IMPACT OF SECTION 201 OF SOX ON THE RELATIONSHIP BETWEEN AUDIT AND NON-AUDIT FEES

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Abstract

This study aims to investigate the changes that the prohibition of the non-audit services by section 201 of SOX brought in the relationship between the audit fees and non-audit fees. Both univariate and multivatiate regression methodologies has been used to test the hypotheses. Using both OLS and two-stage least squares, this study find a weak positive relationship between audit fees and non-audit fees. This result suggests that the companies need to pay an increased rate of both audit and non-audit fees after SOX. The findings of this paper will be the use of financial reporting regulatory authorities such as Public Company Accounting Oversight Board (PCAOB). It will also guide the researchers for future investigations. This study will be the one of the first to provide evidence on the changes in the relationship between audit and non-audit fees because of the Section 201 of Sarbanes-Oxley Act.

Keywords: Audit Fees, Non-audit Fees, Sarbanes-Oxley Act.

JEL Code: G34, G28

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1 Introduction

After the cases of Enron and WorldCom, in order to avoid accounting scandals and bring the trust back in audit profession the United States passed a new law known as the Sarbanes-Oxley Act. This law started operating on July 30, 2002. All American and foreign companies that have registered stocks for trading on all American stock exchanges have to follow the Sarbanes-Oxley Act. According to the section 201 of the Sarbanes-Oxley Act, an auditing firm cannot provide both audit and non-audit services to the same client. Auditing firms used to provide both audit services and non-audit services to their clients. So, the prohibition of the joint provision of audit and non-audit services must have some visible impact on audit firms and at the same time on the companies using both services.

In order to understand the problem of the paper it is important to get a picture of the division between audit and non-audit services. Apart from traditional auditing, most of the audit firms offer services that are not directly connected to auditing. These non-audit services include investment advice, tax service, bookkeeping, actuarial services and management consultancy. Because of the regulations in the Sarbanes-Oxley Act, auditing firms are no longer allowed to offer their clients both audit and non-audit services that are prohibited under the Act. What is the effect on the relationship between audit and non-audit fees after the prohibition, it is still relatively unknown and therefore the aim of this research is to explore this issue further.

While previous studies have investigated the relationship between audit fees and non-audit fees on the basis of the provision of non-audit services (e,g Simunic (1984), Wines (1994), Sharma & Shidu (2001) and Firth (2001)), no academic studies has examined the relationship between audit fees and non-audit fees after the prohibition of certain non-audit services by the Section 201 of SOX. The effect of this prohibition of non-audit services on the relationship between the audit fees and non-audit fees has not yet been investigated.

The main research question of this paper is concerned with the changes that the prohibition of the non-audit services by section 201 of SOX brought in the relationship between the audit fees and non-audit fees. Both univariate and multivatiate regression methodologies has been used to find out the answer of the research question. This research is the quantitative in nature and is based on mathematical and statistical analysis. Using sample drawn from Audit Analystics between 2000 and 2013, this study find a large increase in audit fees after introducing the prohibition of certain non-audit services by Section 201 of SOX. Prior to SOX, the mean audit fees were $12,66,771 but this number increased to $36,83,830 in the years following enactment. Thus audit fees increased 190% between the pre- and post-SOX years. This result suggests that while audit fees increase, non-audit fees decrease after prohibition of non-audit services by Section 201 of SOX.

This study will be the one of the first to provide evidence on the changes in the relationship between audit and non-audit fees because of the prohibition of

the non-audit services by the Section 201 of Sarbanes-Oxley Act. This study will contribute to the literature on the division between audit and non-audit fees. The findings of this paper will be the use of financial reporting regulatory authorities such as Public Company Accounting Oversight Board (PCAOB). It will also guide the researchers for future investigations.

The rest of the sections of this paper are organized in the following manner: Section 2 illustrates the available literature on the relationship between non-audit fees and audit fees. Based on the literature review, this paper then develop hypothesis. In Section 3, the methodology of the research is outlined. The purpose of this section is to present how the research has been conducted, which is important for the understanding of the following chapters explains the methods used for conducting the research. Section 4 analyzes results. Section 5 ends the paper by stating the conclusions drawn from analysis.

