

Post-SOX Era Client Power & Auditor Specialization Effects on Audit Pricing & Auditor Objectivity in City Markets

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ABSTRACT

The considerable realignment of audit services market is one by-product of the Sarbanes-Oxley Act of 2002. Faced with increased regulatory scrutiny and heightened auditing requirements (e.g., Section 404 of the Act), Big 4 audit firms began to shed smaller issuing firms who then looked to non-Big 4 auditors for their audit services. While these clients were small in a Big 4 firm's client portfolio, it is likely that they are large in the non-Big 4 firm's client portfolio. For all auditors, the realignment enhances the position of the remaining clients in the firm's portfolio. In general, these are conditions in which client power can increase. Strategically, the realignment also creates an opportunity for audit firms to focus on particular segments of the audit service market; that is, to specialize in particular industries. I examine the effects of client power and auditor specialization on 3,278 audit fees for fiscal year 2004 engagements. Following recent studies (c.f., Francis et al. 2005), I define auditor industry specialization at the city office level using two definitions: (1) the percent of client audit fees to the sum of client industry audit fees for that office and (2) an indicator variable to identify whether the audit firm is the industry leader at the city level. I define client power by percent of client sales to the sum of sales for all firms audited by the audit firm. These variables of interest are regressed in a simultaneous equations framework on 2004 audit fees and discretionary accruals (as a proxy for auditor objectivity). I find that audit fees are negatively associated with client power and non-Big 4 auditors. Non-big 4 audit specialists, however, are associated with higher audit fees. No effects are detected for client power and auditor specialization on discretionary accruals.

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Introduction

Consider a manager who chooses the audit firm for a small publicly-traded company located in a small-to-medium sized city. What kind of audit firm should the manager select: a large national firm, an industry specialist, or both? Suppose the manager uses accounting gimmicks to meet earnings targets for which he/she is awarded a bonus. Will that manager prefer a small, non-specialist audit firm? The purpose of this study is to examine the audit fees paid and accounting gimmicks used by such companies to test whether the size and specialization of the audit firm matters.

This study extends a number of recent studies on audit industry specialization in the following two aspects: (1) city markets and (2) local, regional, and second tier national audit firms. With significant auditor realignment following the demise of Arthur Andersen and the reforms under the Sarbanes-Oxley Act of 2002 (SOX), non-Big 4 firms have gained market share in the smaller public company market and in small city markets. A new market has been created with smaller public companies, frequently located in smaller cities from which the Big 4 has generally withdrawn. Hence, the barriers to entry facing non-Big 4 audit firms no longer exist. The primary research question of interest is whether non-Big 4 industry specialists command a fee premium in cities with limited or no Big 4 presence. Potentially, “small” clients from the Big 4 firm perspective may be “big” from the non-Big 4 firm perspective creating “power” in bargaining with the non-Big 4 firm (Casterella et al. 2004). A secondary research question is whether non-Big 4 audit clients making up a large percent of the audit firm’s

client base can negotiate for lower fees or succeed in higher earnings management. The study should be of interest to the stakeholders involved and to regulators. Management, board members, and shareholders of small publicly traded companies should be interested in knowing the pricing structure in this newly created audit market. Regulators, shareholders, and financial analysts should be interested in knowing whether audit clients with “power” tend to engage in more earnings management, which would indicate an unintended consequence of SOX.

Related Literature

Most of the studies in this area are based in Australia because that country required public disclosure of audit fees starting in 1990. In contrast, the SEC did not require audit fee disclosures until early 2001. Another tendency in the extant literature is to focus on industry specialization at the firm level. Since most studies were restricted to Big 4 audit firms, firm level is also national level. Recent extensions examine office level (i.e., city markets) or non-Big 4 audit firms, but not both.

Ferguson and Stokes (2002) studied Australian listed public companies in 1990, 1992, 1994, and 1998 and found that Big4 national industry specialists receive a fee premium over non-specialists. A firm was deemed a specialist if it audited at least 10% of the number of companies in that industry or had at least 10% of the total audit fees for that industry. After splitting their sample at median sales, they discovered that the fee premium occurs in the smaller client segment and not in the large client segment. Their sample included both Big 4 and non-Big 4 audit firms. Industry specialization at the city/office-level was not examined.

