The Impact of SOX on the Market for Audits of Public Companies and Audit Quality

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Abstract

This study examines how the market for audits of public companies (the market) and audit quality changed as a result of the Sarbanes-Oxley Act (SOX) of 2002. With the intent of increasing audit quality, SOX empowered the Public Company Accounting Oversight Board, a quasi-governmental corporation, with regulatory powers over the audit firms participating in the market. Prior to this shift, the market was self-regulated via the American Institute of Certified Public Accountants. Shifting from self regulation to government regulation imposed new costs on public company audit firms. This increase in cost resulted in the exodus of a number of small audit firms. This exodus forced the public company clients of the exiting audit firms to hire a new audit firm. Utilizing a difference-in-difference analysis, I find that the audit quality, as measured by discretionary accruals, of companies that were forced to switch auditors increased more than the audit quality of a peer sample. I also find that the audit firm’s level of resource constraint, as measured by public company client growth, does not moderate this increase in audit quality.
1 Introduction

Prior to the passage of the Sarbanes-Oxley Act (SOX) of 2002 the market for audits of public companies (the market) was primarily self-regulated via the American Institute of Certified Public Accountants (AICPA). SOX created a quasi-governmental, non-profit corporation called the Public Company Accounting Oversight Board (PCAOB) which effectively ended self regulation over the market. As a result of the new requirements imposed on audit firms by the PCOAB, a number of small public company audit firms exited the market. This study examines the impact to audit quality of the exodus of small public company audit firms brought about by these regulatory changes. Accordingly, this study responds to DeFond and Francis’ (2005) call for research examining the impact of these regulatory changes.

The cost of auditing public companies changed as a result of SOX. While before SOX, public company audit firms’ quality control systems were reviewed by a peer audit firm, after SOX audit firms are now required to register with and be inspected by the PCAOB. These new requirements increased the overall cost to audit firms of participating in the market by increasing regulatory scrutiny. More specifically, instead of being reviewed by a peer audit firm, audit firms wishing to participate in the market must undergo a PCAOB inspection every year or every three years depending on audit firm size.

The increase in regulatory scrutiny is one of the main costs audit firms must consider when participating in the post-SOX market. A higher level of regulatory scrutiny increases the probability an audit firm performing lower quality audits will be discovered and prosecuted. This increased probability raises the expected cost to audit firms of participating in the market. Thus, audit firms that perform lower quality audits are likely to leave the market. Clearly, if the lower quality auditors exit the market, overall audit quality will rise. However, if the lower
quality audit firm exodus is too great, the audit firms hired by the clients of exiting audit firms potentially face a state of resource constraint. If an auditor’s resources are constrained, audit quality is likely to fall. Therefore, any increase in audit quality due to lower quality auditors leaving the market may be attenuated if the clients of the lower quality, exiting audit firms hire resource constrained audit firms.

In this study, I examine four research questions. First, how has the number of public company audit firms changed since the passage of SOX? Second, how has the change in the number of public company audit firms changed the number of public clients per audit firm? Third, has overall audit quality increased or decreased as a result of the change in the number of public company auditors? Has the change in resources available to audit firms moderated any change in audit quality?

To examine the impact on audit quality of moving from self-regulation to governmental-regulation, I employ four main analyses. First, I examine the number of public company audit firms participating in the market between 2001 and 2007. I find that the number of public company audit firms decreased 38.6% from 2001 to 2007. This drop can completely be attributed to a decrease in the number of small audit firms during the same period. In 2001, 990 small audit firms participated in the market. This number decreased to 563 by 2007.

Second, I examine the change in the number of public clients per public company audit firm for each year over the same period. While prior research has shown that large public company audit firms experience a decrease in number of clients (Krishnan, Park, Vjayakumar (2008) and Glass, Lewis & Co (2005)), I show that during the period between 2001 and 2007 mid-tier and small audit firm increase the number of public company clients they audit. Specifically, I find the average yearly percentage change in number of clients for mid-tier firms ranges between
181.3% and 41.5%. The average yearly percentage change in number of public clients for small audit firms ranges between 15.9% and 24.7%.

Third, I employ a difference-in-differences univariate analysis to examine the change in audit quality, as measured by discretionary accruals, of public companies that are forced to switch auditors because their auditor exited the market. I compare the change in audit quality of companies that were forced to switch with that of companies in the same industry during the same year that did not switch audit firms. By comparing a forced switch sample of companies with a no switch sample of companies I am able to identify the impact to audit quality of increasing the cost to provide audits of public companies in the market. I find that the difference of the difference in discretionary accruals is positive and statistically significant (0.761, p-value = 0.008). This indicates that the forced switch sample experienced an increase in audit quality relative to a peer sample.