2 Literature review and hypotheses

The earlier research has found a complex relationship between audit fees and non-audit fees. The view that an audit firm reduces its audit fees to get the non-audit consulting work reducing the independence of the auditor implies that there should be a negative relationship between audit fees and non-audit fees. The interdependence of the knowledge of audit service and non-audit service also signifies a negative relationship between audit and non-audit fees without harming the independence of the auditor. However, earlier researchers have generally found a positive relationship. The studies of Simunic, (1984), Palmrose Z. , (1986), Beck et al. (1988), Barkess & Simnett, (1994); Ezzamel et al. (1996) and Firth M. , (1997) have found a positive relationship between audit and non-audit fees. The studies of Abdel Khalik, (1990), Barefield, (1993) and O'Keef et al. (1994) found no relationship between audit and non-audit fees. At the same time, in an empirical study, S, Sankaraguruswamy, & Raghunandan, (2003) have identified that both the audit and non-audit fees are determined at the same time. When they used OLS they found a positive relationship between audit fees and non-audit fees. However, by using a simultaneous specification of the fee model applying two-stage least squares, they found no relationship at all. Contrarily, using simultaneous equations for audit fees, non-audit fees and abnormal accruals in the data of UK and US, the study of Antle, (1984) found a positive relationship between audit and non-audit fees in both OLS and jointly determined models.

Solomon, (1990) explained four probable reasons for the positive relationship between audit and non-audit fees. The first reason was located in Simunic, (1984), which says that the 'problem' firms may need a great amount of audit and non-audit services. The second reason was identified in Palmrose Z. , (1986) that some non-audit services, which force changes in a client organization, may require extra audit effort. The lack of competition in the non-audit service market leads to higher audit fees as clients pay to obtain the relatively monopolistic non-audit services. This was pointed out as the third reason. The fourth reason is implied in the internal dynamics of audit firms and partner remuneration. When a client purchases both audit and non-audit services from the same audit firm, it becomes difficult to distinguish between the two. For example, Hackenbrack & Knechel, (1997) mentioned that partners and managers might spend some audit time to explain non-audit projects to clients, which may help them, understand the process. Solomon, (1990) identified that audit partners may get incentives for classifying non-audit fees as audit fee category and by doing so the audit fees may look higher.

The study of Solomon, (1990) has explained some support for the problem firms' and 'change in organization'. The study of Davis et al.(1993) looked over the audit hours and found a positive relationship between audit and non-audit fees as the auditors spend more time on the audit work of the clients who purchased non-audit services. The study of Firth M. (2002) looked over company-specific events that could create a demand for various consulting services like mergers, new accounting systems, restructuring, etc. and found no relationship between audit fees and non-audit fees. At the same time it can also be deducted that as audits fees and non-audit fees are jointly determined, a positive relationship results because of the simultaneous equation bias.

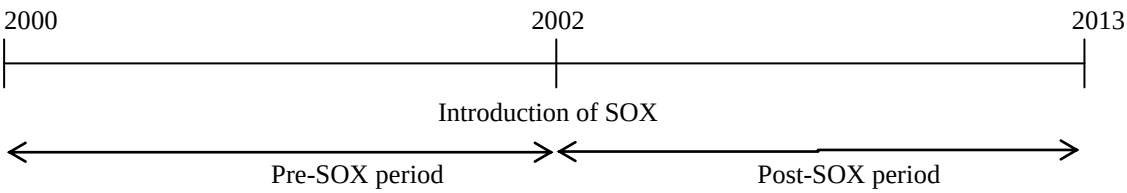
In summary, it can be said that as there is no provision of giving both audit and non-audit services to the same client, the audit firms are expected to charge its usual audit fees, which was usually lesser before the introduction of Section 201 of SOX. As a result, the auditors are expected to audit with more independence because they do not have to think of getting the contract of non-audit services. This would imply a negative relationship between audit fees and non-audit fees. The analysis of prior research leads to our second hypothesis:

H_1: There is a negative relationship between audit fees and non-audit fees after introduction of the Section 201 of SOX

3 Research design

3.1 Event periods

In this section, I focus on my analysis on prohibition of non-audit services by Section 201 of SOX and its impact on the relationship between audit fees and non-audit fees across two main time periods- The Pre-SOX periods and the Post-SOX periods. The Pre-SOX period extend from 2000 through 2001, and the Post-SOX period extend from 2002 through the end of 2013. The following figure shows these different time periods analyzed.



3.2 Data and sample description

The data I use for this research is mainly come from two databases, Compustat and Audit Analystics (accessed via the WRDS server). I collect data for each company for the year 2000-2013 on assets, current assets, current liabilities, receivables, inventory, total debt, income before extra ordinary items and audit opinion from Compustat. I collect data about audit fees, non-audit fees, and auditor information from Audit Analystics. Consistent with prior research, this research excludes utilities (two digit SIC codes between 40-49) and financial institutions (two digit SIC codes between 60-69). These industries are highly regulated, have unique financial reporting and audit issues. This paper also excludes companies with zero non-audit services fees in each year of the sample period because the SOX ban on non-audit services did not affect these companies and consistent with prior research (e.g Raghunandan et al 2003). My next step is to merge the Compustat database into the AuditAnalystics database by company CIK number and fiscal year. Because the two datasets are different, I ensure that the data merges properly as the listings in the two datasets are sometimes different. After performing these steps, the two databases are able to merge uniquely without any error and my dataset complete with 2365 of observations.

