PPBRI PAN-PACIFIC JOURNAL OF BUSINESS RESEARCH

Volume 3, No. 1 Spring, 2012

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Auditor Switching Effects on Audit Pricing:

New Evidence Post Andersen and SOX

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ABSTRACT

Purpose – The purpose of this paper is to examine auditor switching effects on audit pricing pre and post the Arthur Andersen scandal and the passage of the Sarbanes-Oxley Act (SOX).

Design/methodology/approach – A sample of 17,820 firm-year observations from 2000 to 2005 were employed to examine both the overall effects of auditor switches and the switches in different directions on audit pricing, along the timeline of the changing audit environment. The audit fee determination model was also employed to estimate and calculate audit fee.

Findings – Empirical results indicate no auditor switching effects on audit fees before the demise of Arthur Andersen and the passage of SOX. Contrary to fee cutting for initial audit engagements, we find positive effects of auditor switches on audit fees after the scandal and SOX, namely, auditors charge higher fees to the initial audit engagements. Those positive effects are mainly attributed to the Big N clients downward switching to the second and third tiers of auditors. The higher fees can be explained by risk (risk premium) and competition (start-up costs) together.

Originality/value – The results suggest a reduced competition of the audit market for the low quality clients after the dramatic changes in 2002. It also contributes a solution to deal with the problem of duplicate audit fees in an auditor switching year.

Keywords Auditor switches, Duplicate audit fees, Lowballing, Start-up costs, Three tiers of Auditors

JEL: M40 M42

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1. Introduction

The demise of Arthur Andersen and the passage of Sarbanes-Oxley Act (SOX) of 2002 have significantly increased the audit prices charged by the remaining Big 4 auditors (Asthana et al. 2004; Chi 2004) and reduced their output of audit services (Schloetzer 2006). The implementation of SOX Section 404 exacerbated the above phenomena, and significantly increased the audit costs of client firms, especially for small clients. From auditors' perspective, the above events warned them to perform more scrupulous audits and carefully screen existing and potential clients to reduce litigation risk. These changes caused more frequent auditor switches after 2001, especially downward switches. Firms change their auditors either because of audit services realignment and audit cost consideration (Bockus and Gigler 1998; Holland et al. 1993; Berton 1995) or due to the auditors' concern over clients' profitibility and risk (Landsman et al. 2006; Schloetzer 2006). In this study, we classify auditors into three tiers, i.e. Big N[1], the second tier (including Grant Thornton and BDO Seidman), and the third tier (other non-Big N) auditors. There are three directions of auditor switches: downward (from an upper tier of auditors to a lower tier of auditors, e.g. from Big N to the second tier auditors), upward (from a lower tier of auditors to an upper tier of auditors), and lateral (within the same tier of auditors) switches. GAO (2006) reports that because of the prohibitive compliance costs of SOX, especially Section 404, many firms selected to switch to non-Big 4 auditors to seek lower audit fees, and some even delisted themselves to save audit costs.

In this study, we explore both the overall effects of auditor switches and the switches in different directions on audit pricing. We provide a solution to the problem of duplicate audit fees in the years of auditor switching, which is not explicitly addressed in prior studies. When a firm changes its auditor in the middle of a year, part of the audit work is performed by the departed auditor, and the rest is conducted by the engaged auditor in the year. Both auditors

will charge audit fees to the client, and usually these two auditors charge different rates, particularly when a firm switches upward or downward to another tier auditor. We use the audit fee determination model to estimate and calculate the audit fees the engaged auditor should have charged if it had conducted all the audit work in the whole year. We do not find auditor switching effects on audit fees before 2001 (including) in the whole sample[2]. While in 2002, the year of Arthur Andersen's collapse and the passage of SOX, consistent with Asthana et al. (2004) and Chi (2004), there was an audit fee discount for initial audit engagements, indicating that auditors lowballed to attract new clients. The new clients mainly comprised of the mandatory rotations of former Arthur Andersen's clients. However, after 2002, we identify positive effects of initial audit engagements on audit fees, namely, the newly engaged auditors charged higher fees for initial audit engagements than continuous audit engagements. To investigate what kinds of auditor switches contribute to the lowball in 2002 and the extra costs afterwards for the initial audit engagements, we partition the sample into Big N and non-Big N subsamples, and classify auditor changes into upward, downward and lateral switches along a three-tier auditor classification. We find that the fee cutting in 2002 is attributed to Big 4 auditors attempting to attract former Arthur Andersen's clients and clients of non-Big 4 auditors. Besides, the second-tier auditors also lowball their services to attract former Arthur Andersen's clients. The positive impact of auditor switches on audit fees are attributed to the auditor switches from Big 4 to non-Big 4 auditors, and both the second and third tiers of auditors charge extra fees to prior Big N clients.

DeAngelo (1981a) argues that in a competitive audit market, because of the start-up costs for auditors and the switching costs for auditees, auditors will lowball to attract new clients and earn firm-specific quasi-rents in the subsequent audit engagements. Contrary to the lowballing argument, non-Big 4 auditors even charge higher fees to the new clients. To check whether the positive impact of auditor switching on audit fees is caused by the higher

risk of the downward switching clients (risk premium) or by the reduced competition at the lower end of the audit market continuum (start-up costs), we build a composite risk factor by using factor analysis. We find that in addition to a risk premium, auditors still charge higher fees to these clients. The higher fees can be explained as start-up costs[3] charged for the initial audit engagements in that because of the reduced competition for the small, downward switching clients, non-Big 4 auditors can immediately compensate the additional efforts for the initial audit engagements.

This study contributes to the extant literature new empirical evidence for the effects of auditor switching on audit fees, in overall and the different directions of auditor switches, along the timeline of the changing audit environment. The results may suggest a reduced competition of the audit market for the low quality clients after the dramatic changes after 2002. Besides, we also contribute a solution to deal with the problem of duplicate audit fees in an auditor switching year.

The remainder of the paper is organized as follows. Section 2 discusses prior research and develops hypotheses examined in this study. Section 3 outlines our solution to the duplicate audit fees in the auditor switching years. Section 4 describes research method and the data used in this study. Section 5 presents the empirical results. Section 6 discusses the robustness tests. The final section summarizes and concludes the study.

2. Prior studies and hypothesis development

When firms change their auditors, there are start-up costs for the auditors and switching costs for the firms. DeAngelo (1981a) argues that because of the start-up costs and the switching costs, auditors and clients form a bilateral monopolistic relation. Audit firms can earn firm-specific quasi-rents from continuous engagements because of the above relationship. She continues to argue that in a competitive audit market, if the net present value of the future

quasi-rents is not negative, firms may lowball to attract new clients and consider the loss in the initial audit engagements as sunk costs. DeAngelo (1981a) defines lowballing as setting the audit prices lower than total current costs on initial audit engagements. However, the total current costs are not available for researchers and extant literature actually examines the price cutting concept defined by Francis (1984). Price cutting is defined as setting audit fees for initial audit engagements lower than the audit fees for continuous audit engagements.

In the extant literature, auditor switching effects on audit fees are quite mixed. Fee cutting has been identified for initial audit engagements (Simon and Francis 1988; Ettredge and Greenberg 1990; Turpen 1990; Robert et al. 1990; Pong and Whittington 1994; Deis and Giroux 1996; Gregory and Collier 1996; and Walker and Casterella 2000) and also for the second and third year engagements (Simon and Francis 1988; Gregory and Collier 1996). However, other studies find no fee cutting for initial audit engagements (Simunic 1980; Palmrose 1986a; Baber et al. 1987; and Butter and Houghton 1995) and even charges for start-up costs (Francis 1984; Willekens and Archmadi 2003). Schatzberg (1990) uses the experimental economics methodology to examine DeAngelo's (1981a) theory that in a competitive audit market auditors will lowball to attract new clients in case of start-up costs and switching costs. His results support DeAngelo's (1981a) argument that when there are no start-up and switching costs, auditors do not cut audit fees for the initial audit engagements. However auditors lowball for the initial engagements and charge client-specific quasi-rents when start-up and switching costs do exist. A competing theory of Dye (1991) argues that the fee discount for the initial audits is not driven by the transaction costs, but by the non-observability of the quasi-rents. The two competing theories can be examined by comparing audit markets in which audit fees are publicly disclosed, and those in which audit fees are not publicly available. Craswell and Francis (1999) use the listed companies on Sydney Stock Exchange to test the competing theories because audit fees are publicly disclosed in Australia.

They find audit fee cutting only for firms switching from non-Big Eight auditors to Big Eight auditors. Their conclusions support the theory of Dye (1991), and they explain the fee-cutting for the upward switching clients as experience goods Big Eight auditors provide to the new clients[4].

The dissolution of Andersen has caused the market to reintegrate. In 2002 there was a big flow of Arthur Andersen clients to other auditors. Some clients followed the office of former Arthur Andersen to the remaining Big 4 auditors. Others that were hurt more by the relation with Arthur Andersen dismissed it earlier to signal their integrity (Chang, Chi and Liu 2003). Firms with greater agency concerns were less likely to follow (Blouin et al. 2006). There were a large number of big and important clients of Arthur Andersen that were attractive to other auditors, especially the remaining Big 4 auditors. Therefore these auditors might lowball to attract former Arthur Andersen's clients (Asthana et al. 2004; Chi 2004). In 2002, the mandatory switches of former Andersen clients comprised of the major stream of auditor rotations, and other kinds of auditor switches were inundated by the switches of Arthur Andersen clients. As such, in our study we also expect to observe lowballing effects in 2002.