Finally, I examine the moderating effect of hiring a resource constrained auditor on any increase in audit quality due to low quality audit firms exiting the market as a result of increased market participation costs. I use public company client growth as a proxy for level of resource constraint. Using multivariate regression analysis, I find that the increase in audit quality is not attenuated by any constrain on audit firm resources.

This study makes three major contributions to the literature. First, to my knowledge, this study is the first to provide archival evidence on the costs and benefits of supplying audit services to public companies. The primary benefit of meeting the PCAOB’s requirements to audit public companies is to be eligible to earn audit fee revenues from public companies. As shown below, public company audit firms with more public clients are less likely to exit the market as the benefit of staying in the market for these firms is greater. By meeting the
PCAOB’s requirements and auditing public companies, audit firms are exposed to potentially costly regulatory scrutiny from the PCAOB and the SEC. I find a sharp decrease in the number of suppliers of the audits of public companies which suggests that SOX increased the perceived cost of regulatory scrutiny.

Second, this study adds to recent studies that examine the actions of participants in the market for audits of public companies after Enron/SOX. For example, Landsman, Nelson, and Rountree (2009) examine pre-Enron/post-Enron differences in Big N audit firms’ sensitivity to client risk and misalignment. They find evidence that Big N audit firms adjust client portfolios in response to a change in demand for audit services due ex-Andersen clients search for new audit firms and due to the new audit requirements imposed by SOX. Also, Krinshnan, Park, and Vijayakumar (2008) investigate changes in audit quality of firms that switch from Big N audit firms to mid-tier audit firms. They find that while before SOX mid-tier audit firms allowed a greater level of earnings management, after SOX, mid-tier audit firms permitted less earnings management. My study differs from Krishnan, Park, and Vijayakumar (2008) in that I examine the other end of the audit supplier spectrum. Specifically, I investigate the impact of the exodus of small audit firms on audit quality.

Third, this study contributes to the growing literature that examines whether or not the PCAOB has helped increase overall audit quality of public company audits. Three recent studies examine the impact of the PCAOB’s inspection process on audit quality by examining audit quality before and after a PCAOB inspection (Carcello and Mastrolia (2008), Gramling et. al., (2008) and Lennox (2009)). These three studies all examine the audit quality of public company audit firms that have registered with and been inspected by the PCAOB. In this study I examine the difference in audit quality between audit firms that presumably did not register with the
PCAOB and subsequently left the market for audits of public companies with those that did register with the PCAOB and remained as suppliers in the market. To my knowledge, no other study has compared these two groups of public company audit firms.

The remainder of this paper is organized as follows. In section two I discuss the changing regulatory environment of the market for audits of public companies. I then discuss the motivation and hypotheses in section three. Section four describes the data source and the results. I conclude in section five.

2 Changing Regulatory Environment

2.1 Regulatory Environment before Sarbanes Oxley

DeFond and Francis (2005) highlight two main features of the regulatory environment of the audit market; (1) the authority to write standards and (2) the authority to enforce these standards. Before SOX the American Institute of Certified Public Accountant (AICPA) possessed the authority to write standards and instituted mechanisms to ensure audit firms followed these standards. The AICPA created Generally Accepted Auditing Standards (GAAS), which outlines auditors’ responsibilities and standards of professional conduct. These standards played an integral role in the process of planning, executing, and reporting the conclusion of any audit engagement, public or private.

Prior to SOX and under SEC mandate, audit firms that audited public companies were required to join the SEC Practice Section (SECPS) of the AICPA. In an effort to ensure compliance with the GAAS, members of the SECPS underwent a peer review every three years. In the peer review, a peer audit firm reviews the audit firm’s quality control system to determine the extent to which the audit firm complied with professional auditing standards. The reviewing
audit firm then discloses any weaknesses found during the review in a report. DeFond and Francis (2005) observe that although “the ‘voluntary’ self-regulation program (including peer reviews) was made mandatory… it was still operated by the AICPA as professional self-regulation with oversight by the Public Oversight Board.” In the wake of the Enron and WorldCom scandals and along with the indictment of Arthur Andersen, congress enacted SOX which drastically altered regulatory landscape of a profession that had been self-regulated for more than 50 years.

