NEG_ABAF*ABAFEE	-0.0818**	-0.0964***			
	(-3.24)	(-3.68)			
LNTA	-0.0315***	-0.0349***	-0.0312***	-0.0345***	-0.0346***
	(-8.18)	(-8.29)	(-8.12)	(-8.23)	(-8.20)
BIG4	-0.00433	-0.00538	-0.00482	-0.00596	-0.00692
	(-0.42)	(-0.51)	(-0.47)	(-0.57)	(-0.66)
BTM	-0.0636***	-0.0659***	-0.0636***	-0.0660***	-0.0664***
	(-6.55)	(-6.99)	(-6.55)	(-7.00)	(-7.05)
CHGSALE	-0.0174	0.0367**	-0.0172	0.0371**	0.0388**
	(-1.18)	(2.61)	(-1.17)	(2.64)	(2.75)
LOSS	-0.0469***	-0.0461***	-0.0468***	-0.0459***	-0.0454***
	(-4.97)	(-4.72)	(-4.95)	(-4.70)	(-4.64)
LEVE	0.0418	0.0535*	0.0423	0.0542*	0.0551*
	(1.70)	(2.10)	(1.72)	(2.12)	(2.15)
ISSUE	0.00403	-0.00212	0.00357	-0.00269	-0.00350
	(0.47)	(-0.24)	(0.42)	(-0.30)	(-0.39)
CFO	-0.349***	-0.366***	-0.348***	-0.366***	-0.365***
	(-8.76)	(-9.44)	(-8.75)	(-9.42)	(-9.38)
LAGACCR	-0.0979***	-0.113***	-0.0985***	-0.114***	-0.114***
	(-3.48)	(-4.26)	(-3.50)	(-4.29)	(-4.31)
STD_CFO	0.0499*		0.0502*		
	(2.34)		(2.35)		
STD_REV	0.0228**		0.0229**		
	(2.71)		(2.71)		
POS_ABAF			0.00380	0.00499	
			(0.33)	(0.43)	
POS_ABAF*ABAFEE			0.0503**	0.0595**	
			(2.83)	(3.17)	
_cons	0.550***	0.595***	0.550***	0.594***	0.611***
	(9.53)	(9.80)	(9.65)	(9.92)	(10.00)
Industry and Year dummies Included	Yes	Yes	Yes	Yes	Yes
R^2	0.446	0.427	0.445	0.427	0.425
N	6600	6600	6600	6600	6600
t statistics in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$					

Table 4: Panel B: Regression Result of Multivariate Analysis for DA- Modified Jones Model

	(1B)	(2B)	(3B)	(4B)	(5B)
NEG_ABAF	-0.0143	-0.0142			
	(-1.47)	(-1.45)			
ABAFEE	-0.0493**	-0.0477**	-0.0722***	-0.0797***	-0.0533***
	(-3.20)	(-3.05)	(-5.10)	(-5.07)	(-6.84)
NEG_ABAF*ABAFEE	-0.0237	-0.0341			
	(-1.06)	(-1.39)			
LNTA	-0.0155***	-0.0171***	-0.0154***	-0.0169***	-0.0170***
	(-4.78)	(-5.10)	(-4.76)	(-5.07)	(-5.07)
BIG4	-0.0325***	-0.0334***	-0.0326***	-0.0335***	-0.0339***
	(-3.36)	(-3.39)	(-3.36)	(-3.40)	(-3.43)
BTM	0.0178*	0.0159	0.0178*	0.0159	0.0155
	(2.17)	(1.93)	(2.17)	(1.93)	(1.88)
CHGSALE	-0.0303	-0.00620	-0.0304	-0.00619	-0.00535
	(-1.94)	(-0.42)	(-1.95)	(-0.42)	(-0.36)
LOSS	-0.0951***	-0.0947***	-0.0951***	-0.0947***	-0.0944***
	(-7.59)	(-7.26)	(-7.60)	(-7.27)	(-7.26)
LEVE	0.0193	0.0242	0.0194	0.0243	0.0247
	(0.65)	(0.74)	(0.65)	(0.74)	(0.75)
ISSUE	0.0249**	0.0216**	0.0248**	0.0215**	0.0208*
	(3.25)	(2.69)	(3.24)	(2.67)	(2.58)
CFO	0.723***	0.706***	0.723***	0.706***	0.706***
	(20.58)	(17.06)	(20.58)	(17.06)	(17.02)
LAGACCR	0.0126	-0.00181	0.0124	-0.00205	-0.00226
	(0.56)	(-0.08)	(0.55)	(-0.09)	(-0.10)
STD_CFO	0.0496**		0.0496**		
	(2.77)		(2.77)		
STD_REV	0.00467		0.00469		
	(0.58)		(0.59)		
POS_ABAF			0.0150	0.0153	
			(1.54)	(1.54)	
POS_ABAF*ABAFEE			0.0194	0.0262	
			(1.44)	(1.77)	
_cons	0.244***	0.266***	0.229***	0.251***	0.266***
	(4.95)	(5.44)	(4.65)	(5.17)	(5.48)
Industry and Year Dummies Included	Yes	Yes	Yes	Yes	Yes
R^2	0.612	0.606	0.612	0.606	0.605
N	6600	6600	6600	6600	6600
t statistics in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$					