3.3 Empirical models

To test the relationship between audit fees and non-audit fees, this study replicates and modify (Hay, Knechel, & LI, 2006) model.

$$Ln\ (AF) = \beta_0 + \beta_1\ Ln\ (NAF) + \beta_2 SOX + \beta_3\ Big\ 4 + \beta_4\ Ln\ (Assets) + \beta_5 Currentassets + \beta_6 Currentratio + \beta_7 Receivableratio + \beta_8 Inventoryratio + \beta_9 Leverage + \beta_{10} Profitability + \beta_{11}\ Opinion + \varepsilon \quad (1)$$

The measurements of the variables are as follows: Dependent variable measurement: *Ln (AF)* = Natural logarithm of the fees paid to the external audit firm for the fiscal year's financial statement audit. Experimental variable: *Ln (NAF)* = Natural logarithm of the fees paid to the external audit firm for the fiscal years other than financial statement audit. Independent Control variable measurement: SOX = Indicator variable that equals 1 if the fiscal year ends after July 30, 2002, 0 otherwise; Big4 = Indicator variable that equals 1 when the external auditors is a Big4 auditing firm (Auditor information will be obtained from Audit Analystics); Assets = Natural logarithm of total assets; Currentassets = Ratio of current assets to total assets; Currentratio = Ratio of current assets to current liabilities; Receivableratio = Ratio of total receivables to total assets; Inventoryratio = Ratio of inventory to total assets; Leverage = Ratio of total debt to total assets; Profitability = Ratio of income before extraordinary items to total assets; Opinion = Indicator variable that equals 1 if firms having received an unqualified audit opinion with additional explanations, 0 otherwise; All the variables are measured as of the end of the fiscal year.

3.4 Two stage least square

This paper extends this test, consistent with the work (S, Sankaraguruswamy, & Raghunandan, 2003) using a two-stage least square approach. In that approach the model is:

$$Ln\ (N\hat{A}F) = \beta_0 + \beta_1 SOX + \beta_2 BIG\ 4 + \beta_3\ Ln\ (Assets) + \beta_4 Currentassets + \beta_5 Currentratio + \beta_6 Receivableratio + \beta_7 Inventoryratio + \beta_8 Leverage + \beta_9 Profitability + \beta_{10} Opinion + \varepsilon \quad (2)$$

$$Ln\ (AF) = \beta_0 + \beta_1\ Ln\ (N\hat{A}F) + \beta_2 SOX + \beta_3\ Ln\ (Assets) + \beta_4 Currentassets + \beta_5 Currentratio + \beta_6 Receivableratio + \beta_7 Inventoryratio + \beta_8 Leverage + \beta_9 Profitability + \beta_{10} Opinion + \varepsilon \quad (3)$$

Equation (2) is used to provide an estimated value of non-audit fees, Ln (N$\hat{A}$F), which is not influenced by audit fees, and this is substituted for Ln (NAF) in equation (3). In order to prevent exact multicollinearity in equation (3), it is necessary that at least one variable in equation (2) will not in equation (3). I choose to delete *Big 4 (*Indicator variable that equals 1 when the external auditors is a Big4 auditing firm) from equation (2) as it appears to be more closely related to non-audit fees than audit fees.

4 Results and discussion

4.1 Descriptive statistics

Table 1 reports the descriptive statistics. For the full sample, the average client firm pays $ 48,44,797 in Total Fees to the audit firm. The mean Audit Fees is $ 33,00,576, and Non-Audit Fees is $ 15,44,221. The average firm in the sample owns $6.9 billion in assets;

and holds Currentassets of 0.47, Currentratio of 2.19, Receivableratio of 0.16, Inventoryratio of 0.15 and Leverage of 0.23. The average profitability is -.015. The U.S based firms employs Big 4 Auditor (average .78) and received an opinion is unqualified, but explanatory language has been added to the standard report (average .42).

Table 1. Descriptive statistics

Variable	Obs.	Full Sample Mean	Big 4	Non-Big 4
Audit fees	2365	3300576	4146974	4146974
Non-Audit fees	2365	1544221	1905793	1905793
Total Fees	2365	4844797	6052768	6052768
Assets	2365	6906.178	8750.463	8750.463
Current Asset	2365	.4722964	.4497904	.4497904
Current Ratio	2365	2.197966	2.120969	2.120969
Receivable Ratio	2365	.1658091	.1604877	.1604877
Inventory Ratio	2365	.1563746	.1435158	.1435158
Leverage	2365	.2305942	.2218231	.2218231
Profitability	2365	-.0151406	.035162	.035162
Big 4	2365	.7750529	-	-
SOX	2365	.8414376	.8597927	.8597927
Opinion	2365	.4291755	.9978178	.9978178

For firms using large auditors, the average client firm pays $60,52,768 in total fees for Big 4 audit firms. The mean audit fees is $ 41,46, 974, and Non-Audit Fees is $19,05,793. The average firm audited by Big 4 in the sample owns $8.7 billion in assets. The average profitability is positive (.03) for the firms audited by Big 4 and almost all the firms audited by Big 4 received unqualified opinion with explanatory language (average 99.81).