2.2 Regulatory Environment after Sarbanes Oxley

Egregious breaches of both accounting and auditing standards provided the impetus for the creation and passage of SOX. By enacting SOX, congress shifted the regulatory onus of the public company audit market from the audit profession onto the government. Specifically, Section 101 of SOX orders the creation the PCAOB. The PCAOB retains the standard setting and the enforcement authority over audits of public companies. In an effort to fulfill its mission to “oversee the auditors of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, fair and independent audit reports” (see PCAOB.org), the PCAOB now requires public company audit firms to (1) register with the PCAOB, (2) follow auditing standards set by the PCAOB, and (3) be inspected by the PCAOB.

These three requirements impose new costs on public company audit firms. In fulfilling the first requirement, audit firms pay a registration fee that escalates with the number of the auditor’s public clients. An audit firm that has between one and forty-nine public companies clients pays five hundred dollars; while, audit firms with more than 1,001 public company clients pay $390,000. The second requirement, follow the auditing standards set by the PCAOB, implies that audit firms must initially train employees on how to follow these standards and, as this set of
standards evolves over time, continually educate its employees about standard changes. Whereas before the naissance of the PCAOB, audit firms followed audit plans that reflected the GAAS for both public and private companies, this second requirement forces audit firms to create and update two sets of audit plans; one set that follows the GAAS for audits of private companies and another that reflects the PCAOB’s auditing standards for audits of public companies.

Requirement three, be inspected by the PCAOB, imposes both direct and indirect costs on audit firms participating in the market. Audit firms with more than one hundred clients are inspected by the PCAOB once a year, while smaller audit firms, those with one hundred or less clients, are inspected once every three years. During an inspection, PCAOB inspectors select the highest-risk clients and examine the audit firm’s compliance to the PCAOB’s auditing standards. The direct inspection costs to the audit firm include: catering to inspector requests, responding to the issues identified in the inspection, and ameliorating any weaknesses or deficiencies found by the PCAOB inspectors.

The indirect cost imposed on audit firms arises from an increase in regulatory scrutiny. I argue that, because the PCAOB inspectors select the audit firm’s riskiest clients and because of the small proximity of the PCAOB and the SEC in the regulatory, the probability PCAOB inspectors will identify infractions and seek disciplinary action by involving the SEC is higher than the probability the same issues were identified and prosecuted by peer reviewers. An increase in this probability would imply that after SOX public company audits were exposed to greater regulatory scrutiny. In making this argument I acknowledge that switching from a peer review system to a PCAOB inspection system potentially trades off expertise for independence which may imply this probability decreases.
3 Motivation and Hypotheses

After SOX, participating as a supplier in the market for audits of public companies became more costly. While the registration fee may be a nominal amount, both being required to follow a different set of auditing standards when auditing public companies and operating in an environment of increased regulatory scrutiny are considerable costs that public company audit firms were not exposed to before SOX. This increase in cost is likely to have a greater impact on firms that experience a lower benefit from auditing public companies. One of the benefits of being eligible to supply audits of public companies is collecting audit fees from public companies. Therefore, smaller auditors, twenty five or fewer public clients, are more likely to exit as the benefit to remain in the market is lower than this benefit is to mid-tier and large auditors. Following this cost/benefit logic, I conjecture the following hypotheses:

**H1a:** The overall number of public company audit firms decreased between 2001 and 2007.

**H1b:** Changes in the number of small public company audit firms between 2001 and 2007 is primarily responsible for the decrease in the number of public company audit firms.

A direct implication of audit firms exiting the market for audits of public companies is that the average number of clients per audit firm will increase. Prior research finds that after SOX large audit firms decrease their number of clients (Krishnan, Park, Vjayakumar (2008), and Glass, Lewis & Co. (2005)). If large auditors are in a state of shedding clients, mid-tier and small audit firms are likely to absorb both the clients shed by large auditors and the clients of audit firms that exit the market. Accordingly, I posit the following hypothesis.