SENSITIVITY ANALYSIS

Sensitivity analysis is performed to mitigate concerns about the robustness of the results.

Alternative Specifications

Jones Model and modified Jones Model are discussed to estimate discretionary accruals in Research design (Section 2). To judge the robustness of the results obtained from Modified Jones model, signed DA_2 and unsigned $|DA|_2$ are approximated using Jones model. Then, all ten regression equations in the multivariate analysis are re-estimated for negative abnormal audit fee and positive abnormal audit fee. The results are shown in the appendix in Appendix A : Table 6 – Panel X and Panel Y. The results from all the regressions are similar to the base model reported in Table 4 (Panel A and Panel B) and provide evidence about robustness of the results.

Variance Decomposition

To check the robustness of the results, variance decomposition is applied. It is useful to know the statistic decomposition to understand the relative contribution of each independent variable. Shapley variance decomposition (Shapley, 1953) is used to disintegrate R^2. Appendix B-Table 5- Panel C and Panel D shows the variance decomposition of independent variables to know their relative contribution at explaining the unsigned |DA| and signed DA respectively.

It can be seen from the table that LNTA (size effect) is able to explain 12% - 14% in |DA| whereas LNTA explains merely 2% of variation in signed DA. Similarly, BIG4 explains about 2% variation in |DA| and less than 0.5% variation in DA. Further, CFO emerged as an important variable that explains 36% - 41% of variation in |DA| and 63% - 64% in signed DA. While at the same time, STD_CFO, STD_REV explains 14% in |DA| and just 3% in signed DA. Also, Group 1 that constitutes either the negative abnormal fees component or positive abnormal audit fees component explains nearly 1% variation of R^2 in |DA| and less than 1% in signed DA. Overall, the Table 5 suggest that CFO is the primary driver amongst the independent variables and explains most part of R^2.

Notably, the variance decomposition of |DA| and DA estimated through Jones model yields similar results to the variance decomposition from Modified Jones Model. That is why; the results of Jones model for variance decomposition are not reported here for brevity.

Table 5: Panel C: Variance Decomposition for |DA|- Modified Jones Model

	a		B		c		d		e	
Independent Variables	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**
Group 1*	0.00486	1.09%	0.00595	1.39%	0.00423	0.95%	0.00517	1.21%	0.003	0.70%
LNTA	0.05477	12.29%	0.06098	14.27%	0.05457	12.26%	0.06074	14.23%	0.0609	14.32%
BIG4	0.00785	1.76%	0.00871	2.04%	0.00786	1.76%	0.00871	2.04%	0.00879	2.07%
ISSUE, CHG-SALE, BTM	0.01856	4.17%	0.02165	5.07%	0.01858	4.17%	0.02169	5.08%	0.02197	5.17%
LOSS, LEVE	0.01946	4.37%	0.02184	5.11%	0.0195	4.38%	0.02189	5.13%	0.02198	5.17%
LAGACCR	0.08515	19.11%	0.097	22.70%	0.08528	19.16%	0.09718	22.77%	0.09735	22.89%
CFO	0.15934	35.76%	0.1742	40.77%	0.15932	35.79%	0.17421	40.82%	0.17421	40.96%
STD_CFO , STD_REV	0.06216	13.95%		-	0.0623	13.99%		-	-	-
Industry Dummy	0.02046	4.59%	0.02191	5.13%	0.02045	4.59%	0.0219	5.13%	0.02196	5.16%
Year Dummy	0.01298	2.91%	0.01507	3.53%	0.01312	2.95%	0.01525	3.57%	0.0152	3.57%
TOTAL R^2	0.446	100%	0.4273	100%	0.44519	100.00%	0.42675	100.00%	0.42536	100%

*Group 1 includes NEG_ABAF, ABAFEE and NEG_ABAF*ABAFEE in (a) and (b), POS_ABAF, ABAFEE & POS_ABAF*ABAFEE in (c) and (d) and ABAFEE only in (e).