For the firms using small auditors, the average client firm pays $6,82,747 in total fees. The mean Audit Fees is $3,84,317 and Non-Audit Fees is $2,98,428. The average firms in the sample own $ 5.5 million in assets. The average profitability is -.018. The sample firms received an opinion is unqualified, but explanatory language has been added to the standard report (average .99).

4.2 Univariate tests

4.2.1 Trends in fees paid to auditors from 2000 through 2013

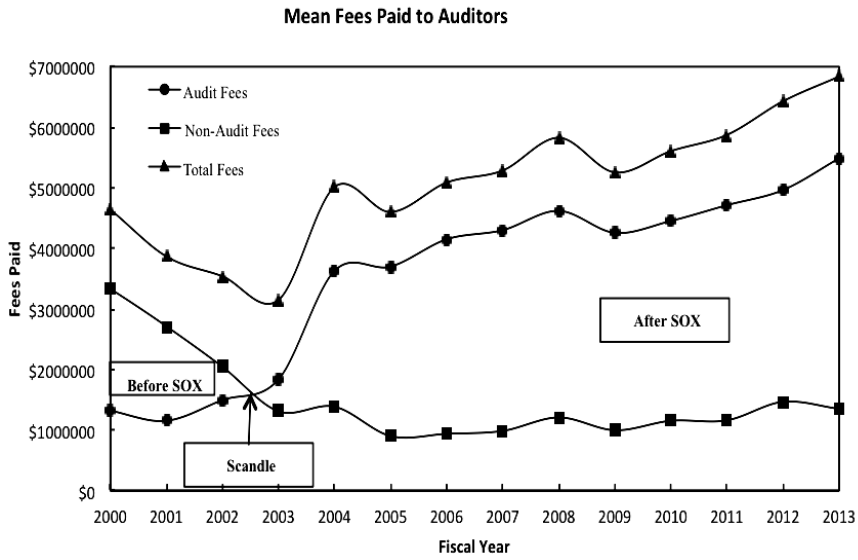
Figure 1 presents the trends in average fees for the years 2000 through 2013. The graph illustrates that audit fees increased dramatically over the sample period. While the increase in audit fees between 2000 and 2001 is small, there is a substantial raise in audit fees in each of the subsequent years. There are few possible reasons for the dramatically increase in audit fees. First: as there is no provision of giving both audit and non-audit services to the same client, the audit firm charges its usual audit fees which was usually lesser before the introduction of Section 201 of SOX in order to attract non-audit services. Second: in order to keep the accounting firms more profitable, the audit firms are charging higher fees for their audit services after the prohibition of certain non-audit services by Section 201 of the Sarbanes-Oxley Act of 2002. In addition to that it can be said that audit services are more stable sources of income than non-audit services. So, while audit fees have increased and non-audit fees have decreased because of the Section 201 of SOX.

In contrast, non-audit fees declined monotonically over the sample period. The decline in non-audit fees is steeper for the years after 2001, which is consistent with the regulatory restrictions imposed on the audit firms providing non-audit services. However, Total fees (The sum of audit and non-audit fees) declined from 2000 to 2002 with increase steadily in 2003 and large gains subsequent to the Post-SOX period.

4.2.2 Audit Fees around the Sarbanes-Oxley Act

Table 2 represents the magnitude of the levels and changes in audit fees around the Sarbanes-Oxley Act. For the full sample (Panel A) the average client firm pays $ 48,44,797 in Total Fees to the audit firm. The mean Audit Fees (AF) is $ 33,00,576, and Non-Audit Fees (NAF) is $ 15,44,221. The average audit fees increased from $12,66,771 for the Pre-SOX period to $36,83,830 for the Post-SOX period. The increase in audit fees over the two periods is $ 24,17,059 (190%). In contrast, the average non-audit fees decreased from $30,55,391 for the Pre-SOX period to $12,59,453 for the Post-SOX period. The decline in non-audit fees of $17,95938 (-59%). Total fees increased from $48,44,797 to $43,22,162 over the Pre-and Post-SOX period, which is 11% increase.