Schloetzer (2006) develops a model and argues that Big 4 auditors reduced the number of clients, and hence the prices of audit services rose after the dissolution of Andersen in 2002 and the implementation of SOX Section 404 in 2004. By studying the Belgian private market in the period between 1989 and 1997, Willekens and Achmadi (2003) report a positive correlation between audit fees and auditor switches. They attribute this positive relation to the sparse competition and to audit firms' ability to charge new clients for the additional audit efforts on the initial audit engagements. As discussed earlier, the failure of Andersen may have reduced market

competition, and the passage of SOX dramatically increased the demand for audit services in both financial reporting and internal control reports. The increased demand results in a shortage of audit service supply, and auditors may want to get rid of low quality (high risk) clients (Schloetzer 2006; Landsman et al. 2006). It follows who are forced to move. First of all, auditors will charge a risk premium to clients. In addition, in the less competitive audit market, switching clients, especially those with high risk, do not have many choices for auditor rotation. Hence auditors might have the ability to demand compensation for the additional audit efforts by charging higher fees for the initial audit engagements. Therefore, we expect a positive impact of auditor switching on audit fees after the Andersen failure and the passage of SOX. So we develop our first hypothesis as follows.

H1: While there was no impact of audit switching on audit fees before the demise of Arthur Andersen and the passage of the Sarbanes-Oxley Act, there was a lowballing effect in 2002 and a positive impact afterwards.

When firms change auditors, they consider audit costs and their specific needs. Grant Thornton (2006) reports that among companies which switched auditors between January 1, 2003 and December 31, 2005, roughly 65 percent of them were from Big 4 to non-Big 4 auditors. Similarly, Landsman et al. (2006) and Schloetzer (2006) show that most of the firms changing auditors make downward switches after the dissolution of Andersen and the passage of SOX. These companies may either be forced out by Big 4 auditors due to their high risks (Schloetzer 2006) or could not sustain the higher fees charged by Big 4 auditors (Ettredge et al. 2005; GAO 2006). In general, these firms are of smaller size and characterized by negative income and higher leverage (Ettredge et al. 2005). Compared to downward switches, client firms making lateral or upward switches may have already considered their own characteristics and the audit costs associated with Big N auditors. As

such, these switching clients would be likely to have risk characteristics similar to those of the existing clients of the engaged auditors or lower than those of the existing clients of the departed auditors. Such a self-selection process suggests that client firms making upward or lateral switches should not be riskier than the existing client firms of the engaged auditors. In light of the increased carefulness of auditors, the audit market might have segregated into two segments, i.e. the segment of less risky clients and the segment of highly risky clients. For the less risky segment, the market is still competitive for the high quality clients, so we will expect that firms upward or lateral switching within the segment with similar risk will pay the same level of audit fees as the existing clients. However, for the downward switching, because of the shortage of audit service supply, riskier clients have fewer choices in seeking new auditors. So the market for these downward switching firms might be less competitive, and the auditors might have the ability to charge either a risk premium or a start-up fee or both for the initial audit engagements. The above discussions lead us to the following hypothesis:

H2: After 2002 downward switching firms pay higher audit fees compared to the existing clients, but upward and laterally switching firms do not.

As discussed above, with the demise of Arthur Andersen and passage of SOX, accounting firms are more conservative in keeping and choosing clients. Firms with smaller size, more liabilities, or receiving going concern opinion are more likely to switch from Big 4 auditors to non-Big 4 auditors (Ettredge et al. 2005). Landsman et al. (2006) demonstrate that although similar risk factors can explain both lateral switches among Big 4 auditors and downward switches from Big 4 auditors to non-Big 4 auditors, small clients of Big 4 auditors are more likely to switch to non-Big 4 auditors. Schloetzer (2006) shows that audit risk increases the probability of downward switches. Based on the above studies and the

increasing discrimination of auditors in selecting clients, it seems reasonable to postulate that the expected higher fees paid by the downward switching firms in the second hypothesis are risk premiums. However, as we argued above, because of less competition among the auditors who take the downward switching firms, they might have the ability to get immediate compensation for the additional audit efforts in the initial audit engagements. So we expect that in addition to a risk premium, auditors also charge start-up costs to the downward switching clients. Thus the third hypothesis is expressed as follows.

H3: In addition to a risk premium, non-Big 4 auditors also charge start-up costs to the downward switching clients.

3. Solution to duplicate audit fees in auditor switching years

When a firm changes its auditor in the middle of a year, part of the audit work is performed by the departed auditor, and the rest is conducted by the engaged auditor. Often, these two auditors charge different rates, particularly when a firm switches its auditor upward or downward to an auditor in different tiers. The problem of audit fee duplication may be depicted as follows.

The problem is intrinsic when we conduct an auditor switching analysis because neither FEE_A nor FEE_B represents the true audit fees (see figure 1), and either one only reflects a proportion of the audit work. If we ignore one of them, the true audit fees for the year of auditor switching will be biased downward, which may result in a misleading conclusion that the engaged auditor lowballs its audit services. Also, we cannot simply add FEE_A and FEE_B to derive total audit fees that the engaged auditor would have charged for the whole year audit services; it may either overestimate or underestimate the audit fees the engaged auditor would have charged. For instance, if we assume that D is a Big N auditor and E is a

non-Big N auditor, and if Big N auditors charge an audit fee premium over non-Big N auditors, adding the two audit fees together may overestimate the audit fees charged by auditor E, leading us to erroneously conclude that the engaged non-Big N auditor charges start-costs for the initial audit engagement. Conversely, if the firm switches from a non-Big N auditor to a Big-N auditor, combining these two fees may underestimate the fees charged by the Big N auditor, leading to the wrong conclusion that Big N auditors lowball to attract non-Big N clients. Prior studies either ignore or do not explicitly mention how they deal with the duplicate audit fee problem.

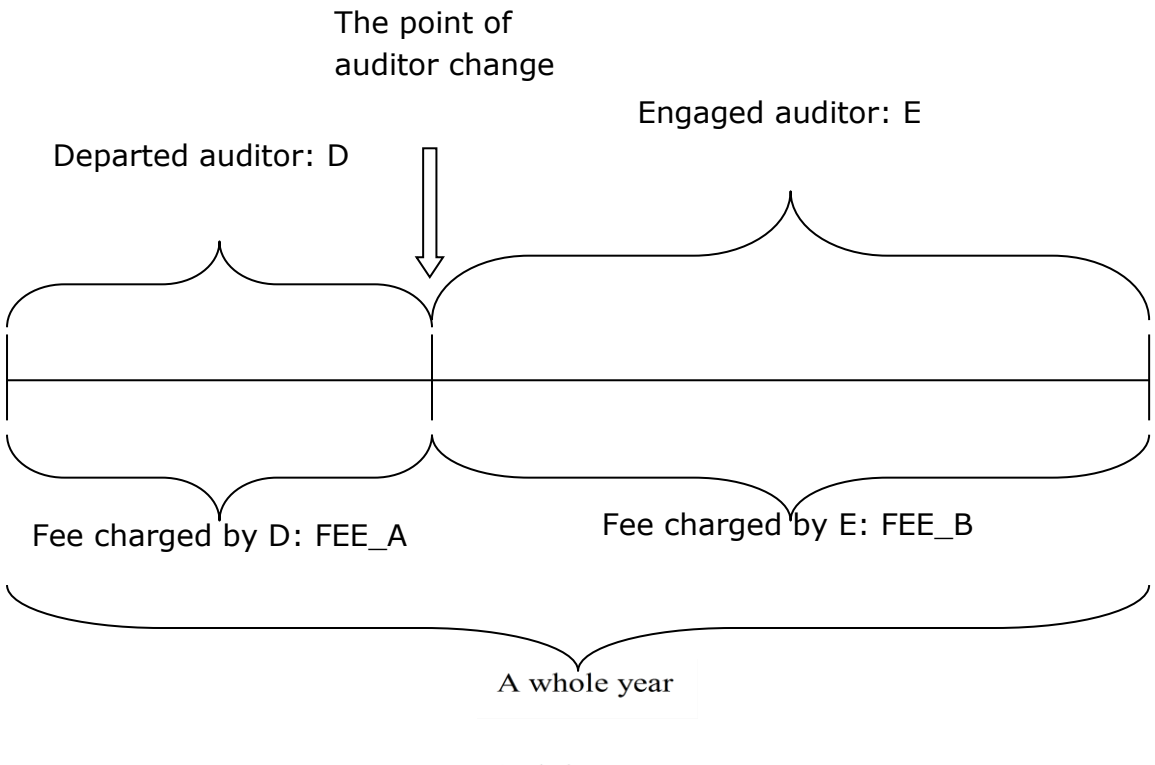

Figure 1

As prior studies, to see auditor switching effects on audit fees, we also compare the audit fees charged by the engaged auditors with those of the existing clients. Therefore, the key issue is how to estimate the audit fees that would have been charged by the engaged auditors had they done the entire audit work in the auditor switching year. Audit task is not evenly performed throughout the 12 months in a year. So we cannot use the number of months during which the engaged auditor provides audit services as a proxy for the proportion of the audit work conducted by auditor E. In this study, we use a method to estimate audit fees charged by the engaged auditor in the year in which a firm makes an auditor switch. Specifically, we estimate the audit fees charged by the engaged auditor based on an inferred proportion of the audit work performed by the engaged auditor. To estimate the inferred proportion, we first calculate the ratio of the actual audit fees charged by auditor D to the fees auditor D would have charged if it had performed the entire year audit work. Then we get the proportion of audit work done by the engaged auditor as one minus the ratio of the audit work done by the departed auditor. The latter fees are estimated using an audit fee determination model built by the same type of non-switching clients (Big N or non-Big N) as the departed auditor. We make an assumption that the same types of auditors (Big N or non-Big N) have the same pricing standard in the same year. So we have the audit fee determination model as follows.

$$Logaudfees = X\beta + \varepsilon$$

In this model X is the same set of variables as in our OLS regression. We use the model to predict the audit fees (FEE_C) that auditor D would have charged if it had implemented the audit work for the entire year. Therefore, we infer that auditor D did a FEE_A/ FEE_C portion of the total audit work for that year. This allows us to infer that the engaged auditor E does the specific remaining proportion (1- FEE_A/ FEE_C) of the work and should have charged (FEE_B/(1- FEE_A/ FEE_C) for the whole year accordingly. Therefore, we use

FEE_B/(1- FEE_A/ FEE_C) as fees charged by auditor E in all the analyses in the empirical part.