**H2:** The average change in the number of engagements per mid-tier and small audit firm is increasing during the period from 2001 to 2007.
As I discussed in the previous section, switching from self-regulation to governmental regulation increased regulatory scrutiny within the market for audits of public companies. In an environment of heightened regulatory scrutiny, audit firms that perform lower quality audits are more likely to face regulatory scrutiny. The increase in probability of having lower quality audits discovered and prosecuted increases the expected cost of performing audits of public companies for all audit firms but is more pronounced for audit firms that perform low quality audits. This implies audit firms that exit the market for audits of public companies are those that perform lower quality audits. If this is true, then overall audit quality should have increased as a result of the transition from self-regulation to government-regulation. Using discretionary accruals as a proxy for audit quality, I hypothesize the following:

**H3**: The discretionary accrual level during the last year with an audit firms that exited the market is greater than the discretionary accrual level during the first year with the new auditor.

Operationalizing earnings management through discretionary accruals is well established (e.g., Dechow, Sloan, and Sweeney (1995), Kothari, Leone, and Wasley (2005)), and despite the shortcomings of discretionary accrual models, it continues to be used as a proxy for earnings management. (e.g., Prawitt, Smith, and Wood (2009)).

The increase in audit quality posited by H3 may be attenuated by the new audit firm access to resources. At the same time the number of small audit firms supplying audits of public companies was decreasing, the large audit firms were trimming their client portfolios. Therefore, a decrease in the number of small audit firms and a decrease in the average number of clients per large audit firm implies a positive increase in the average number of clients per mid-tier and non-exiting small audit firm. If the mid-tier and small audit firms that increase the size of their public
client portfolio and fail to increase their resources as fast as client growth, these audit firms may be performing audits while being resource constrained. By using client growth as a proxy for level of resource constraint I conjecture hypothesis four.

**H4**: Client growth of audit firms hired by companies forced to switch audit firms due to their audit firm exiting the market moderates the decrease in discretionary accruals from the last year with the exiting audit firm to the first year with the new audit firm.

4 Data and Results

4.1 Changes in the supply of audits of public companies

I obtain data on the number of public clients per audit firm from the AuditAnalytics Audit Opinion database. Using this database, I calculate the number of clients per audit firm for 2001 to 2007 and auditor type (i.e., Small, Mid-Tier, Large). Large auditors are defined as auditors with more than 1,000 clients during per year. Small audit firms have 25 or less clients, while mid-tier audit firms have between 1,000 and 25 clients. Table 1 lists the number of audit firms supplying audits of public companies by year and by type. Table 1 also provides the total and average number of audit clients during each year for the whole sample and for each audit firm type.

<INSERT TABLE 1 HERE>

Table 1 Panel A shows the number of audit firms participating in the market for audits of public companies decreased from 1,029 in 2001 to 631 in 2007. This is a 38.7% decrease in the number of audit firms supplying audits of public companies. Observing such a decrease in the number of public company audit firms provides evidence consistent with H1a.
By separating audit firms by type I am able to examine H1b. Panel B of Table 1 shows that the number of large audit firms remains relatively unchanged. Large audit firms consist of the Big Four accounting firms with Arthur Andersen included during 2001 and Grant Thornton included during 2005 and 2007. In 2007, there were 63 Mid-tier audit firms. This was an 85.3% increase from the 34 Mid-tier audit firms in 2001\(^1\). H1b conjectures that the large decrease in all public company audit firms comes mainly from changes in the number of small audit firms as the cost of participating in the market may outweigh the benefit. As Table 1 indicates the all of the drop in the number of public company audit firms can be account for by the drop in the number of small audit firms. In 2001 there were 990 small audit firms. In 2007 this number dropped to 563. This 43.1% drop is consistent with H1b.

To examine H2, I calculate the average change in the number of public company clients for each audit firm\(^2\). Panel A of Table 1 displays the average percentage for the whole sample of audit firms. In 2001, the average audit firm had 15.52 public clients, while in 2007 this average was 25.16. Once again, by splitting the whole sample by audit firm type I can examine my conjectured hypothesis. Panel B of table 1 presents average change in the number of public clients per audit firm. For large audit firms this average increased in 2002 and 2003. However, after 2003 this average decreased every year. This result is consistent with prior research that shows, during the post-SOX period, Big 4 audit firms on average jettisoned clients while rebalancing client portfolios (Landsman et. al. (2009), Glass, Lewis & Co. (2005), Krishnan, Park, Vjayakumar (2008), etc.) Panel B displays the average change in the number of public clients per audit firm for mid-tier and small audit firms. For both types, this average is

\(^1\) This indicates that a number of the small audit firms absorbed enough of the clients of exiting audit firms to move from the small auditor type to the mid-tier auditor type.