Figure 1. Trends in fees paid to auditors from 2000 through 2013



For firms using large auditors (Table 2, Panel B), these increases are even much more dramatic. The result shows that the average audit fees increased from $14,90,818 over the Pre-SOX period to $45,80,117 over the Post-SOX period, an increase of 207%. In contrast, Non-Audit Fees decreased from $39,40,557 to $15,73,982 around SOX, a decline of 60%. Total fees increased from $54,32,375 to $61,54,099 around SOX, which translate to a 13% increase.

Table-2. Audit fees around the Sarbanes-Oxley Act

Panel A: Full Sample	**Overall Mean**	**Pre-SOX 1999-2001**	**Post-SOX 2002-2013**	**Difference**
Audit Fees	$33,00,576	$12,66,771	$36,83,830	$24,17,059
Non-Audit Fees	$15,44,221	$30,55,391	$12,59,453	-$17,95,938
Total fees	$48,44,797	$43,22,162	$49,43,283	$6,21,121
Observations	2365	375	1990	
Panel B: Big 4	**Overall Mean**	**Pre-SOX 1999-2001**	**Post-SOX 2002-2013**	**Difference**
Audit Fees	$41,46,976	$14,90,818	$45,80,117	$30,89,299
Non-Audit Fees	$19,05,793	$39,40,557	$15,73,982	-$23,66,575
Total fees	$60,52,768	$54,32,375	$61,54,099	$7,21,724
Observations	1833	257	1576	
Panel C: Non-Big 4	**Overall Mean**	**Pre-SOX 1999-2001**	**Post-SOX 2002-2013**	**Difference**
Audit Fees	$3,84,318	$7,78,804	$2,71,880	-$5,06,924
Non-Audit Fees	$29,84,28	$11,27,529	$62,115	-$10,65,414
Total fees	$6,82,746	$19,06,334	$3,33,994	-$15,72,340
Observations	532	118	414	

For firms using small auditors, the increase in audit fees are much less pronounced. In Table, Panel C, result shows that average audit fees decreased from $7,78,804 over the Pre-SOX period to $2,71,880 over the Post-SOX period. Thus audit fees decreased by 65% between the two periods. In contrast, non-audit fees also decreased from $11,27,529 to $61,115, which translate to a 94% decline between the two periods. Total fees decreased from $19,06,334 to $3,33,994 (82%) over the two periods.

Overall, the univariate results indicate that Audit Fees increased while Non-Audit Fees decreased

because of the prohibition of certain non-audit service by Section 201 of the Sarbanes-Oxley Act of 2002 for large auditors (Big 4 Audit firms). However, both audit and non-audit fees decreased for small auditors (Non-Big 4 audit firms) because of the prohibition of certain non-audit services by Section 201 of the SOX.

4.2.3 Correlation between variables

Table 3 shows the relationship between audit fees and non-audit fees. The table also shows the relationship between audit fees and firm characteristics. The result shows that there is a positive and strong correlation between audit fees and non-audit fees. That is while audit fees increases, non-audit fees also increases. The result also shows that audit fees are positively and significantly correlated with firm's assets, profitability, Big 4, SOX and audit opinion. However, audit fees are negative but significantly correlated with firm's current assets, current ratio, receivable ratio, inventory ratio and leverage. More important, SOX has positive relation with audit fees and negative relationship with non-audit fees. This result indicates that while audit fees increase, non-audit fees decrease after prohibition of non-audit services by Section 201 of Sarbanes-Oxley Act of 2002.

Table 3. Correlation between variables

	Ln (Audit Fees)	Ln (Non-Audit Fees)	Ln (Asset)	Current Assets	Current Ratio	Receivable Ratio	Inventory Ratio
Ln (Audit Fees)	1.0000						
Ln (Non-Audit Fees)	.07561*	1.0000					
Ln (Asset	0.8982*	0.8016*	1.0000				
Current Assets	-0.2775*	-0.2840*	-0.4010*	1.0000			
Current Ratio	-0.2177*	-0.1819*	-0.2027*	0.4204*	1.0000		
Receivable Ratio	-.0998*	-0.0961*	-0.2062*	0.5424*	-0.0397	1.0000	
Inventory Ratio	-.31144*	-0.3169*	-0.3681*	0.5879*	0.1297*	0.17771*	1.0000
Leverage	-0.0461*	-0.0490*	-0.0983*	-0.0816*	-0.1011*	-0.0230	-0.0172
Profitability	0.1294*	0.1168*	0.2106*	-0.0421*	0.0615*	-0.0321	-0.0180
Big 4	0.5638*	0.4847*	0.5779*	-0.2106*	-0.0958*	-0.0954*	-0.1960*
SOX	0.2121*	-0.0765*	0.0811*	-0.0147	-0.0042	-0.0532*	-0.0547*
Opinion	.2075*	0.1558*	0.1651*	-0.1178*	-0.1235*	-0.0579*	-0.1114*
	Leverage	**Profitability**	**Big 4**	**SOX**	**Opinion**		
Leverage	1.0000						
Profitability	-0.3138*	1.0000					
Big 4	-0.0586*	0.1229*	1.0000				
SOX	0.0339	-0.0114	0.0933*	1.0000			
Opinion	0.0352	-0.0489*	0.1930*	0.2057*	1.0000		