4. Sample selection and research design

4.1 Sample Selection

To investigate the effects of auditor switches on audit pricing, we obtain audit fees and auditor information data from Audit Analytics, firms' financial information from Compustat, and daily stock returns (for the risk factor) from CRSP. A total of 68,790 observations are retrieved from Audit Analytics during the sample period from 2000 through 2005. When merging the data from Audit Analytics with the data from Compustat and CRSP, we delete 27,684 observations without matching firm/years in these two databases (see Table 1). Following prior studies[5], we exclude financial firms (SIC code between 6,021 and 6,799), and this results in the loss of 7,627 observations[6]. Furthermore, 743 subsidiaries are deleted from our sample because usually they are not independent decision makers in auditor selection. Due to missing values from Compustat, we lose 7,726 observations. We further delete 1,385 duplicate auditors in auditor switching years and only keep the engaged auditors. After excluding 6,805 observations with missing values from CRSP, our final sample consists of 17,820 observations in the six years.

Table 1

Sample Selection Procedure

Total observations from Audit Analytics	68,790
Less:	
Observations without matching firms in Compustat and CRSP	(27,684)
Financial firms	(7,627)

Subsidiaries	(743)
Observations with missing values in financial information in Compustat	(7,726)
Duplicated observations in audit fees	(1,385)
Observations with missing values in CRSP	(6,805)
Final Sample	17,820

Three databases are used in this study: Audit Analytics, Compustat and CRSP. Following prior studies and based on the purpose of this study, the above sample selection procedure is employed. From Audit Analytics, 68, 790 observations are retrieved from 2000 to 2005. After merging with Compustat and CRSP, 27, 684 OBS without matching firm/years are lost from the sample. Following prior studies, 7,627 financial firm/years are excluded. 743 subsidiaries are further deleted because they are usually not independent decision makers of auditor selection. Observations with missing values in Compustat (7,726) and CRSP (6,805) are excluded because they can not be used in the regressions. Besides, because there are duplicate observations in audit fees, especially for the years of auditor switches, after special manipulation, 1,385 duplicate observations are excluded from the sample. After the above selection procedure, there are 17,820 observations left in the final sample in the six-year research period.

4.2 Model Specifications

In this study, we first examine the overall effects of auditor switches on audit fees, so the variable of interest is the auditor switching dummy variable (SWITCH) for all kinds of auditor switches, which is assumed to have homogenous effects on audit fees. We include the auditor switching dummy variable in an OLS audit fee determination model. The specification of the model we use is as follows,

$$LOGFEE = \beta_0 + \beta_1 LOGASSET + \beta_2 SQ\_LOGASSET + \beta_3 ASSET\_TURN + \beta_4 ROA + \beta_5 DA$$
$$+ \beta_6 QUICK + \beta_7 INVENTORY + \beta_8 RECEIVABLE + \beta_9 BUSY\_SEASON$$
$$+ \beta_{10} SEGMENTS + \beta_{11} LOSS + \beta_{12} FOREIGN\_SALES + \beta_{13} NET\_LIABILITY$$
$$+ \beta_{14} OPINION + \beta_{15} BIG\_N + \beta_{16} SWITCH + v$$

Where:

LOGFEE=Natural logarithm of audit fees

LOGASSET=Natural logarithm of total assets

SQ_LOGASSET=The square of LOGASSET

ASSET_TURN=Asset turnover; sales divided by total assets

ROA=Return on assets

DA=Long-term debts to total assets ratio

QUICK=Quick ratio

INVENTORY=Inventory to total assets ratio

RECEIVABLE=Receivables to total assets ratio

BUSY_SEASON=1 if a company's fiscal year end falls between December 1 and March 31 which is the normal busy season for auditors, and 0

SEGMENTS=The number of industry segments in which a firm operates

LOSS=1 if net income before extraordinary items is less than zero, and 0 otherwise

FOREIGN_SALES=Foreign sales as a percentage of total sales

NET_LIABILITY=1 if a company's total liabilities are bigger than its total assets, and 0 otherwise

OPINION=1 if a company receives a qualified audit opinion, and 0 otherwise otherwise

BIGN=1 if a firm's auditor is one of Big N auditors, and 0 otherwise

SWITCH=1 if a firm changes its auditor in a year, and 0 otherwise

Our model is originated from Simunic (1980), which established the foundation of audit fee determination models. Simunic (1980) assumes a nonlinear relationship between the audit fee and auditee size and uses single OLS equation. Variation of the audit fee pricing models include Chan et al. (1993) and Pong and Whittington (1994). Chan et al. (1993) employs the Herfindahl index as the proxy for the complexity of an auditee, and Pong and Whittington

(1994) include both total asset and turnover measure as the proxy for auditee size. In addition, Hay, Knechel, and Wong (2006) have a summary of 186 independent variables that have been used in audit fee studies over 27 years in more than 20 countries.

An audit pricing model usually includes three categories of explanatory variables: firm size, complexity and risk (Chan et al. 1993). In our audit pricing model, we include firm size (LOGASSET and SQ_LOGASSET), complexity (INVENTORY, RECEIVABLE, SEGMENTS, and FOREIGN_SALES), risk (ROA, QUICK, DA, LOSS and NET_LIABILITY), auditor size, and other control variables (ASSET_TURN, BUSY_SEASON, OPINION, etc.)[7]. The definitions of all variables are listed in the Appendix.

In the above model, we conclude that there is lowballing, start-up costs or no effects of auditor switches on audit fees corresponding to a negatively significant, positively significant, or not significant coefficient of SWITCH. The SWITCH dummy variable includes all kinds of auditor switches, namely, lateral switches among Big N auditors or non-Big N auditors, upward switches to an upper tier of auditors and downward switches to a lower tier of auditors. So the interpretation should be that, on average, firms that switch auditors pay a lower, higher or unchanged level of audit fees in the initial audit engagements compared to firms which stay with their incumbent auditors. Therefore, the benchmark is mixed and we may compare lateral switches among Big N auditors with the pricing rate of non-Big N auditors or vice versa. To see the effects on audit fees of different kinds of auditor switches, we partition the whole sample into Big N and non-Big N subsamples to run regressions, so the benchmark for switches to Big N (non-Big N) auditors is Big N (non-Big N) clients that do not change their auditors. Thus we avoid comparing auditor switching effects across different levels of audit pricing rates between different tiers of auditors. In the separate regressions for Big N and non-Big N subsamples, the dummy variable SWITCH is partitioned

into different auditor switching dummy variables for auditor switches among different tiers of auditors. The definitions of these switching dummy variables are also listed in the appendix.

4.3 Factor analysis

Prior studies include risk factors in their audit pricing models, such as clients' debt/assets ratio, profitability, losses or audit risk. However, each proxy of risk only represents one dimension of audit risk, and it cannot show the whole picture of it. To see how risk influences audit pricing and auditor switching effects on audit fees, we follow Asthana et al. (2004) to utilize factor analysis to extract a comprehensive factor loading for risk.

Factor analysis is used to discover a simple pattern of relationships among variables. In particular, the objective of factor analysis is to investigate whether the observed variables can be interpreted largely or entirely by a small number of variables---factors. Here we circumvent the mathematical complexity and only give intuitive description of the rationale of factor analysis. Factor analysis extracts a factor or factors which can partially explain the covariance matrix of variables. The covariance matrix can be partitioned into a common portion explained by a set of factors, and a unique portion which is unexplained by the factors. The common matrix can be further decomposed into component matrices which are explained by corresponding factors. The more factors are used, the more is explained in the covariance matrix. When the number of factors is equal to the number of variables, the common component matrix is exactly equal to the covariance matrix, i.e. it is fully explained by the factors. However, too many factors will blur the economic meanings of these factors. The appropriate number of factors can be decided by successively increasing the number of factors from one until the unexplained residual matrix is not significant in a Chi-square distribution test.

5. Empirical Results

5.1 Descriptive Statistics

Table 2 presents the frequencies of auditor switching in the period from 2000 to 2005. There were remarkably few auditor switches in 2000 and 2001 (189), but quite a number of switches emerged in 2002 (659) and afterwards (713). Interestingly, prior to 2002, most of the auditor changes were among Big 5 auditors (68.8% in 2000 and 59.9% in 2001). By contrast, the share of lateral switches among Big 4 auditors decreased in 2003 (31.6%), 2004 (21.2%) and 2005 (21.4%). Indeed, since 2003 there has been a clear sign of increasing downward auditor switches (48.1% in 2003, 58.3% in 2004 and 60.5% in 2005). This is consistent with GAO (2006)'s document that many smaller public companies moved from Big 4 to non-Big 4 audit firms. Regarding the switches in 2002, the year of Andersen's dissolution, our results show that 80.4 percent of the switches are attributed to former AA clients (75.3% switching to Big 4 vs. 5.1% to non-Big 4).

Our results show that comparing with the second tier auditors, Big N auditors serve clients who have a larger size, a higher ROA and a lower percentage of loss. Similarly, we find that clients of the second-tier auditors are more profitable, larger, and suffer less from loss than those of the third-tier auditors. In addition, our results show that on average Big N clients making lateral switches have a higher ROA and a lower percentage of losses than their counterparts making downward switches. Also, from 2002 to 2005, firms switching upward from non-Big N to Big N auditors have a larger size and a higher ROA than their counterparts with lateral switching.