Table 5: Panel D: Variance Decomposition for DA- Modified Jones Model

	A		b		c		d		e	
Independent Variables	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**	**Shapley value**	**Per cent**
Group 1*	0.00512	0.84%	0.00527	0.87%	0.00475	0.78%	0.00524	0.86%	0.00488	0.81%
LNTA	0.01253	2.05%	0.01356	2.24%	0.01252	2.05%	0.01355	2.24%	0.01355	2.24%
BIG4	0.00228	0.37%	0.0024	0.40%	0.00231	0.38%	0.00241	0.40%	0.00243	0.40%
ISSUE, CHGSALE , BTM	0.00763	1.25%	0.00756	1.25	0.00758	1.24%	0.00756	1.25%	0.00752	1.24%
LOSS, LEVE	0.05035	8.23%	0.05203	8.59%	0.05032	8.23%	0.05203	8.59%	0.052	8.59%
LAGACCR	0.07517	12.29%	0.08018	13.24%	0.07512	12.28%	0.08015	13.23%	0.08011	13.23%
CFO	0.38419	62.81%	0.38852	64.14%	0.38425	62.84%	0.38853	64.14%	0.38853	64.18%
STD_CFO, STD_ REV	0.02055	3.36%	-	-	0.02058	3.37%	-	-	-	-
Industry Dummy	0.04939	8.07%	0.05136	8.48%	0.04951	8.10%	0.05141	8.49%	0.05149	8.51%
Year Dummy	0.00451	0.74%	0.00486	0.80%	0.00453	0.74%	0.00488	0.81%	0.00489	0.81%
TOTAL R^2	0.61172	100%	0.60574	100%	0.61147	100.00%	0.60576	100.00%	0.60539	100%

*Group 1 includes NEG_ABAF, ABAFEE and NEG_ABAF*ABAFEE in (a) and (b), POS_ABAF ABAFEE POS_ABAF*ABAFEE in (c) and (d) and ABAFEE only in (e).

CONCLUSION

The mixed results over the enhancement of audit quality post PCAOB leads me to probe whether the audit quality has increased or decreased post PCAOB. Also, the inconclusive evidences over the association between abnormal audit fees and audit quality leads me towards examining this association post PCAOB and to look whether abnormal audit fees has any impact on audit quality. This is being examined by taking signed and unsigned DA as a proxy for audit quality which is estimated through Modified Jones model in main analysis and Jones model in the sensitivity analysis. Using 6,600 firm- year observations from NASDAQ stock exchange for the years 2008 to 2015, the study finds that abnormal audit fee is significantly negatively associated with signed and unsigned DA. It shows the positive association between abnormal audit fees and audit quality post PCAOB in line with the hypothesis H1. This result is also consistent with Eshleman and Guo (2013), Larcker and Richardson (2004) and inconsistent with Choi et al. (Choi) in which the abnormal audit fees is not found to be significantly associated with audit quality.

The positive relation between abnormal fees and audit quality shows that audit quality improves when there is increase in abnormal fees post PCAOB. Higher the abnormal fees, higher would be the quality of audit. As anticipated in my research question, it provides evidence that PCAOB requires clients to pay more on account of audit effort, hours invested and litigation cost and at the same time, it improves the quality of audit.