AF= Audit Fees are fees paid to external audit firm for the fiscal year's financial statement audit. NAF=Non-audit fees are fees paid to the external audit firm for services not related to the audit, Total Fees are the amount of fees paid to the external audit firm for the fiscal year. Audit, Non-audit and Total fees are obtained from Audit Analystics.. Assets are total assets (in millions). CurrAsset is the ratio of current assets to total assets. CurrRatio is the ratio of current assets to current liabilities. RecevRatio is the ratio of total receivables to total assets. InvtRatio is the ratio of inventory to total assets. Leverage is the ratio of total debt to total assets Profitability is income before extra ordinary items divided by total assets. Big 4 is an indicator variables that equals 1 when the external auditor is one of the Big 4 auditing firms, 0 otherwise. SOX is an indicator variable that equals 1 if the fiscal year ends after July 30, 2002, 0 otherwise. Opinion is an indicator variable that equals 1 if the auditing firm's opinion is unqualified, but explanatory language has been added to the standard report. 0 otherwise. All variables are measured as the fiscal year-end. The full sample consists of 2365 observations over the year 1999 to 2013.

*Indicate (.05) significance level

4.3 Multivariate tests

4.3.1 Model to test relationship between audit and non-audit fees

As there is no provision of giving both audit and non-audit services to the same client, the audit firms are expected to charge its usual audit fees, which was usually lesser before the introduction of Section 201 of SOX. As a result, the auditors are expected to audit with more independence because they do not have to think of getting the contract of non-audit services.

This would imply a negative relationship between audit fees and non-audit fees. The analysis of prior research leads to our hypothesis: *There is a negative relationship between audit fees and non-audit fees after introduction of the Section 201 of SOX*. To test the hypothesis, this study replicates and modify Hay et al. (2006) model.

Table 4. Relationship between audit and non-audit fees

OLS Regression					No. of Obs. = 2365 F(11, 2353 = 1510.69 Prob > F = 0.0000 R-squared = 0.8531 Root MSE = .28566		
Ln (Audit Fees)	Expected Sign	Coef.	Robust Std. Err.	t	P>|t|	[95% conf.	Interval]
Ln (Non-audit fees)	-	.1058521	.0122868	8.62	0.000***	.0817581	.1299462
SOX	+	.302264	.0146296	20.66	0.000***	.2735758	.3309522
Big 4	+	.0862504	.018096	4.77	0.000***	.0507646	.1217362
LnAsset	+	.5502985	.0112573	48.88	0.000***	.5282233	.5723738
Current Asset	+	.4839131	.0651594	7.43	0.000***	.3561373	.611689
Current Ratio	-	-.0350095	.0060795	-5.75	0.000***	-.0469313	-.0230877
Receivable Ratio	+	.1602648	.0866187	1.85	0.064**	-.0095921	.3301218
Inventory Ratio	-	-.2035757	.0723663	-2.81	0.005***	-.3454841	-.0616673
Leverage	+	.0717525	.0228587	3.14	0.002***	.0269273	.1165777
Profitability	-	-.0368821	.013336	-2.77	0.006***	-.0630337	-.0107305
Opinion	+	.0271571	.0127418	2.13	0.033**	.0021708	.0521433
_Cons	+/-	3.316456	.0560221	59.20	0.000***	3.206598	3.426314

AF= Audit Fees are fees paid to external audit firm for the fiscal year's financial statement audit. NAF=Non-audit fees are fees paid to the external audit firm for services not related to the audit. Audit, and Non-audit fees are obtained from Audit Analystics. Big 4 is an indicator variables that equals 1 when the external auditor is one of the Big 4 auditing firms, 0 otherwise. SOX is an indicator variable that equals 1 if the fiscal year ends after July 30, 2002, 0 otherwise. Assets are total assets (in millions). CurrAsset is the ratio of current assets to total assets. CurrRatio is the ratio of current assets to current liabilities. RecevRatio is the ratio of total receivables to total assets. InvtRatio is the ratio of inventory to total assets. Leverage is the ratio of total debt to total assets Profitability is income before extra ordinary items divided by total assets.. Opinion is an indicator variable that equals 1 if the auditing firm's opinion is unqualified, but explanatory language has been added to the standard report. 0 otherwise. All variables are measured as the fiscal year-end. The full sample consists of 2365 observations over the year 1999 to 2013.