\(^2\) The percentage change is calculated by subtracting the number of clients during year \(t-1\) from the number of clients during year \(t\) and then dividing by the number of clients during year \(t\).
increasing over the time period. This is consistent with the mid-tier and small audit firms
absorbing those companies that were forced to switch audit firms due to their audit firm exiting
the market. This evidence is also consistent with H2.

4.2 Change in Audit Quality of companies forced to switch auditors

I examine the change in audit quality, as measured by the change in discretionary accruals,
for companies that were forced to switch audit firms due to their predecessor audit firm leaving
the market. I identify audit firms that exit the market as those that drop out of the
AuditAnalytics database before 2007. After identifying exiting audit firms, I identify the public
clients of these exiting audit firms during the audit firm’s last year in the market and include
them in my forced switch sample. Therefore, this sample includes companies that were audited
by exiting audit firms during the firm last year in the market and likely would have continued as
a client of the exiting audit firm if SOX had not increased the costs of participating in the market.
By examining the exiting audit firms’ clients I am able to isolate the effect of the changing
regulatory environment on audit quality. I compare the difference in discretionary accruals for
the forced switch sample to the difference in discretionary accruals for a peer sample.

I select the peer sample by including all companies in same industry as the forced switchers
during the last year the forced switcher was audited by the exiting audit firm. I exclude
companies that were audited by big 4 audit firms to increase the comparability between the
forced switch sample and the peer sample.

After pooling the forced switch sample with the peer sample, I estimate the modified Jones
model to calculate discretionary accruals (Dechow, et. al. (1995)). I estimate the model for each
year and Fama and French (1997) industry in my sample. I require there to be at least ten
industry observations. Specifically, I estimate the following model:
\[ TA_{it} = \beta_0 + \beta_1 A_{it-1}^{-1} + \beta_2 (\Delta \text{REV}_{it} - \Delta \text{AR}_{it}) + \beta_3 \text{PPE}_{it} + \beta_4 \text{ROA}_{it} + \epsilon_{it} \]

Following Hribar and Collins (2002), I calculate total accruals, \( TA_{it} \), by using variables from the statement of cash flows to ensure any change in total accruals is not driven by non-operating changes. \( \Delta \text{REV}_{it} \) is the change in revenue and \( \Delta \text{AR}_{it} \) is the change in accounts receivable. \( \text{PPE}_{it} \) is the firm’s property, plant and equipment. \( \text{ROA}_{it} \) is measured as net income over assets. \( TA_{it}, \Delta \text{REV}_{it}, \Delta \text{AR}_{it}, \) and \( \text{PPE}_{it} \) are scaled by prior period assets. Discretionary accruals are the absolute value of the residuals of this model.

Table 2 reports a difference-in-differences univariate analysis of the discretionary accruals for the forced switch sample and the peer sample. I calculate the difference between discretionary accruals during the post year and the pre year. I then take the absolute value of this difference to measure the change in discretionary accruals. A high number indicates a large change in discretionary accruals while a low number indicates a small change. The difference between the post year and the pre year is 0.593 (p-value <0.001) for the Switchers and 1.354 (p-value <0.001) for the Peers. In order to test H3, I examine the difference between the SWITCHERS and the PEERS post year and pre year difference. I find that the difference in these differences is 0.761 (p-value = 0.008). This is consistent with H3. That is, a company required to switch auditors due to its predecessor audit firm leaving the market observes a smaller change in discretionary accruals when compared to a peer group.

<INSERT TABLE 2 HERE>

Finally, to test H4, I run a difference-in-differences regression model. A difference-in-differences model can be used when analyzing how two groups differentially change over time. In this context, I analyze how discretionary accruals changed for both the forced switch sample
and the peer sample. With both the switch sample and the peer sample pooled, I estimate the following model first with the Client_Growth variable and then without.

\[ \text{abs}(DAC) = \beta_0 + \beta_1 \text{Post} + \beta_2 \text{Switcher} + \beta_3 (\text{Post} \times \text{Switcher}) + \beta_4 \text{Client}_\text{Growth} + \epsilon \]

The dependent variable \( \text{abs}(DAC) \) is the absolute value of discretionary accruals. \text{Post} is an indicator value that takes on the value of 1 when the observation is from the second year, zero otherwise. \text{Switcher} is also an indicator variable that is equal to 1 when the company was forced to switch auditors, zero otherwise. The interaction between \text{Post} and \text{Switcher} represents the difference in differences. A negative coefficient implies the companies forced to switch auditor experienced a greater increase in audit quality, as measured by discretionary accruals, than their peers. \text{Client}_\text{Growth} is the percentage change in the number of public clients audited by each company’s auditor. By including \text{Client}_\text{Growth} in this equation I am able to examine the difference-in-differences while controlling for the extent to which the auditor is resource constrained.