Further, the study also investigates the association of abnormal audit fees and audit quality, conditional on the sign of abnormal audit fees. There is scant evidence over the negative abnormal fees association with audit quality (Asthana & Boone, 2012). The past literature suggest the association of positive abnormal audit fees and audit quality while they found no association of negative abnormal audit fees and audit quality (Choi et al., 2010; Hope, Kang, Thomas, & Yoo, 2009; Mitra, Deis, & Hossain, 2009). It was found in the results in multivariate analysis that this association between abnormal audit fees and audit quality becomes insignificant when negative abnormal fee is

included to estimate audit quality in case of unsigned DA. Notably, the abnormal fees remains significant even after the introduction of positive abnormal fee in the model. It demonstrates that the association between abnormal fees and audit quality is conditional on the sign of abnormal fees. Hence, these results are consistent with H2 and reveals that there is a significant difference between the association of negative abnormal fees as compared to positive abnormal fee with audit quality at least in case of unsigned DA and the negative abnormal audit fees is more likely to affect audit quality than positive abnormal audit fees. The study calls for further research to highlight further insights into the proposition of the difference of impact of negative abnormal audit fee and positive abnormal audit fee on audit quality.

The study is subject to following caveats and the results should be interpreted cautiously. First, the study has taken both absolute and signed discretionary accruals as per Modified Jones model and Jones model (in the sensitivity analysis) to address the concern to estimate audit quality. Further, the abnormal audit fees are also segregated into positive and abnormal audit fees to look at the effects on discretionary accruals. But, it is widely acknowledged that the proxies to measure audit quality and other computational exercises are not error-free. Therefore, it is not possible to dismiss the measurement errors altogether from the study. Second, the paper takes the listed companies registered in one stock exchange, NASDAQ only because of time limitations. It could have been extended to a global sample in U.S.A. Consequently, the study recognizes the need of future research with global sample in this area.

REFERENCES

Aobdia, D. (2016). *The impact of the PCAOB individual engagement inspection process–Preliminary evidence*. Available at SSRN 2739442.

Ashbaugh, H., Lafond, R., & Mayhew, B. W. (2003). Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review*, *78*, 611–639.

Asthana, S. C., & Boone, J. P. (2012). Abnormal audit fee and audit quality. *Auditing: A Journal of Practice & Theory*, *31*, 1–22.

Banker, R. D., Fang, S., & Jin, B. (2015). *Asymmetric behavior of accruals*. Working paper Temple University.

Barnes, P. (2004). The auditor's going concern decision and Types I and II errors: The Coase Theorem, transaction costs, bargaining power and attempts to mislead. *Journal of Accounting and Public Policy*, *23*, 415–440.

Becker, C. L., Defond, M. L., Jiambalvo, J., & Subramanyam, K. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, *15*, 1–24.

Bhimani, A., Horngren, C. T., & Foster, G. (2008). *Management and cost accounting*, Pearson Education.

Carcello, J. V., & Nagy, A. L. (2004). Client size, auditor specialization and fraudulent financial reporting. *Managerial Auditing Journal*, *19*, 651–668.

Choi, J.-H., Kim, J.-B., & Zang, Y. (2010). Do abnormally high audit fees impair audit quality? *Auditing: A Journal of Practice & Theory*, *29*, 115–140.

Chung, H., & Kallapur, S. (2003). Client importance, nonaudit services, and abnormal accruals. *The Accounting Review*, *78*, 931–955.

Coates, J. C., & Srinivasan, S. (2014). SOX after ten years: A multidisciplinary review. *Accounting Horizons*, *28*, 627–671.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193–225.

Defond, M. L., & Subramanyam, K. (1998). Auditor changes and discretionary accruals. *Journal of Accounting and Economics*, *25*, 35–67.

Defond, M. Z., & Jieying. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, *58*, 275–326.

Eshleman, J. D., & Guo, P. (2013). Abnormal audit fees and audit quality: The importance of considering managerial incentives in tests of earnings management. *Auditing: A Journal of Practice & Theory*, *33*, 117–138.

Francis, J. R., Maydew, E. L., & Sparks, H. C. (1999). The role of Big 6 auditors in the credible reporting of accruals. *Auditing: A Journal of Practice & Theory*, *18*, 17–34.

Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review*, *77*, 71–105.

Gipper, B., Leuz, C., & Maffett, M. (2015). *Public audit oversight and reporting credibility: Evidence from the PCAOB inspection regime*. National Bureau of Economic Research.

Glover, S. M., Prawitt, D. F., & Taylor, M. H. (2009). Audit standard setting and inspection for US public companies: A critical assessment and recommendations for fundamental change. *Accounting Horizons*, *23*, 221–237.