***Significant at 1%

**Significant at 5%

In Table 8, Panel A, OLS regression results are reported. In the regression shown in Panel A, the prediction equation:

$$LnAF = + 3.316456\ (Cons) + .1058521\ (LnNAF) + .302264\ (SOX) + .0862504\ (Big\ 4) + .5502985\ (LnAssets) + .4839131\ (CurrAsset) - .0350095\ (CurrRatio) + .1602648\ (ReceivRatio) - .2035757\ (InvtRatio) + .0717525\ (Leverage) - .0368821\ (Profitability) + .0271571\ (Opinion) \quad (4)$$

In Table 4, results are consistent with those of prior studies. The parameter estimates for Assets, CurrAsset, ReceivRatio, Leverage and Opinion are positive and significant at 5% level, while the estimates for CurrRatio, InvtRatio and Profitability are negative and significant. Similar with prior studies, the R^2 is high (above 85%). More importantly, the parameter estimate of LnNAF (β_1) is .1058521 at 5% significant level, telling that AF (Audit Fees) is predicted to increase .1058521 when NAF (Non-Audit Fees) variable goes up by one. That means, Non-Audit fees have a significant positive relationship with audit fees, do not supporting hypothesis.

This paper extends this test, consistent with the work (S, Sankaraguruswamy, & Raghunandan, 2003) using a two-stage least square approach. Table 5,

Panel B reports results of two-stage least squares regression. In order to have sufficient instrumental variables to estimate Ln (NAF), it was necessary to remove one explanatory variable from the model of audit fees, the most appropriate choice being Big4, which appears to be significantly related to non-audit fees but not audit fees. The results are shown in the Table 5 Panel B. The result shows that there is a positive and significant relationship between Ln (AF) and Ln (NAF) when two-stage least squares is used, suggesting that the auditor are more independent now as joint provision of determining audit fees and non-audit fees is no longer possible after separation of audit and non-audit services by Section 201 of the Sarbanes-Oxley Act.

Table 5. Two-stage Least Square regression

Linear Regression					No. of Obs.	= 2365	
					F(11, 2353)	= 2472.68	
					Prob > F	= 0 .0000	
					R-squared	= 0.9251	
					Root MSE	= .20393	
Ln (Audit Fees)	Expected Sign	Coef.	Robust Std. Err.	t	P>|t|	[95% conf.	Interval]
Ln(NÂF)	-	1.167309	.0274451	42.53	0.000***	1.11349	1.221128
SOX	+	.1189175	0.113772	10.45	0.000***	.0966071	.1412278
LnAsset	+	.3249579	.0091494	35.52	0.000***	.3070162	.3428996
Current Asset	+	.1875043	.0476259	3.94	0.000***	.0941113	.2808973
Current Ratio	-	-.0039806	.0049571	-0.80	0.422	-.0137012	.0057401
Receivable Ratio	+	.1857823	.0618763	3.00	0.003***	.0644445	.30712
Inventory Ratio	-	-.1311439	.0537599	-2.44	0.015**	-.2365656	-.0257223
Leverage	+	.0456203	.0187785	2.43	0.015**	.0087962	.0824444
Profitability	-	-.0022697	.0034636	-0.66	.0512**	-.0090617	.0045222
Opinion	+	.0345577	.0086635	3.99	0.000***	.0175688	.0515467
_Cons	+/-	-2.199092	.1410724	-15.59	0.000***	-2.475731	-1.922453

***Significant at 1%
**Significant at 5%

5 Conclusion

The main research question of this paper is concerned with the changes that the prohibition of the non-audit services by section 201 of SOX brought in the relationship between the audit fees and non-audit fees. Both univariate and multivatiate regression methodologies has been used to find out the answer of the research question. Using OLS, this study find significant positive relationship between audit fees and non-audit fees, do not supporting hypothesis. However, by applying two-stage least squares, this paper also finds positive relationship between audit and non-audit fees. There are few reasons behind the positive relationship. First, according to the Section 201 of the Act, an auditing firm cannot provide its client with both audit services and non-audit services. In fact, auditing firms are prohibited from offering a few non-audit services to their clients. So, it can be certainly said that joint provision of determining audit fees and non-audit fees is no longer possible after SOX. As a result, the companies prefer to keep the present auditing firm for the audit and appoint another firm for the non-related service. In this situation, the companies need to pay an increased rate of both audit and non-audit fees that leads to a positive relationship between audit and non-audit fees after SOX. Second, problem firms need to receive assistance from their auditors in correcting control weakness discovered during the audit. However, According to the Section 201 of SOX, auditing firms are prohibited from offering a few non-audit services to their clients to correct the control weakness. As a result the problem firms keep the present auditing firm for the audit and appoint another firm for the non-related service. In this situation, the companies need to pay an increased rate of both audit and non-audit fees that lead to a positive relationship between audit and non-audit fees after SOX.