Table 2

Descriptive Statistics of Auditor Switching

	Year 2000				Year 2001				Year 2002				Year 2003				Year 2004				Year 2005			
Sub-Sample	NO. of OBS	ASSET	ROA	LOSS	NO. Of OBS	ASSET	ROA	LOSS	NO. Of OBS	ASSET	ROA	LOSS	NO. of OBS	ASSET	ROA[a]	LOSS	NO. of OBS	ASSET	ROA	LOSS	NO. of OBS	ASSET	ROA	LOSS
BIGN Group	1890	2026.7	-7.62	0.35	2529	1984.2	-17.30	0.46	2807	2725.4	-11.35	0.42	2696	3099.8	-5.16	0.35	2637	3565.2	-1.86	0.28	2317	3529.5	-2.44	0.28
Switch to BIGN	25				107				552				77				65				57			
From BIGN	22	2080.3	-3.23	0.36	94	1276.2	-12.27	0.52	44	1232.4	-12.86	0.39	65	1680.6	-1.97	0.32	56	3283.9	0.05	0.29	52	1574.8	0.43	0.31
From AA									496	2051.3	-7.01	0.34												
From NON_BIGN	3	31.3	-24.72	0.67	13	110.8	-68.71	0.69	12	237.5	1.19	0.33	12	373.6	5.65	0.08	9	335.7	-1.40	0.33	5	971.7	-9.05	0.40
SECOND	1	33.0	9.60	0.00	4	59.8	-165.52	0.75	4	50.9	-7.07	0.50	3	179.8	12.87	0.00	3	214.5	-4.30	0.33	3	1088.7	-3.81	0.33
THIRD	2	30.5	-41.88	1.00	9	133.4	-25.68	0.67	8	330.8	5.32	0.25	9	438.1	3.25	0.11	6	396.4	0.05	0.33	2	796.3	-16.92	0.50
NON_BIGN Group	230	143.3	-15.14	0.49	344	116.6	-37.31	0.54	468	164.7	-33.05	0.53	511	146.4	-24.86	0.54	668	147.3	-18.95	0.47	722	166.7	-15.69	0.49
SECOND	116	188.6	-18.02	0.50	163	159.8	-32.77	0.55	190	157.2	-29.66	0.53	211	182.8	-18.84	0.55	277	196.7	-16.81	0.47	274	243.4	-9.30	0.45
THIRD	114	97.3	-12.22	0.47	181	77.7	-41.39	0.53	278	169.8	-35.37	0.53	300	120.8	-29.09	0.54	391	112.3	-20.48	0.48	448	119.8	-19.61	0.51
Switch to NON_BIGN	7				50				107				129				199				186			
To SECOND	0				25				47				51				86				66			
From BIGN	0				19	59.4	-103.75	0.53	23	36.2	-25.69	0.52	48	124.6	-15.21	0.58	83	166.9	-7.73	0.42	64	236.6	-3.09	0.39
From AA									20	53.7	-42.16	0.65												

From SECOND	0				3	8.7	-24.17	1.00	0				0				0				1	86.8	5.58	0.00
From THIRD	0				3	48.6	5.46	0.33	4	70.7	-2.09	0.50	3	19.4	-104.9	0.67	3	287.8	-4.92	0.67	1	40.0	6.11	0.00
To THIRD	7				25				60				78				113				120			
From BIGN	3	56.9	-108.17	1.00	18	32.9	-31.20	0.67	22	20.1	-140.03	0.73	51	35.6	-74.34	0.71	71	49.0	-21.87	0.55	83	91.1	-18.16	0.59
From AA									14	33.9	-49.04	0.57												
From SECOND	2	9.1	-105.72	1.00	6	18.7	-46.34	0.67	7	35.3	-4.25	0.29	10	25.2	-38.43	0.70	19	58.6	-36.08	0.68	21	54.5	-49.61	0.67
From THIRD	2	28.4	0.51	0.50	1	12.2	-47.08	1.00	17	25.7	-51.56	0.71	17	56.4	-6.36	0.53	23	48.3	-18.48	0.43	16	41.4	-2.82	0.56

Table 2 (continued)

[a] An outlier of ROA in the non-Big N sample were deleted in 2003

The yearly auditor switching frequency in different directions and the simple descriptive statistics of variables, ASSET, ROA, and LOSS for different sub-samples are presented. The indented items are the sub-items of the item above them. For example, "Switch to BIGN" means firms transferring to Big N auditors. Under this item, "From BIGN", "From AA", and "From NON_BIGN" are the origins of firms switching to Big N auditors. Among them, "From NON_BIGN" also includes firms transferring from the "SECOND" tier auditors and the "THIRD" tier auditors. Other items are defined in the same way.

Variable definitions: ASSET=Total assets at a fiscal year end; ROA=Return on assets; LOSS=1 if net income before extraordinary items is less than zero, and 0 otherwise.

5.2 Regression results

5.2.1 Testing result for H1

We run the OLS audit pricing model on the whole sample (including both Big N and non-Big N clients) by years and report the regression results in Table 3. The model explains at least 75% of the variations of audit fees in different years, which is comparable to prior studies on the U.S. audit market. From the table we can see that there is a convex relation between audit fees and auditee size from 2000 to 2003. However the quadratic term of auditee size is not significant for 2004 and 2005, which may indicate a model structural change and demand more research into it in the future. As predicted, audit fees are positively and significantly related to RECEIVABLE, SEGMENTS, LOSS, FOREIGH_SALES, NET_LIABILITY, OPINION, and BIG_N and negatively and significantly related to QUICK. Although the coefficients of ROA are negatively significant in five out of the six years, their magnitudes are too small to indicate a meaningful determinant of audit fees. BUSY_SEASON is positively significant in three out of the six years, especially in 2004, indicating that the implementation of SOX Section 404 keeps all auditors so busy that they increase prices in the busy season. Other control variables are not consistently significant across years.

Table 3

OLS audit pricing model

The OLS Model:

$$LOGFEE = \beta_0 + \beta_1 LOGASSET + \beta_2 SQ\_LOGASSET + \beta_3 ASSET\_TURN + \beta_4 ROA + \beta_5 DA + \beta_6 QUICK + \beta_7 INVENTORY + \beta_8 RECEIVABLE + \beta_9 BUSY\_SEASON$$

$$+ \beta_{10} SEGMENTS + \beta_{11} LOSS + \beta_{12} FOREIGN\_SALES + \beta_{13} NET\_LIABILITY + \beta_{14} OPINION + \beta_{15} SWITCH + \beta_{16} BIG\_N + v$$

		Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	Exp. Sign	Coeff.	p-value	Coefficient	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
INTERCEPT		11.506	<.0001	12.516	<.0001	12.915	<.0001	12.958	<.0001	3.707	<.0001	1.903	0.0456
LOGASSET	?	-0.418	<.0001	-0.508	<.0001	-0.565	<.0001	-0.552	<.0001	0.379	<.0001	0.604	<.0001
SQ_LOGASSET	?	0.022	<.0001	0.024	<.0001	0.026	<.0001	0.026	<.0001	0.003	0.2646	-0.003	0.2519
ASSET_TURN	+	0.010	0.4642	0.010	0.3379	0.037	0.0261	0.034	0.0680	0.065	0.0008	0.071	0.0001
ROA	-	-0.003	<.0001	-0.001	<.0001	-0.001	<.0001	0.000	0.3032	-0.002	<.0001	-0.003	<.0001
DA	?	-0.129	0.0334	-0.136	0.0088	-0.081	0.1660	-0.016	0.7663	-0.063	0.3557	-0.267	<.0001
QUICK	-	-0.020	<.0001	-0.026	<.0001	-0.025	<.0001	-0.017	<.0001	-0.011	0.0048	-0.012	0.0027
INVENTORY	+	0.260	0.0026	0.120	0.1038	0.024	0.7767	-0.103	0.2911	-0.001	0.9904	-0.265	0.0091
RECEIVABLE	+	1.021	<.0001	1.020	<.0001	1.005	<.0001	1.027	<.0001	0.877	<.0001	0.781	<.0001
BUSY_SEASON	+	-0.011	0.7756	0.073	0.0012	0.070	0.0052	0.029	0.2562	0.335	<.0001	-0.037	0.1911

SEGMENTS	+	0.059	<.0001	0.059	<.0001	0.065	<.0001	0.065	<.0001	0.058	<.0001	0.064	<.0001
LOSS	+	0.088	0.0024	0.173	<.0001	0.229	<.0001	0.283	<.0001	0.236	<.0001	0.193	<.0001
FOREIGN_SALES	+	0.389	<.0001	0.389	<.0001	0.300	<.0001	0.336	<.0001	0.336	<.0001	0.367	<.0001
NET_LIABILITY	+	0.381	<.0001	0.249	<.0001	0.253	<.0001	0.250	0.0002	0.141	0.0705	0.281	<.0001
OPINION	+	0.119	0.0002	0.036	0.1309	0.149	<.0001	0.133	<.0001	0.130	<.0001	0.106	0.0003
SWITCH	?	-0.042	0.6579	-0.019	0.6545	-0.083	0.0012	0.191	<.0001	0.244	<.0001	0.316	<.0001
BIG_N	+	0.112	0.0055	0.194	<.0001	0.284	<.0001	0.298	<.0001	0.516	<.0001	0.467	<.0001
Adj-R2		0.7691		0.7834		0.7755		0.7643		0.7524		0.7748	
No. of OBS		2120		2873		3275		3208		3305		3039	

Variable definitions: LOGFEE=Natural logarithm of audit fees; LOGASSET=Natural logarithm of total assets; BIG_N=1 if a firm selects one of Big N as its auditor, and 0 otherwise; ASSET_TURN=Asset turnover; sales divided by total assets; ROA=Return on assets; DA=Long-term debts to total assets ratio; QUICK=Quick ratio; INVENTORY=Inventory to total assets ratio; RECEIVABLE=Receivables to total assets ratio; SEGMENTS=The number of industry segments in which a firm operates; LOSS=1 if net income before extraordinary items is less than zero, and 0 otherwise; FOREIGN_SALES=Foreign sales as a percentage of total sales; NET_LIABILITY=1 if a company's total liabilities are bigger than its total assets, and 0 otherwise; OPINION=1 if a company receives a qualified audit opinion, and 0 otherwise; BUSY_SEASON=1 if a company's fiscal year ends between December 1st and March 31st, which is the normal busy season for auditors, and 0 otherwise; SWITCH=1 if a firm changes its auditor in a year, and 0 otherwise.

Now turning to the variable of our interest, we can see that the coefficient of the dummy variable SWITCH is insignificant in year 2000 and 2001, indicating that there is no impact of auditor switching on audit fees. Furthermore, the coefficient of SWITCH is negative and significant (-0.083; p=0.001) in 2002, but it is positive and significant in 2003 (0.191; p<0.0001), 2004 (0.244; p<0.0001) and 2005 (0.316; p<0.0001)[8,9]. These results suggest that in 2002, audit firms lowballed fees to attract new clients due to Andersen's collapse, but that they charged higher fees to clients who switched auditors after 2002. Therefore, our first hypothesis is supported.