Ferguson et al. (2003) reexamine their earlier study (2002) in two ways. First, they construct their tests to determine the precise level at which a fee premium is earned (their earlier study used an arbitrary 10% of market share to designate a specialists). Second, they use both firm level and city-level markets to determine specialists. They found that the top 2 providers at the city-level command an average fee premium of 24 percent. The national leader was the city market leader merely 44 percent of the time, which indicates that firm-level specialization is a bias estimate of city-level specialization. Following SOX and Andersen's, auditor realignments have left many smaller cities without a Big 4 audit provider; hence, the disconnect between firm level and city-level industry specialists is probably greater.

Two studies examine the ability of industry specialists to curb management attempts to guide (or manipulate) earnings in order to meet earnings targets and financial analysts' earnings forecasts. Balsam et al. (2003) use a US sample of Big 4 audit clients and found that clients of firm-level industry specialists utilize less accounting gimmicks to meet earnings targets. Reynolds and Francis (2001) also use a US sample of Big 4 audit clients but determine industry specialization at the office/city-level. They found that clients of industry specialists had less earnings management and that industry specialists were more willing to issue going-concern opinions on their clients. Neither study examined non-Big 4 audit firms.

Casterella et al. (2004) use a US sample of Big 4 audit clients and found, similar to related studies, that firm-level industry specialists receive a fee premium. They also found that clients that make up a large percentage of the audit firm's industry clients have "power" and can negotiate lower fees (a potential 'brand name' associated with the client

rather than the auditor). Such power could manifest itself in other ways including the ability to manage earnings to meet earnings targets. If clients can exercise power over Big 4 audit firms, it appears the ability to do so over non-Big 4 audit clients would be more pronounced.

Francis et al. (2005) examine the pricing of audit services by Big 5 audit firms in the U.S. market in 2000 and 2001. They find a fee premium accruing to audit firms that are both the national and city-level industry leader. Their time period of study precedes the recent reforms to the auditing profession (e.g., SOX, PCAOB). I extend this study in the following manner: (1) include nonBig4 audit firms and (2) conduct the study after the implementation of reforms to the auditing profession.

In summary, the studies consistently demonstrate the existence of an audit fee premium for industry specialists at both the firm/national-level and the office/city-level. Studies also document that industry specialists are more likely to discourage accounting gimmicks designed to meet earnings targets. In contrast, however, when the audit firm's market share is dominated by a single large client (think "Enron") that client possesses power over the audit firm. Auditor realignments and the post-SOX regulatory environment have created a new market: the city non-Big 4 segment. This study will investigate the characteristics of that market.

Hypotheses

Primarily following Francis et al. (2005), I expect industry specialist to be able to command a fee premium for their services. I make this conjecture regardless of the size (i.e., Big4 or nonBig4) of the audit firm. I also reason that industry specialists are more

likely to detect earnings management practices. The following two research hypotheses regarding audit firm specialization are stated in the alternative form:

H₁: NonBig 4 industry specialist will have higher audit fees than non-specialist.

H₂: NonBig 4 industry specialist audit clients will have less earnings management than clients of non-specialist.

Of course clients may also be specialists in the sense that they represent the dominant client within a particular audit firm's portfolio of clients in that industry. Large, industry dominant clients lend credence to the audit firm as specialist in that industry. In short, large clients bolster the audit firm's reputation and possibly empower the client in areas of potential dispute. These large clients, therefore, are in a position to bargain for lower audit fees and they may also be more successful in using techniques to manage earnings. The following two research hypotheses regarding client power are stated in the alternative form:

H₃: Dominant market share audit clients will have lower audit fees than other clients.

H₄: Dominant market share audit clients will have higher earnings management than other clients.

Method

I use a simultaneous set of equations to test for the existence of: (1) a fee premium to city-level industry specialists and (2) earnings management by small public companies. The sample includes Big 4 and non-Big 4 U.S. audit clients in 2004. The model for audit fees is specified as follows:

Audit Fee Model:

$$\begin{aligned} LnFee = & \alpha_0 + \beta_1 LnASSETS + \beta_2 SEGMENTS + \beta_3 FOREIGN + \beta_4 RECINV \\ & + \beta_5 ROI + \beta_6 LOSS + \beta_7 OPINION + \beta_8 LnTENURE + \beta_9 AUDCHG + \beta_{10} SPECIALIST \\ & + \beta_{11} POWER + \beta_{12} nonBIG4 + \beta_{13} SPECIALIST * nonBIG4 + \beta_{14} POWER * nonBIG4 + \eta_{15} DAC \end{aligned}$$

where (Casterella et al. 2004):