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Appendix A. Explanation and measurement of variables

Audit fees: Audit fees is measured by the dollar value of audit fees paid by the company to the external audit firm for the fiscal year's financial statement audit (from Audit Analystics); transformed to logarithm data to correct for non-normality in the distribution of the data.

SOX: This paper mainly focuses on prohibition of non-audit services by Section 201 of SOX and its impact on relationship between audit fees and non-audit fees across two main time periods- The Pre-SOX period and the Post-SOX period. The Pre-SOX period extend from 1999 through 2001, and the Post-SOX period extend from 2002 through the end of 2013.

BIG 4: Previous studies in the U.S (Francis & and Simon, 1987) show positive relationship between the Big 5 firms and audit fees. This is due to the effect of the Big Five's reputation.

Auditee Size: Measured by total assets; transformed to logarithmic data. This paper control client firm size (Assets) because firm size is positively associated with audit fees and non-audit fees (Simunic, 1984)

Audit Complexity: Two variables are used as proxies for audit complexity. (1) Receivable ratio (2) Inventory ratio (Ghosh & Lustgarten, 2006)

Audit Risk: This paper also use five variables as proxies for audit risk: (1) Current assets (2) Current ratio (3) Leverage (4) Profitability and (5) Opinion which are also positively correlated with audit fees (Simunic, 1984); (Craswell, Francis, & Taylor, 1995); (Seetharaman, Gul, & Lynn, 2002).

Appendix B. Section 201 of SOX

This research is based on the Section 201 of the Sarbanes-Oxley Act. A detailed explanation regarding Section 201 of SOX is provided in this part of the research. Section 201 of the Sarbanes-Oxley Act deals with the separation of audit and non-audit services. According to the SOX, the term 'non-audit services' can be defined as "*any professional services provided to an issuer by a registered public accounting firm, other than those provided to an issuer in connection with an audit or a review of the financial statements on an issuer*"(Sarbanes-Oxley, 2002) Examples of such services are actuarial services, bookkeeping and legal services.

According to the Section 201 of SOX it is illegal for an auditing firm to provide both audit and non-audit services to their clients who are affected by the law simultaneously. The non-audit services prohibited in the Act are listed below. Auditing firms are allowed to offer audit client's non-audit services that are not listed below, but only if the audit committee approves the activity in advance. According to the Sarbanes-Oxley Act, provision of tax services is not considered to impair independence. Therefore, auditing firms are allowed to carry out tax services for their audit clients as long as the services are pre-approved by the audit committee (Sarbanes-Oxley, 2002). In accordance with the regulations of the Sarbanes-Oxley Act, the SEC has issued final rules regarding auditor independence. According to (Soltani B. , 2004), these rules are based on three principles that are considered to be determinants for the independence of the audit profession:

1. An auditor cannot function in the role of management.
2. An auditor cannot audit his or her own work.
3. An auditor cannot serve in an advocacy role for his or her client.

The prohibited non-audit services of the Sarbanes-Oxley Act (Section 201) are listed below. The underlined sentences are direct quotes of the legislation of Section 201.

1. ***Bookkeeping or other services related to the accounting records or financial statements of the audit client***. Under this point traditional bookkeeping and payroll services are prohibited. An auditor should not assist his client in preparing financial statement in any way because it hampers his independence. However, the auditor may advice his client on some issues like how to convert the foreign subsidiaries correctly.

2. ***Financial information system design and implementation***. Under this point come designing and implementing the information system of a client where the data will be a part of the financial statement or where the system will produce information important for preparing the financial statement.

3. ***Appraisal or valuation services, fairness opinions, or contribution-in-kind reports.*** Under this point come valuing assets, liabilities and real estate. However, services for non-financial reporting are not prohibited.

4. ***Actuarial services.*** An auditor is not allowed to provide actuarial services, like calculating the life expectancy of the employees to determine the size of pension funds, to the audit client

5. ***Internal audit outsourcing services.*** The auditor is not allowed to provide most of the internal audit services, but he may recommend how to improve the client's quality of internal audit during the audit process.

6. ***Management functions or human resources.*** An auditor is not allowed to work as an employee, officer or director at a clients company. Nor it is permitted for the auditor to be involved in recruiting management or employees or negotiating for the client.

7. ***Broker or dealer, investment adviser, or investment banking services.*** the auditor is not allowed to advise the client whether to buy or sell client's securities. Additionally, the audit firm is not allowed to take the investment decisions on behalf of the audit client or should not have the authority over the client's investment.

8. ***Legal services and expert services unrelated to the audit.*** The auditor is prohibited from representing the company in legal matters because this would make the auditor an advocate for the company. The auditing firm is also not allowed to provide an audit client with expert advice to support the company in adversarial proceedings.

9. ***Any other service that the Board (PCAOB) determines, by regulation, is impermissible***