There is a question we need to address here. Our above conclusions are contradictory to Griffin and Lont (2006) which use the U.S. data from 2000 to 2004. They find that the fee cutting for initial audit engagement exists both pre and post the demise of Arthur Andersen and the implementation of SOX. Contradictory to our findings as well as Asthana et al. (2004) and Chi (2004), fee discount is not identified by Griffin and Lont for the non-voluntary auditor switches of former Arthur Andersen's clients. However, several potential problems may cast a doubt on their findings and alleviate the contradictory results. First, there are high correlations among Griffin and Lont's independent variables, such as the correlations among total assets, market capitalization and revenue, which may cause multicollinearity in their models. Second, they pool observations in all years, but do not include year dummy variables. The audit fees increased a lot after Andersen and SOX (Chi 2004; Asthana et al. 2004). Even if year dummy variables had been included, they may not fully catch the fee differences in different years because auditors' pricing standards may have changed for different audit fee determinants. So pooling all years to catch the auditor switching effects will make the benchmark very messy. Third, their conclusion is based on a discount of only 3 to 5 percent and the significance level derived from a very large sample (15,000 observations). So it may not be economically meaningful enough. Lastly, they do not include SOXb in their model,

and maybe the interaction term between SOXb and DISMISS catches the effect of the SOXb because audit fees has increased in the period of SOXb[10].

5.2.2 Testing results for H2

The above regressions pool both Big N and non-Big N clients together in each year, and the overall audit switching effects are captured by the dummy variable of SWITCH. After the demise of Arthur Andersen and the implementation of SOX, there is difference in audit pricing rates between Big N and non-Big N auditors (Wang 2007). So pooling both kinds of auditor clients to run the regression may cause the comparing benchmark messy. To investigate the initial audit engagement effects on audit fees by comparing with the continuous audit engagement in the same tiers of auditors, we further partition the entire sample into Big N and non-Big N subsamples. We use the same control variables that are included in the audit fee determination model.

Upward and lateral switching. Table 4, Panels A and B summarize the OLS regression results of the effects of auditor switching to Big N and non-Big N auditors on audit fees, and Panel C presents the effects of auditor switching along the three-tier auditor classification. Our results show an insignificant effect of the lateral switches among Big N auditors (FROM_BIGN) on audit fees across all the years (except for 2004; Panel A) and the lateral switches (FROM_NON_BIGN) in the non-Big N group (except for 2005; Panel B). Furthermore, Panel C of Table 4 confirms that the second or third tier auditors do not charge extra fees to clients with lateral switching (SECOND_TO_SECOND or THIRD_TO_THIRD) except for THIRD_TO_THIRD in 2003. A possible explanation may be that these lateral-switching clients share similar firm characteristics with the existing clients of the second and third tiers of auditors. Consistent with Asthana et al. (2004), we observe a negative coefficient of FROM_AA in Panel A of Table 4, indicating that Big 4 auditors lowballed to acquire former AA clients in 2002. Regarding upward switching, we generally find an

insignificant effect from non-Big N to Big N auditors (except for 2002: -0.553, p=0.001; 2005: 0.53, p=0.044; Panel A of Table 4) and from the third tier to the second tier auditors (Table 4, Panel C).

Downward switching. As shown in Panel B of Table 4, the coefficients of FROM_BIGN are insignificant in 2000 (-0.241; p=0.451) and 2001 (-0.075; p=0.408), but they are positive and significant in 2002 (0.269; p=0.008), 2003 (0.488; p<0.0001), 2004 (0.360; p<0.0001) and 2005 (0.422; p<0.0001). This suggests that after 2001 non-Big 4 auditors charge higher fees to firms downward switching from Big 4 auditors. Recall that in the full sample, auditors charge extra fees to the switched clients from 2003 to 2005 (Table 3). However, Panel A of Table 4 only shows significant coefficients of FROM_BIGN in 2004 (0.191; p=0.031) and FROM_NON_BIGN in 2005 (0.530; p=0.044). Therefore, this suggests that the extra fees observed in the whole sample are mainly from client firms downward switching from Big 4. Taken together, these results support our second hypothesis.

Table 4

OLS Regressions of Auditor Switching

Panel A Switching to BIG N auditors (Dependent variable--LOGFEE)

	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
INTERCEPT	12.372	<.0001	14.658	<.0001	13.450	<.0001	12.871	<.0001	2.303	0.056	5.085	<.0001
LOGASSET	-0.493	<.0001	-0.705	<.0001	-0.594	<.0001	-0.517	<.0001	0.565	<.0001	0.349	0.003
SQ_LOGASSET	0.024	<.0001	0.029	<.0001	0.027	<.0001	0.025	<.0001	-0.002	0.482	0.003	0.264
ASSET_TURN	0.006	0.702	0.013	0.234	0.026	0.153	0.046	0.018	0.060	0.006	0.063	0.004
ROA	-0.003	<.0001	-0.001	<.0001	-0.002	<.0001	-0.001	0.018	-0.004	<.0001	-0.003	<.0001
DA	-0.132	0.039	-0.090	0.120	-0.101	0.110	0.062	0.342	-0.060	0.435	-0.160	0.040
QUICK	-0.022	<.0001	-0.025	<.0001	-0.025	<.0001	-0.015	0.000	-0.012	0.014	-0.010	0.025
INVENTORY	0.319	0.001	0.220	0.007	0.114	0.240	-0.211	0.047	0.018	0.882	-0.172	0.157
RECEIVABLE	1.059	<.0001	1.065	<.0001	1.111	<.0001	1.208	<.0001	0.978	<.0001	1.026	<.0001
SEGMENTS	0.058	<.0001	0.061	<.0001	0.066	<.0001	0.070	<.0001	0.068	<.0001	0.073	<.0001

LOSS	0.091	0.003	0.145	<.0001	0.202	<.0001	0.269	<.0001	0.154	<.0001	0.150	<.0001
FOREIGN_SALES	0.394	<.0001	0.407	<.0001	0.317	<.0001	0.363	<.0001	0.339	<.0001	0.369	<.0001
NET_LIABILITY	0.411	<.0001	0.233	<.0001	0.281	<.0001	0.161	0.029	0.165	0.063	0.230	0.003
OPINION	0.143	<.0001	0.027	0.280	0.147	<.0001	0.118	<.0001	0.112	<.0001	0.091	0.004
BUSY_SEASON	-0.020	0.641	0.077	0.001	0.093	0.001	0.034	0.214	0.400	<.0001	-0.085	0.007
FROM_BIGN	-0.047	0.675	-0.030	0.569	0.070	0.422	0.024	0.737	0.191	0.031	0.015	0.851
FROM_NON_BIGN	-0.064	0.833	-0.034	0.809	-0.553	0.001	0.033	0.842	0.116	0.595	0.530	0.044
FROM_AA					-0.112	<.0001						
No. of OBS	1890		2529		2807		2696		2637		2317	
Adj R^2	0.7609		0.7761		0.7661		0.7638		0.7063		0.7321	

(continued on next page)

Table 4 (Continued)

Panel B Switching to non-Big N auditors (Dependent variable--LOGFEE)

	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	Coeff.	p-value	Coeff.	P-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
INTERCEPT	8.593	0.036	7.822	0.011	13.210	<.0001	16.900	<.0001	13.484	<.0001	5.674	0.084
LOGASSET	-0.126	0.781	-0.062	0.857	-0.620	0.033	-1.007	0.004	-0.711	0.050	0.133	0.713
SQ_LOGASSET	0.015	0.227	0.014	0.133	0.029	0.001	0.039	<.0001	0.033	0.001	0.012	0.225
ASSET_TURN	0.049	0.340	0.032	0.351	0.079	0.043	0.017	0.739	0.091	0.032	0.095	0.010
ROA	-0.004	0.000	0.000	0.873	0.001	0.181	0.000	0.186	-0.001	0.003	-0.002	0.003
DA	-0.119	0.566	-0.203	0.067	0.150	0.321	-0.126	0.229	-0.180	0.241	-0.390	0.006
QUICK	-0.004	0.673	-0.019	0.023	-0.019	0.125	-0.021	0.039	-0.008	0.276	-0.020	0.029
INVENTORY	-0.081	0.720	-0.282	0.108	-0.115	0.550	0.201	0.399	-0.074	0.713	-0.369	0.055
RECEIVABLE	0.756	0.011	0.665	0.006	0.692	0.012	0.414	0.199	0.638	0.017	0.275	0.276
SEGMENTS	0.064	0.036	0.021	0.383	0.049	0.064	0.037	0.186	0.016	0.472	0.010	0.626
LOSS	0.068	0.422	0.278	<.0001	0.266	<.0001	0.204	0.005	0.381	<.0001	0.296	<.0001
FOREIGH_BUS	0.358	0.000	0.239	0.003	0.096	0.197	0.124	0.125	0.310	<.0001	0.285	<.0001

NET_LIABILITY	0.191	0.408	0.556	0.000	0.129	0.406	0.331	0.054	0.172	0.298	0.332	0.020
OPINION	-0.097	0.332	0.129	0.116	0.152	0.018	0.137	0.056	0.156	0.028	0.131	0.073
BUSY_SEASON	0.029	0.762	0.045	0.465	-0.033	0.634	0.064	0.395	0.101	0.131	0.063	0.314
FROM_BIGN	-0.241	0.451	-0.075	0.408	0.269	0.008	0.488	<.0001	0.360	<.0001	0.422	<.0001
FROM_NON_BIGN	-0.007	0.981	0.200	0.167	-0.015	0.903	-0.178	0.205	0.051	0.652	0.396	0.001
FROM_AA					0.018	0.8728						
No. of OBS	230		344		468		512		669		722	
Adj R^2	0.5805		0.6036		0.497		0.4359		0.5167		0.5600	

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Table 4 (continued)

Panel C Effects of auditor switching along the three-tier auditor classification (Dependent variable--LOGFEE)