Dependent variable

LnFee = natural log of audit fees

Control variables

LnASSETS = natural log of total assets

SEGMENTS = number of business segments reported

FOREIGN = percentage of total assets that are foreign-based

RECINV = percentage of total assets that are foreign-based

ROI = return on investment (net income divided by total assets)

LOSS = 1 if loss reported in any of 3 prior years; 0 otherwise

OPINION = 1 if audit report modified for going concern issue; 0 otherwise

LnTENURE = natural log of the number of years with the same auditor

AUDCHG = 0/1 = first year audit

Experimental variables

SPECIALIST = office/city-level industry specialist (measured several ways as described later) using 2 digit SIC codes to define industry

POWER = client sales to sum of industry sales for all firms audited by the company's auditor

nonBIG4 = 1 if non-Big 4 auditor; 0 otherwise

*SPECIALIST*nonBIG4* = interaction term for non-Big 4 industry specialists at the city-level

*POWER*nonBIG4* = interaction term representing a non-Big 4 audit firm with dominant audit client

DAC = estimate of discretionary accruals from Model 2

SPECIALIST will be constructed in the following ways:

Client Audit Fees

Sum of Industry Audit Fees in City Market

and,

1 = top provider, 0 otherwise (the industry leader in the city).

The second model tests the ability of city-level nonBig 4 audit firms to constrain earnings management and whether clients with “power” over the audit firm are more successful in earnings management. The model takes the following form (Reynolds and Francis 2001):

Discretionary Accruals Model:

$$\begin{aligned} DAC = & \eta_0 + \eta_1 OCF + \eta_2 ABSOCF + \eta_3 ACC + \eta_4 ABSACC + \eta_5 GROWTH + \eta_6 ASSETGROW \\ & + \eta_7 LOSS + \eta_8 LnASSETS + \eta_9 DEBT + \eta_{10} PBANK + \eta_{11} LnTENURE + \eta_{12} AUDCHG \\ & + \eta_{13} SPECIALIST + \eta_{14} POWER + \eta_{15} nonBIG4 + \eta_{16} POWER * nonBIG4 + \eta_{17} LnFEES \end{aligned}$$

where:

Dependent variable

DAC = absolute value of discretionary accruals (a proxy for earnings management)

Control variables

OCF = operating cash flows

ABSO CF = absolute value of operating cash flows

ACC = total accruals

ABSACC = absolute value of total accruals

GROWTH = market value of equity/book value of equity

ASSETGROW = one year % change in total assets

LOSS = 1 if loss reported in any of 3 prior years; 0 otherwise

LnASSETS = natural log of total assets

DEBT = ratio of total debt to total assets

PBANK = probability of bankruptcy measured by Altman Z-score

LnTENURE = natural log of the number of years with the same auditor

<i>AUDCHG</i>	= 0/1 = first year audit
Experimental Variables	
<i>SPECIALIST</i>	= office/city-level industry specialist (measured several ways as described earlier)
<i>POWER</i>	= client sales to sum of industry sales for all firms audited by the company's auditor
<i>NonBIG4</i>	= 1 if non-Big 4 auditor; 0 otherwise
<i>POWER*nonBIG4</i>	= interaction term representing a non-Big 4 audit firm with dominant audit client
<i>LnFEES</i>	= Estimate of total audit fees from Model 1

Discretionary accruals (*DAC*) are measured as the difference between total accruals and non-discretionary accruals. Non-discretionary (expected) accruals are estimated using a two-step process. First, the following model is estimated for the full sample by regressing total accruals on the change in revenues from the prior year and the level of property plant and equipment to control for the economic determinants of expected accruals (Jones 1991):

$$TA_{ijt}/A_{ijt-1} = \alpha_{jt}[1/A_{ijt-1}] + \beta_{0jt}[\Delta REV_{ijt}/A_{ijt-1}] + \beta_{1jt}[PPE_{ijt}/A_{ijt-1}] + e_{ijt}$$

where:

TA_{ijt}	=	total accruals (net income from continuing operations, minus operating cash flows) for company i in industry j for year t.
A_{ijt-1}	=	total assets for company i in industry j for year t-1.
ΔREV_{ijt}	=	change in revenues from prior year for company i in industry j for year t.
PPE_{ijt}	=	gross PP&E for company i in industry j for year t.
e_{ijt}	=	error term for company i in industry j for year t.