Griffin, P. A., & Lont, D. H. (2007). An analysis of audit fees following the passage of Sarbanes-Oxley. *Asia-Pacific Journal of Accounting & Economics*, *14*, 161–192.

Higgs, J. L., & Skantz, T. R. (2006). Audit and nonaudit fees and the market's reaction to earnings announcements. *Auditing: A Journal of Practice & Theory*, *25*, 1–26.

Hope, O.-K., Kang, T., Thomas, W. B., & Yoo, Y. K. (2009). Impact of excess auditor remuneration on the cost of equity capital around the world. *Journal of Accounting, Auditing & Finance*, *24*, 177–210.

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

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 193–228.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, *39*, 163–197.

Krauß, P., Pronobis, P., & Zülch, H. (2015). Abnormal audit fees and audit quality: Initial evidence from the German audit market. *Journal of Business Economics*, *85*, 45–84.

Lamoreaux, P. T. (2016). Does PCAOB inspection access improve audit quality? An examination of foreign firms listed in the United States. *Journal of Accounting and Economics*, *61*, 313–337.

Larcker, D. F., & Richardson, S. A. (2004). Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research*, *42*, 625–658.

Lennox, C., & Pittman, J. (2010). Auditing the auditors: Evidence on the recent reforms to the external monitoring of audit firms. *Journal of Accounting and Economics*, *49*, 84–103.

Mitra, S., Deis, D. R., & Hossain, M. (2009). The association between audit fees and reported earnings quality in pre- and post-Sarbanes-Oxley regimes. *Review of Accounting and Finance*, *8*, 232–252.

Myers, J. N., Myers, L. A., & Omer, T. C. (2003). Exploring the term of the auditor-client relationship and the quality of earnings: A case for mandatory auditor rotation? *The Accounting Review*, *78*, 779–799.

Robertson, J. C., & Houston, R. W. (2010). Investors' expectations of the improvement in the credibility of audit opinions following PCAOB inspection reports with identified deficiencies. *Accounting and the Public Interest*, *10*, 36–56.

Sarbanes Oxley Act (SOX). 2002. *Public Law No. 107–204*. Washington, DC. Retrieved from https://www.sec.gov/about/laws/soa2002.pdf.

Shapley, L. S. (1953). A value for n-person games. In H. Kuhn & A. Tucker (Eds.), *Contributions to the Theory of Games*, *II*, 307–317.

Tackett, J., Wolf, F., & Claypool, G. (2004). Sarbanes-Oxley and audit failure: A critical examination. *Managerial Auditing Journal*, *19*, 340–350.

Whisenant, S., Sankaraguruswamy, S., & Raghunandan, K. (2003). Evidence on the joint determination of audit and non-audit fees. *Journal of Accounting Research*, *41*, 721–744.

APPENDIX A

Table 6: Panel X : Regression Result for |DA|2 - Jones Model

	(1X)	(2X)	(3X)	(4X)	(5X)
NEG_ABAF	-0.00156	-0.00233			
	(-0.14)	(-0.20)			
ABAFEE	0.0136	0.0152	-0.0554**	-0.0665***	-0.0313***
	(0.83)	(0.92)	(-3.08)	(-3.56)	(-3.41)
NEG_ABAF*ABAFEE	-0.0810**	-0.0956***			
	(-3.21)	(-3.65)			
LNTA	-0.0315***	-0.0349***	-0.0312***	-0.0345***	-0.0346***
	(-8.19)	(-8.30)	(-8.13)	(-8.24)	(-8.22)
BIG4	-0.00438	-0.00544	-0.00487	-0.00602	-0.00696
	(-0.42)	(-0.52)	(-0.47)	(-0.57)	(-0.66)
BTM	-0.0634***	-0.0658***	-0.0635***	-0.0658***	-0.0663***
	(-6.53)	(-6.98)	(-6.54)	(-6.99)	(-7.03)
CHGSALE	-0.0177	0.0360*	-0.0175	0.0365**	0.0382**
	(-1.20)	(2.58)	(-1.19)	(2.61)	(2.72)
LOSS	-0.0475***	-0.0467***	-0.0473***	-0.0465***	-0.0460***
	(-5.04)	(-4.78)	(-5.02)	(-4.76)	(-4.70)
LEVE	0.0420	0.0537*	0.0425	0.0543*	0.0552*