	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
INTERCEPT	9.491	0.019	9.451	0.002	15.385	<.0001	18.609	<.0001	16.061	<.0001	7.825	0.012
LOGASSET	-0.219	0.623	-0.232	0.496	-0.853	0.004	-1.184	0.001	-0.968	0.005	-0.063	0.855
SQ_LOGASSET	0.017	0.162	0.019	0.052	0.035	<.0001	0.043	<.0001	0.039	<.0001	0.016	0.097
ASSET_TURN	0.046	0.364	0.038	0.275	0.072	0.061	-0.003	0.949	0.081	0.045	0.089	0.012
ROA	-0.004	0.001	0.000	0.826	0.000	0.310	0.000	0.114	-0.001	0.012	-0.002	0.022
DA	-0.057	0.781	-0.190	0.082	0.126	0.398	-0.110	0.276	-0.107	0.468	-0.340	0.011
QUICK	-0.002	0.812	-0.018	0.026	-0.022	0.069	-0.021	0.035	-0.009	0.228	-0.017	0.050
INVENTORY	-0.143	0.525	-0.337	0.054	-0.242	0.208	0.200	0.387	-0.103	0.589	-0.334	0.066
RECEIVABLE	0.810	0.006	0.609	0.011	0.631	0.021	0.420	0.179	0.604	0.017	0.180	0.450
SEGMENTS	0.059	0.049	0.022	0.369	0.042	0.102	0.037	0.168	0.019	0.383	0.011	0.569
LOSS	0.056	0.505	0.268	<.0001	0.254	0.000	0.160	0.024	0.322	<.0001	0.267	<.0001
FOREIGN_SALES	0.337	0.000	0.209	0.007	0.127	0.083	0.153	0.052	0.303	<.0001	0.286	<.0001
NET_LIABILITY	0.164	0.473	0.490	0.001	0.089	0.563	0.269	0.106	0.093	0.555	0.344	0.011
OPINION	-0.083	0.405	0.146	0.071	0.125	0.048	0.106	0.129	0.147	0.030	0.127	0.065

BUSY_SEASON	-0.002	0.987	0.029	0.627	-0.046	0.498	0.055	0.455	0.109	0.086	0.087	0.142
SECOND	0.198	0.007	0.241	<.0001	0.282	<.0001	0.360	<.0001	0.534	<.0001	0.512	<.0001
BIGN_TO_ SECOND			-0.048	0.704	0.226	0.107	0.437	0.000	0.193	0.032	0.377	<.0001
BIGN_TO_THIRD	-0.119	0.711	-0.144	0.250	0.225	0.114	0.502	<.0001	0.441	<.0001	0.461	<.0001
SECOND_TO_THIRD	-0.086	0.821	0.317	0.134	0.346	0.144	0.346	0.136	0.365	0.027	0.810	<.0001
THIRD_TO_SECOND			0.295	0.310	-0.014	0.965	0.380	0.361	0.546	0.170	-0.486	0.466
SECOND_TO_SECOND			-0.167	0.566							0.480	0.470
THIRD_TO_THIRD	0.270	0.470	0.050	0.920	-0.056	0.721	-0.413	0.022	0.035	0.813	0.205	0.232
AA_TO_SECOND					-0.244	0.099						
AA_TO_THIRD					0.279	0.100						
No. of OBS	230		344		468		512		669		722	
Adj R^2	0.5920		0.6225		0.5160		0.4717		0.5664		0.6070	

(continued on next page)

Table 4 (continued)

Variable definitions:

LOGFEE=Natural logarithm of audit fees; LOGASSET=Natural logarithm of total assets; SQ_LOGASSET=The quadratic term of LOGASSET; ASSET_TURN=Asset turnover; sales divided by total assets; ROA=Return on assets; DA=Long-term debts to total assets ratio; QUICK=Quick ratio; INVENTORY=Inventory to total assets ratio; RECEIVABLE=Receivables to total assets ratio; SEGMENTS=The number of industry segments in which a firm operates; LOSS=1 if net income before extraordinary items is less than zero, and 0 otherwise; FOREIGN_SALES=Foreign sales as a percentage of total sales; NET_LIABILITY=1 if a company's total liabilities are bigger than its total assets, and 0 otherwise; OPINION=1 if a company receives a qualified audit opinion, and 0 otherwise; BUSY_SEASON=1 if a company's fiscal year ends between December 1st and March 31st, which is the normal busy season for auditors, and 0 otherwise.

FROM_BIGN=(in Panel A) 1 if a firm transferring from one Big N auditor to another Big N auditor, and 0 otherwise; (in Panel B) 1 if a firm transferring from a Big N auditor to a non-Big N auditor, and 0 otherwise; FROM_NON_BIGN=(in Panel A) 1 if a firm transferring from a non-Big N auditor to a Big N auditor, and 0 otherwise; (in Panel B) 1 if a firm transferring from one non-Big N auditor to another non-Big N auditor, and 0 otherwise; FROM_AA=(in Panel A) 1 if a firm transferring from former Arthur Andersen to a Big 4 auditor, and 0 otherwise in 2002; (in Panel B) 1 if a firm transferring from former Arthur Andersen to a non-Big 4 auditor, and 0 otherwise in 2002.

SECOND=1 if a firm's auditor is one of the second-tier auditors, and 0 otherwise; BIGN_TO_SECOND=1 if a firm transferring from a Big N auditor to a second-tier auditor, and 0 otherwise; BIGN_TO_THIRD=1 if a firm transferring from a Big N auditor to a third-tier auditor, and 0 otherwise; SECOND_TO_THIRD=1 if a firm transferring from a second-tier auditor to a third-tier auditor, and 0 otherwise; THIRD_TO_SECOND=1 if a firm transferring from a third-tier auditor to a second-tier auditor, and 0 otherwise; SECOND_TO_SECOND=1 if a firm transferring from one second-tier auditor to another second-tier auditor, and 0 otherwise; THIRD_TO_THIRD=1 if a firm transferring from one third-tier auditor to another third-tier auditor, and 0 otherwise; AA_TO_SECOND=1 if a former Arthur Andersen client transferring to a second-tier auditor, and 0 otherwise in 2002; AA_TO_THIRD=1 if a former Arthur Andersen client transferring to a third-tier auditor, and 0 otherwise in 2002.

To shed light on the auditor switching effects within non-Big N auditors, we analyze different switching directions to the second and third tiers of auditors. Our results in Table 4, Panel C show that firms downward switching from Big 4 to either the second or third tier audit firms paid extra fees in 2003, 2004 and 2005. While we do not find a significant coefficient of FROM_AA (in 2002) in the overall non-Big N sample (Table 4, Panel B), we observe a negative and marginally significant coefficient of AA_TO_SECOND (-0.244, p=0.099) in Table 4, Panel C. This suggests that the second tier auditors lowball to compete with the Big 4 auditors for former AA clients.

5.2.3 Testing result for H3

One may speculate that the extra fees charged to downward switching clients are due to these client firms' higher risks. To explore this possible explanation, we use a factor analysis to extract a factor to measure clients' comprehensive risk (RISK). Following Asthana et al. (2004), we include seven variables in the factor analysis: LOSS, OPINION, CA (current assets to total assets ratio), DA, STDDEV (standard deviation of daily stock returns in a specific year), ADJ_RET (annual industry-adjusted stock return at the fiscal year end), NET_LIABILITY. Among them, STDDEV is calculated by using daily stock returns of firms from CRSP, and ADJ_RET is calculated by using yearly stock return minus average yearly stock return in the same industry classified by two-digit SIC codes. In addition, we include LATE_FILE (dummy variable; equal to one if a firm registers its 10-K reports to SEC 90 days later than the date of its fiscal year end, and 0 otherwise) to proxy audit risk in the analysis (Schloetzer 2006).

Panel A of Table 5 summarizes descriptive statistics of overall client risk by different auditor groups and switching patterns. Our results show that client risks of Big N auditors are significantly lower than those of non-Big N auditors as a group and those of the second- and third-tiers of auditors individually (at least at the 0.002 level). Interestingly, client risks of the

second- and third-tiers of auditors do not differ significantly from each other in 2000, 2001 and 2002 (p=0.599; p=0.808; and p=0.808, respectively); however, their differences are significant in 2003 (t=2.18, p=0.0295), 2004 (p=0.0073) and 2005 (p=0.0119). Furthermore, we find risks of the clients switching to the third tier auditors are much higher than those to the second tier auditors in 2004 (p=0.026) and 2005 (p=0.076), indicating that more risky clients tended to switch to the third rather than the second-tier auditors in these two years.

Panel B of Table 5 presents the OLS results on the effects of risk and auditor switching on audit fees for the non-Big N subsample. Our results show significant and positive coefficients of RISK across all six years. This indicates that non-Big N auditors demand a premium from risky clients, which is intuitively understandable and consistent with Asthana et al. (2004). If the extra fees charged to downward switching firms were completely caused by the higher risk of these firms, we would expect that when we include the interaction term (RISK_FROM_BIGN) between RISK and FROM_BIGN, the coefficient of FROM_BIGN will become insignificant while the coefficient of RISK_FROM_BIGN might be positively significant. Contrary to our expectation, the coefficient of FROM_BIGN remains positively significant from 2003 to 2005 and the coefficient of RISK_FROM_BIGN is only significant at 10% level in 2004.