Second, the appropriate industry-specific model parameters from this estimation are used to calculate a value for company i in industry j for year t. This calculation is an estimate of the observation's non-discretionary or expected accruals. Discretionary accruals (DA_{ijt}) are then measured as the absolute value of total accruals (TA_{ijt}) minus the calculated value for non-discretionary accruals, scaled by lagged total assets.

Sample

I construct the sample by starting with audit data for fiscal year 2004 from *AuditAnalytics*. Initially, I have audit fees, auditor opinions, the city of the auditor and its client for more than 9,800 audits. The audit data sample reduces to about 5,100 firms after removing audits of companies in financial and insurance industries (SIC codes 6000-6999), non-US companies, and companies with incomplete audit data. Financial data is obtained from Standard & Poor's *Research Insight*. The final sample for which there is complete audit and financial data is 3,278 firms for fiscal year 2004.

Results

The results of the two-stage-least-squares estimation of the audit fee and discretionary accruals appear in tables 1 and 2, respectively. Both models have a high degree of explanatory power as evidenced by adjusted R^2 values of approximately 0.78. The audit fee model results appear in table 1. Interestingly, higher audit fees were associated with auditor changes. This may be associated with the reforms of the Sarbanes-Oxley Act of 2002 and other recent reforms of the auditing profession. Otherwise, all but one of the control variables (auditor tenure) in the audit fee model are significant and in the expected direction (for those variables for which a prediction was made). Hence, I will focus the discussion on the experimental variables.

Brand name auditors command a premium for their services as evidenced by being either the lead auditor in the city (TOPAUDITOR) or based on the percent of market share captured (SPECIALIST). This result is consistent whether the two variables are in the model separately or together. Since regression diagnostics show that multicollinearity is not a concern (variance inflation factors less than 2.0), I report the

results with both “specialist” variables in the same model. Audit fees are also lower for nonBIG4 auditors. This result was anticipated and is consistent strong evidence in the extant literature that BIGn audit firms command a fee premium. A nonBIG4 audit firm that is also the lead industry auditor in the city market also enjoys a fee premium (SPECIALIST*nonBIG4). In sum, the evidence shows that audit firm specialists command a fee premium even when the audit firm is not a BIGn firm.

There is also evidence that audit fees are somewhat lower for large clients within an audit firm’s industry portfolio (POWER). Moreover, large audit clients of nonBIG4 auditors have incrementally lower audit fees (POWER*nonBIG4). This result can be explained either by economies of scale accruing to larger firms or “rents” extracted by dominant industry clients for enhancing the reputation of the audit firm within that industry. Although it is difficult to distinguish among these two explanations, I use the second model of discretionary accruals to evaluate whether these relatively large (and potentially powerful) clients are more successful in managing earnings.

As shown in table 2, there is no evidence that large, powerful clients (POWER) are more successful in managing their earnings. Nor is an industry dominant audit client audited by a nonBIG4 audit firm (POWER*nonBIG4) associated with the level of discretionary accruals. Hence, it appears that dominant industry firms can demand lower audit fees but are not able to use their position of power to manage earnings.

Somewhat surprising is the lack of association between three measures of audit firm specialization and discretionary accruals (TOPAUDITOR, SPECIALIST, SPECIALIST*nonBIG4). It seems reasonable that audit specialists would be more successful in detecting and constraining earnings management practices. The result,

however, does not support that expectation as all three specialization variables are insignificant in table 2. Both audit tenure variables (LnTENURE and AUDCHG) are positive and significantly associated with discretionary accruals. Higher discretionary accruals associated with length of tenure (LnTENURE) are consistent with concerns that auditors become complacent as their association with an audit client lengthens. Likewise, higher discretionary accruals associated with first year auditors suggest that the audit firm's inexperience with the client also hampers their ability to detect earnings management practices.

Conclusion

In this study, I examine the implications of audit firm industry specialization and client power on the pricing of audit services and the quality of the work performed—as proxied by the level of discretionary accruals. I use a two-stage-least-square estimation of 3,278 audits from fiscal year 2004 with the log of total audit fees in equation 1 and the absolute value of discretionary accruals in equation 2. As expected, I find that audit firm industry specialists command higher audit fees and that dominant industry (i.e., powerful) clients enjoy lower audit fees. In the model of discretionary accruals I find no association between powerful clients and earnings management. Consequently, the evidence suggests that auditor objectivity is not impaired when auditing large, industry dominant firms. While, contrary to expectations, I do not find that audit firm specialists constrain earnings management, I did find that higher levels of earnings management associated with the length of auditor tenure and with first year audits. While the finding associated audit

tenure lends support for mandatory audit firm rotation, such a conclusion must be tempered by the problem associated with first year audits.