	(1X)	(2X)	(3X)	(4X)	(5X)
	(1.71)	(2.11)	(1.73)	(2.12)	(2.16)
ISSUE	0.00388	-0.00225	0.00342	-0.00281	-0.00361
	(0.45)	(-0.25)	(0.40)	(-0.32)	(-0.41)
CFO	-0.349***	-0.366***	-0.349***	-0.366***	-0.366***
	(-8.75)	(-9.42)	(-8.74)	(-9.41)	(-9.37)
LAGACCR	-0.0985***	-0.114***	-0.0991***	-0.114***	-0.115***
	(-3.50)	(-4.28)	(-3.52)	(-4.31)	(-4.33)
STD_CFO	0.0503*		0.0506*		
	(2.36)		(2.37)		
STD_REV	0.0225**		0.0226**		
	(2.66)		(2.67)		
POS_ABAF			0.00370	0.00487	
			(0.32)	(0.42)	
POS_ABAF*ABAFEE			0.0495**	0.0588**	
			(2.78)	(3.13)	
_cons	0.551***	0.596***	0.551***	0.595***	0.611***
	(9.55)	(9.82)	(9.68)	(9.94)	(10.02)
Industry and Year dummies Included	Yes	Yes	Yes	Yes	Yes
R^2	0.446	0.428	0.445	0.427	0.426
N	6600	6600	6600	6600	6600

t statistics in parentheses,* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: Panel Y: Regression Result for DA2 - Jones Model

	(1Y)	(2Y)	(3Y)	(4Y)	(5Y)
NEG_ABAF	-0.0146	-0.0145			
	(-1.51)	(-1.48)			
ABAFEE	-0.0498**	-0.0482**	-0.0724***	-0.0798***	-0.0533***
	(-3.24)	(-3.09)	(-5.13)	(-5.09)	(-6.86)
NEG_ABAF*ABAFEE	-0.0233	-0.0336			
	(-1.05)	(-1.38)			
LNTA	-0.0154***	-0.0170***	-0.0154***	-0.0169***	-0.0169***
	(-4.77)	(-5.08)	(-4.75)	(-5.05)	(-5.05)
BIG4	-0.0325***	-0.0333***	-0.0325***	-0.0334***	-0.0338***
	(-3.36)	(-3.39)	(-3.37)	(-3.40)	(-3.43)
BTM	0.0182*	0.0164*	0.0182*	0.0164*	0.0159
	(2.22)	(1.98)	(2.23)	(1.99)	(1.94)
CHGSALE	-0.0301	-0.00673	-0.0302	-0.00673	-0.00589
	(-1.93)	(-0.46)	(-1.93)	(-0.46)	(-0.40)
LOSS	-0.0955***	-0.0951***	-0.0955***	-0.0951***	-0.0948***
	(-7.62)	(-7.30)	(-7.62)	(-7.30)	(-7.29)
LEVE	0.0194	0.0241	0.0195	0.0242	0.0246
	(0.65)	(0.73)	(0.65)	(0.74)	(0.75)
ISSUE	0.0248**	0.0215**	0.0247**	0.0214**	0.0208*
	(3.24)	(2.68)	(3.23)	(2.66)	(2.57)
CFO	0.724***	0.707***	0.724***	0.707***	0.707***
	(20.58)	(17.09)	(20.58)	(17.09)	(17.06)

	(1X)	**(2X)**	**(3X)**	**(4X)**	**(5X)**
LAGACCR	0.0108	-0.00352	0.0106	-0.00375	-0.00396
	(0.48)	(-0.16)	(0.47)	(-0.17)	(-0.18)
STD_CFO	0.0494**		0.0494**		
	(2.77)		(2.76)		
STD_REV	0.00426		0.00428		
	(0.53)		(0.54)		
POS_ABAF			0.0153	0.0156	
			(1.57)	(1.57)	
POS_ABAF*ABAFEE			0.0191	0.0258	
			(1.43)	(1.75)	
_cons	0.243***	0.265***	0.228***	0.250***	0.265***
	(4.94)	(5.43)	(4.64)	(5.15)	(5.46)
Industry and Year dummies Included	Yes	Yes	Yes	Yes	Yes
R^2	0.613	0.607	0.613	0.607	0.606
N	6600	6600	6600	6600	6600

t statistics in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$