Table 5

Client risk and its effect on audit fees

Panel A Descriptive statistics of client risk by auditor group and year

	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	NO. of		NO. Of		NO. Of		NO. of		NO. of		NO. of	
Sub-Sample	OBS	RISK	OBS	RISK	OBS	RISK	OBS	RISK	OBS	RISK	OBS	RISK
Overall BIGN Group	1890	-0.054	2529	-0.043	2807	-0.049	2696	-0.098	2637	-0.118	2317	-0.075
Switch to BIGN	25		107		552		77		65		57	
From BIGN	22	-0.041	94	0.060	44	-0.128	65	-0.175	56	-0.010	52	-0.040
From AA					496	-0.091						
From NONBIGN	3	0.300	13	0.183	12	-0.048	12	-0.277	9	0.401	5	-0.249
SECOND	1	-0.585	4	0.323	4	0.196	3	-0.044	3	0.395	3	-0.454
THIRD	2	0.743	9	0.122	8	-0.170	9	-0.354	6	0.403	2	0.058
Overall NONBIGN Group	230	0.445	344	0.316	468	0.293	511	0.517	668	0.465	722	0.241
SECOND	116	0.416	163	0.300	190	0.278	211	0.413	277	0.356	274	0.119
THIRD	114	0.475	181	0.331	278	0.303	300	0.589	391	0.542	448	0.316

Switch to NONBIGN	7		50		107		129		199		186	
To SECOND	0		25		47		51		86		66	
From BIGN	0		19	0.889	23	0.447	48	0.650	83	0.296	64	0.054
From AA					20	0.178						
From SECOND	0		3	0.617	0		0		0		1	-0.202
From THIRD	0		3	-0.435	4	0.456	3	0.833	3	0.340	1	-0.125
To THIRD	7		25		60		78		113		120	
From BIGN	3	1.311	18	0.345	22	1.009	51	0.839	71	0.589	83	0.315
From AA					14	0.670						
From SECOND	2	3.133	6	1.402	7	-0.015	10	1.504	19	1.074	21	0.910
From THIRD	2	0.718	1	0.843	17	0.323	17	0.919	23	0.676	16	0.287

(continued on next page)

Table 5 (Continued)

Panel B Effects of audit fees of client risk and auditor switching (Dependent variable--LOGFEE)

	Year 2000		Year 2001		Year 2002		Year 2003		Year 2004		Year 2005	
	Coff.	P-value	Coff.	P-value	Coff.	P-value	Coff.	P-value	Coff.	P-value	Coff.	P-value
INTERCEPT	7.808	0.053	8.997	0.004	13.665	<.0001	17.397	<.0001	15.028	<.0001	6.929	0.029
LOGASSET	-0.055	0.901	-0.160	0.645	-0.635	0.034	-1.048	0.001	-0.844	0.015	0.066	0.850
SQ_LOGASSET	0.013	0.272	0.016	0.091	0.029	0.001	0.040	<.0001	0.036	0.000	0.012	0.225
ASSET_TURN	0.095	0.024	0.033	0.276	0.059	0.074	0.014	0.716	0.097	0.003	0.061	0.036
ROA	-0.003	0.007	0.000	0.476	0.000	0.307	0.000	0.079	-0.001	0.010	-0.002	0.003
QUICK	-0.004	0.653	-0.012	0.141	-0.024	0.051	-0.030	0.003	-0.010	0.180	-0.010	0.230
SEGMENTS	0.073	0.014	0.043	0.078	0.051	0.049	0.046	0.086	0.022	0.305	0.015	0.454
FOREIGH_BUS	0.317	0.000	0.214	0.007	0.126	0.092	0.119	0.126	0.321	<.0001	0.291	<.0001
BUSY_SEASON	0.024	0.798	0.012	0.850	-0.037	0.591	0.042	0.559	0.115	0.069	0.082	0.171
SECOND	0.183	0.011	0.250	<.0001	0.257	<.0001	0.383	<.0001	0.511	<.0001	0.510	<.0001
FROM_BIGN	-0.695	0.534	-0.075	0.440	0.164	0.154	0.406	<.0001	0.251	0.001	0.464	<.0001
FROM_NON_BIGN	0.207	0.612	0.153	0.356	0.038	0.773	-0.169	0.297	0.095	0.488	0.367	0.004
RISK	0.155	0.009	0.170	<.0001	0.112	0.002	0.142	0.015	0.152	0.001	0.110	0.001
RISK_FROM_BIGN	0.409	0.619	-0.002	0.979	0.082	0.305	0.087	0.318	0.152	0.051	-0.061	0.367
RISK_FROM_NON_BIGN	-0.176	0.295	-0.007	0.953	0.092	0.603	0.041	0.682	0.107	0.322	0.175	0.067

FROM_AA			-0.042	0.731		
RISK_FROM_AA			0.118	0.294		
Adj R^2	0.5933	0.597	0.5005	0.4711	0.5536	722
No. of OBS	230	344	468	512	668	0.5902

(continued on next page)

Table 5 (continued)

In Panel A, the auditor switching frequency in different directions and the descriptive statistics of RISK for different sub-samples are presented. RISK is a comprehensive risk factor built from a factor analysis by using the following risk variables: LOSS, OPINION, CA, DA, STDDEV, ADJ_RET, NET_LIABILITY, and LATE_FILE

Variable definitions: LOGFEE=Natural logarithm of audit fees; LOGASSET=Natural logarithm of total assets; SQ_LOGASSET=The quadratic term of LOGASSET; ASSET_TURN=Asset turnover; sales divided by total assets; ROA=Return on assets; DA=Long-term debts to total assets ratio; QUICK=Quick ratio;

INVENTORY=Inventory to total assets ratio; RECEIVABLE=Receivables to total assets ratio; SEGMENTS=The number of industry segments in which a firm operates; LOSS=1 if net income before extraordinary items is less than zero, and 0 otherwise; FOREIGN_SALES=Foreign sales as a percentage of total sales; NET_LIABILITY=1 if a company's total liabilities are bigger than its total assets, and 0 otherwise; OPINION=1 if a company receives a qualified audit opinion, and 0 otherwise; BUSY_SEASON=1 if a company's fiscal year end falls between December 1st and March 31st, which is the normal busy season for auditors, and 0 otherwise; SECOND=1 if a firm's auditor is one of the second-tier auditors, and 0 otherwise; CA=current assets to total assets ratio); STDDEV=standard deviation of daily stock returns in a specific year); ADJ_RET=annual industry-adjusted stock return at the fiscal year end; LATE_FILE=1 if a firm registered its audited annual reports to SEC 90 days later than its fiscal year end, and 0 otherwise; RISK=the risk factor built from a factor analysis; RISK_FROM_BIGN=the interaction term between RISK and the dummy variable FROM_BIGN; RISK_FROM_NON_BIGN=the interaction term between RISK and FROM_NON_BIGN; RISK_FROM_AA=the interaction term between RISK and FROM_AA

However, the inclusion of RISK and the interaction term between RISK and FROM_BIGN lowers the magnitude of the coefficient of FROM_BIGN in Table 4, Panel B, indicating that risk has some contribution to the extra fees charged to the downward switching clients. The stability of the sign and significance of FROM_BIGN demonstrates that, after considering risk, auditors still charge start-up costs to the downward switching clients. And this result indirectly examines that the competition of the audit market has reduced for the lower end of the auditee quality continuum.

Non-Big 4 auditors charge a risk premium as well as start-up costs to the downward switching firms. In the strictly regulatory environment, with the demise of Arthur Andersen and the Passage of SOX, the demand for audit services has increased, and the supply of Big 4 auditors has decreased (Schloetzer 2006). In addition, because Big 4 auditors can not fully price audit risk in the new environment (Landsman et al. 2006), the target firms for them to shed off are highly risky clients. So these downward switching firms do not have more options except for non-Big 4 auditors. The above factors increase the negotiation power of non-Big 4 auditors with these downward switching clients. In stead of low-balling their audit services in accepting these downward switching clients, non-Big 4 auditors charge a risk premium together with start-up costs to compensate the additional audit efforts in the initial audit engagements. From the result we can infer that at the lower end of auditee quality continuum, these clients are not desirable for auditors, and the competition for them has been decreased.

6. Robustness Check

6.1. The Effect of Accelerated Filers on Auditor Switching Effects

In response to mounting complaints and pressure by small companies and foreign private issuers, the SEC requires that only accelerated filers (ACC_FILER), excluding registered investment companies, with fiscal year ending on or after November 15, 2004, file Section 404 reports in the first year[11]. We find a high correlation (0.549) between LOGFEE and ACC_FILER. It is likely that accelerated filers correlate with firm size, and that these companies are required to have their internal control reports assessed by auditors, which apparently increases audit fees.

To examine whether the above auditor switching effects are somehow affected by accelerated filers, we perform a robustness check by adding a dummy variable ACC_FILER into the models for years 2004 and 2005. As expected, we find that coefficients of ACC_FILER are positive and significant for all the models. Also, our results show that after adding the variable of ACC_FILER, the signs and significance levels of other variables (except for LOGASSET and SQ_LOGASSET) remain the same. Since our robustness check shows that adding ACC_FILER does not change the auditor switching effects in any of the models, to avoid multicollinearity problems caused by the high correlation between LOGASSET and ACC_FILER (the correlation coefficient is 0.610), we do not include this variable in our formal models.

6.2. The Effect of Combined Duplicate Fees

In the formal model, we use derived audit fees (described in section 3) in the years of auditor switching. To ascertain that our main results are not sensitive to the method of calculating audit fees for the engaged auditors, we also use the combined fees (i.e., adding the reported fees by both departed and engaged auditors together) to rerun our models. Our robustness tests show qualitatively similar results for the control variables. However, some differences exist in the auditor switching effects. Specifically, we find a weaker overall impact of auditor switching on audit fees in 2003, but not for other years. Perhaps because the firms with low quality and high risk got rid of by Big 4 auditors are charged more audit fees,

when we add the fees together, it does not reflect the proportion of audit work that is done by the departed auditor and the engaged auditor, and the fee increase cannot be caught. Also, in the subsample of non-Big N auditors we observe that while the magnitude and significance level of THIRD_TO_SECOND decrease in 2003, those of SECOND_TO_THIRD increase in 2003 and 2004. These results are consistent with the evidence that second tier auditors charge audit fee premiums over the third-tier auditors (Wang 2007). Taken together, our main results hold when we use combined audit fees as a proxy.