Table 1. Two-Stage-Least-Squares Estimation of Audit Fee Model (Dependent variable = Log of Audit Fees)

$$\begin{aligned} \text{LnFee} = & \alpha_0 + \beta_1 \text{LnASSETS} + \beta_2 \text{SEGMENTS} + \beta_3 \text{FOREIGN} + \beta_4 \text{RECINV} \\ & + \beta_5 \text{ROI} + \beta_6 \text{LOSS} + \beta_7 \text{OPINION} + \beta_8 \text{LnTENURE} + \beta_9 \text{AUDCHG} + \beta_{10} \text{SPECIALIST} \\ & + \beta_{11} \text{POWER} + \beta_{12} \text{nonBIG4} + \beta_{13} \text{SPECIALIST} * \text{nonBIG4} + \beta_{14} \text{POWER} * \text{nonBIG4} + \eta_{15} \text{DAC} \end{aligned}$$

Variable	Predicted Sign	Parameter Estimate	t-value	p-value
<i>Control Variables</i>				
Intercept		9.926	137.53	.0001
LnAsset	+	0.522	67.29	.0001
SEGMENTS	+	0.197	8.10	.0001
FOREIGN	+	0.591	13.55	.0001
RECINV	+	0.230	3.79	.0001
ROI	-	-0.000	-2.37	.0090
LOSS	+	0.229	9.56	.0001
OPINION	+	0.199	3.12	.0009
LnTENURE	?	0.004	0.17	.8627
AUDCHG	?	0.079	1.68	.0017
<i>Experimental Variables</i>				
TOPAUDITOR	+	0.188	6.05	.0001
SPECIALIST	+	0.199	6.66	.0001
POWER	-	-0.252	-3.38	.0004
nonBIG4	-	-0.311	-6.65	.0001
SPECIALIST*	+	0.322	1.80	.0357
nonBIG4				
POWER*	-	-0.131	-1.39	.0828
nonBIG4				
DAC	+	0.398	3.14	.0009
Adj. R²		0.782		

Table 2. Two-Stage-Least-Squares Estimation of Discretionary Accruals (Dependent variable = absolute value of Jones (1991) discretionary accruals).

$$DAC = \eta_0 + \eta_1 OCF + \eta_2 ABSOCF + \eta_3 ACC + \eta_4 ABSACC + \eta_5 GROWTH + \eta_6 ASSETGROW + \eta_7 LOSS + \eta_8 LnASSETS + \eta_9 DEBT + \eta_{10} PBANK + \eta_{11} LnTENURE + \eta_{12} AUDCHG + \eta_{13} SPECIALIST + \eta_{14} POWER + \eta_{15} nonBIG4 + \eta_{16} POWER * nonBIG4 + \eta_{17} LnFEES$$

Variable	Predicted Sign	Parameter Estimate	t-value	p-value
<i>Control Variables</i>				
Intercept		-0.175	-3.72	.0002
OCF	-	-0.033	-5.42	.0001
ABSO CF	-	-.0315	-4.26	.0001
ACC	+	0.238	21.50	.0001
ABSACC	+	1.073	80.15	.0001
GROWTH	+	-0.000	-0.49	.6229
ASSETGROW	+	0.035	30.14	.0001
LOSS	-	-0.004	-1.64	.1014
LnASSETS	+	-0.011	-4.15	.0001
DEBT	+	-0.008	-2.02	.0431
PBANK	-	0.001	6.27	.0001
LnTENURE	-	0.003	1.65	.0993
AUDCHG	+	0.008	3.68	.0002
<i>Experimental Variables</i>				
TOPAUDITOR	-	-0.003	-1.08	.2787
SPECIALIST	-	-0.002	-0.67	.5046
POWER	+	0.006	0.91	.3607
nonBIG4	+	0.005	1.35	.1766
POWER*	+	0.002	0.28	.7791
nonBIG4				
LnFEES	+	0.017	3.68	.0002
Adj. R ²		0.768		

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