6.3. Comparison of audit fee between switching and non-switching firms

In order to provide intuitive and first-hand results regarding the effect of auditor switches on audit fee, we compare the difference of audit fee between non-switching firms and switching firms by dividing the sample into firms two groups: with BigN and with Non-BigN auditor. For each group from year 2000 to 2005, we do the t-test on mean difference to see how audit fee is different between non-switchors and switchors; between non-switchors and switchors from BigN auditor to Non-BigN auditor; between non-switchors and switchors from Non-BigN auditor to BigN auditor. Our robustness check results are in general consistent with our main results

6.4. Time-series analysis without non-switching firms

We examine the long term effect of auditor switches on audit fees by focusing only on a sample of auditor switching firms and comparing their audit fees across years (pre-switch versus post-switch years). We implement the following steps in the analysis:

1. Delete all non-switching firms;
2. Make a year dummy variable to control year effect on audit fees;
3. Delete all observations in the year in which firms switch auditors;
4. Make a dummy variable after-switch (1 after a firm switched auditor, 0 otherwise);

5. Run regressions across years to see whether the after-switch dummy variable is significant or not.

Our robustness check results are in general consistent with our main results [12].

7. Discussion and Conclusions

In the dramatically changing audit market in the U.S., audit fees have increased (Asthana et al. 2004; Chi 2004), and firms downwards switched to seek for lower audit fees (GAO 2006) after the demise of Arthur Andersen and the passage of the Sarbanes-Oxley Act. This study examines auditor switching effects on audit fees in the timeline from 2000 through 2005.

We find that prior to 2002, most of the Big 4 clients changed auditors laterally; however, they mainly switched downwards to non-Big 4 auditors afterwards. The downward switching might be driven by either client firms' high risks (Landsman et al. 2006; Schloetzer 2006) or their desire to seek lower audit fees (GAO 2006). Our results show that auditor switching has no impact on audit fees prior to 2002 and that non-Big 4 auditors charge extra fees to downward switching clients in 2003, 2004, and 2005. In addition, both the second and the third tiers of auditors charge higher fees to the downward switching firms. Consistent with prior studies (Ashthana et al. 2004; Chi 2004), we find that in the process of audit market reintegration, both Big 4 and second-tier auditors lowballed fees to attract former Andersen clients.

To see whether the higher fees were driven by the high risk of downward switching firms or the reduction of competition, we use factor analysis to extract a risk factor and add it and the interactions between auditor switching dummy variables and the risk factor into our regression. Our results show that although firms charge a risk premium, there are still start-up costs charged by non-Big 4 auditors to the downward switching clients. This finding might provide a hint to support that in an environment of less competition and high demand for audit services, small and risky clients are eager to acquire their services while they do not

have many appealing options except non-Big 4 auditors, which increases the negotiation power of non-Big 4 auditors and enables them to price the additional audit efforts by charging start-up costs to the former Big 4 clients.

Our robustness checks show that our results remain unchanged when we include a variable of accelerated filers in year 2004 and 2005, or use alternative combined audit fees.

8. Recent Development on Audit Fee Premium

Audit fee premium remains a hot topic in the empirical accounting research. Dao et al. (2012) find that for those public companies with shareholder voting on auditor ratification, the audit fees they paid to the auditors are, in general, higher. Choi et al. (2009) find that legal environment has an effect on the legal liability of the auditors so auditors charge audit fee premiums for firms cross-listing in countries with stronger legal regime. Using the IPO (Initial Public Offering) setting, Venkataraman et al. (2008) also study the relationship of audit fee and legal liability of auditors. They find audit fee is higher on the IPO engagement than the post-IPO engagement due to the higher risk of litigation exposure.

While the above paper explore the relationship of audit fee premium and the legal liability auditors face, Ghosh & Lustgarten (2006) study the pricing difference of initial audit engagement. While clients switching within small audit firms receive more or less a discount of 24 percent, clients switching within large audit firms receive a discount of 4 percent only. This difference is because the Big 4 audit firms have the oligopolistic power in audit market and the price competition is less intensive among them. Huang at al. (2009) find that Big 4 auditors low-balled the initial-year audit fee of about 24% in 2001. On the other hand, the Big 4 clients paid an initial-year audit fee premium of about 16% between 2005 and 2006. In addition, Big 4 auditors have become more conservative, less likely to serve as a successor and more likely to charge audit fee premium in the post-SOX period. Both Ghosh & Lustgarten (2006) and Huang at al. (2009) discuss the most recent development of the impact of audit switching on audit pricing so they serve as updates to the current paper.

Notes

1. For the specific time period (i.e., pre and post the demise of Andersen), we use either Big 5 or Big 4 to refer to the large accounting firms. However, we use "Big N" when it involves a general concept of the five or four large accounting firms during the sample period.
2. In Wang (2007), both the OLS model and the treatment effects models are used in the audit pricing study. In both of the models similar results are found for auditor switching effects on audit fees in the whole sample. Wang uses the treatment effects model to correct selectivity bias between Big N and non-Big N auditors. Because selectivity bias is not the main concern in this study, so only the results in OLS models are reported.
3. We follow the downward switching firms in subsequent years after the initial audit engagements and do not find that they pay higher fees than the continuous audit engagements except that the firms switched in 2004, they pay a bit higher fees in 2005. So we can call the higher fees as start-up costs.
4. The concept of experience goods in economic theory is defined as the high quality goods sellers provide to new clients with lower than normal price for them to try in order to stimulate repurchases in the future.
5. Simunic (1980) finds that the pricing structure in banking industry is different from other industries. Prior studies exclude this industry from their samples based on Simunic's finding and the argument that the financial ratios in banking are different from other industries (Maher et al. 1992; Lee 1996; Firth 1997; Chaney et al. 2004).
6. In a robustness test, we include financial firms in our models and find qualitatively similar results.
7. As shown in Wang (2007), the control dummy variable of BigN is endogenous, namely, there is selectivity bias between Big N and non-Big N auditors. So a self-selection model should be used to correct the selectivity bias. But whether the selectivity bias is controlled does not have a significant influence on the issues of interest, so the traditional OLS audit pricing model is employed as most prior studies.
8. There is almost no difference in magnitudes and significance levels of the coefficient for SWITCH between this study and Wang (2007), who uses a treatment effects model.
9. When including only companies with dismissal of auditors, both magnitudes and significance levels of SWITCH are reduced. But they are still positive and significant.
10. Griffin and Lont's research period is from the last quarter of 2000 to July 4, 2004. They divide the research period into three sub-periods, namely, the base period, SOXa (DEF 14A date from July 25, 2002 to March 31, 2003), and SOXb (DEF 14A date from April 1, 2003 to July 4, 2004)
11. Foreign private issuers received a one-year extension until the first fiscal year ending on or after July 15, 2006, to comply with the regulation. Due to the complexity and substantial compliance costs associated with implementation, in September 2005 the SEC further extended the compliance date for non-accelerated filers until 2007.
12. Result for Robustness Check 6.3 and 6.4 available upon request.

Appendix Variable Definitions

FEE	Audit fees a company pays to its auditor
LOGFEE	Natural logarithm of audit fees
ASSET	Total assets at a fiscal year end
LOGASSET	Natural logarithm of total assets
SQ_LOGASSET	The square of LOGASSET
ASSET_TURN	Asset turnover; sales divided by total assets
ROA	Return on assets
DA	Long-term debts to total assets ratio
QUICK	Quick ratio
INVENTORY	Inventory to total assets ratio
RECEIVABLE	Receivables to total assets ratio
SEGMENTS	The number of industry segments of a firm
LOSS	1 if net income before extraordinary items is less than zero, and 0 otherwise
FOREIGN_SALES	Foreign sales as a percentage of total sales
NET_LIABILITY	1 if a company's total liabilities are bigger than its total assets, and 0 otherwise
OPINION	1 if a company receives a qualified audit opinion, and 0 otherwise
BUSY_SEASON	1 if a company's fiscal year end falls between December 1st and March 31st, which is the normal busy season for auditors, and 0 otherwise
NO_EXPERTISE	1 if a company's audit committee has no financial expert, and 0 otherwise
SWITCH	1 if a firm changes its auditor in a year, and 0 otherwise
ACC_FILER	Accelerated filer, 1 if a firm's market value is greater than $75 million, and 0 otherwise
BIG_N	1 if a firm's auditor is one of Big N auditors, 0 otherwise
FROM_BIGN	1 if the departed auditor is a Big N auditor in auditor switching, and 0 otherwise

FROM_NON_BIGN	1 if the departed auditor is a non-Big N auditor in auditor switching, and 0 otherwise
FROM_AA	1 if the departed auditor was Arthur Andersen in 2002, and 0 otherwise
SECOND	1 if a firm's auditor is either Grant Thornton or BDO Siedman, and 0 otherwise
BIGN_TO_SECOND	1 if a firm switches from a Big N auditor to either Grant Thornton or BDO Siedman, and 0 otherwise
BIGN_TO_THIRD	1 if a firm switches from a Big N auditor to a non-Big N auditor other than Grant Thornton or BDO, and 0 otherwise
SECOND_TO_THIRD	1 if a firm switches from either Grant Thornton or BDO to other non-Big N auditors, and 0 otherwise
THIRD_TO_SECOND	1 if a firm switches from a non-Big N auditor other than Grant Thornton or BDO to either Grant Thornton or BDO, and 0 otherwise
SECOND_TO_SECOND	1 if a firm switches among Grant Thornton or BDO, and 0 otherwise
THIRD_TO_THIRD	1 if a firm switches among non-Big N auditors other than Grant Thornton or BDO, and 0 otherwise
AA_TO_SECOND	1 if a firm switches from Arthur Andersen to either Grant Thornton or BDO, and 0 otherwise
AA_TO_THIRD	1 if a firm switches from Arthur Andersen to a non-Big N auditor other than Grant Thornton or BDO, and 0 otherwise
STD_DEV	standard deviation of daily stock returns in a specific year for a firm
ADJ_RET	annual industry-adjusted stock return at the fiscal year end
LATE_FILE	dummy variable; equal to one if a firm registered its audited annual reports to SEC 90 days later than its fiscal year end, 0 otherwise
RISK	The risk factor extract from factor analysis
RISK_FROM_BIGN	The interaction term between RISK and the dummy variable FROM_BIGN
RISK_FROM_NON_BIGN	The interaction term between RISK and FROM_NON_BIGN
RISK_FROM_AA	The interaction term between RISK and FROM_AA

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