Table 3 provides the results of the difference-in-differences model estimation. The difference in differences coefficient, \( \beta_3 \), is significantly negative regardless of whether or not I control for constrained resources. In that \( \beta_3 \) is significant in both models 1 and 2, I fail to find evidence that a decrease in audit quality is moderated by how resource constrained an auditor may be. Therefore, I fail to find evidence to support H4.

<INSERT TABLE 3 HERE>

5 Conclusion

SOX drastically altered the regulatory landscape of the market for audits of public companies. In creating the PCAOB, SOX increased the cost to participate as a supplier in the
market. As a result of the increased cost, a number of the smaller audit firms ceased to audit public companies. By no longer supplying audits of public companies, audit firms forced their public companies clients to find a new audit firm to perform the audit function. With a smaller number of audit suppliers in the market, the remaining audit firms, on average, increased the number of public clients they audit.

The main cost driving the exodus of smaller audit firms was an increase in regulatory scrutiny. Accordingly, audit firms performing lower quality audits were more likely to exit and overall audit quality increased. By examining the change in audit quality, as measured by discretionary accruals, I find audit quality increased more for companies forced to switch audit firms when compared to a peer group that did not change auditors. This is consistent with SOX increasing overall audit quality.

A decreasing number of suppliers of public company audits imply that resources of audit firms may be strained. I find that level of resource constraint, as measured by public company client growth, fails to moderate an increase in audit quality.
References


Table 1. Shrinking Suppliers of Public Company Audits (2001 - 2007)

Panel A of this table reports for 2001 to 2007 the number of public company audit firms, the number of audit clients, the mean number of clients per firm and mean percentage change in the number of clients per firm. Panel B reports these numbers and averages by audit type. Large Audit Firms have more than 1,000 clients. Mid-tier Audit Firms have between 1000 and 26 clients. Small Audit Firms have 25 or less clients. Audit firm types are reclassified each year. These data are obtained from AuditAnalytics Audit Opinion database.

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<td>All Audit Firms</td>
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<td>831</td>
<td>703</td>
<td>657</td>
<td>662</td>
<td>631</td>
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<td>15,973</td>
<td>15,687</td>
<td>17,555</td>
<td>16,440</td>
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<td>15.52</td>
<td>16.55</td>
<td>21.13</td>
<td>23.39</td>
<td>24.95</td>
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<td>22.6%</td>
<td>26.5%</td>
<td>31.6%</td>
<td>28.6%</td>
<td>30.7%</td>
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<td>Audit Clients</td>
<td>10,203</td>
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<td>10,173</td>
<td>10,652</td>
<td>8,765</td>
<td>9,395</td>
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<td>19.1%</td>
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<td>-3.5%</td>
<td>-9.0%</td>
<td>-2.6%</td>
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<td>Mid-tier Audit Firms</td>
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<td>32</td>
<td>39</td>
<td>47</td>
<td>53</td>
<td>61</td>
<td>63</td>
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<td>Audit Clients</td>
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<td>2,565</td>
<td>2,694</td>
<td>3,364</td>
<td>2,769</td>
<td>4,186</td>
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<td>Mean Clients per Firm</td>
<td>75.26</td>
<td>80.16</td>
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<td>Mean % Change in Number of Clients</td>
<td>181.3%</td>
<td>81.7%</td>
<td>132.2%</td>
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<td>3.24</td>
<td>3.55</td>
<td>3.89</td>
<td>4.45</td>
<td>4.96</td>
<td>5.01</td>
<td>5.21</td>
</tr>
<tr>
<td>Mean % Change in Number of Clients</td>
<td>15.9%</td>
<td>23.4%</td>
<td>23.8%</td>
<td>24.7%</td>
<td>24.4%</td>
<td>23.8%</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Difference-in-Differences Analysis of Discretionary Accruals

<table>
<thead>
<tr>
<th></th>
<th>Pre-Switch (n = 4076)</th>
<th>Post-Switch (n = 4076)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switchers (n = 570)</td>
<td>0.2969</td>
<td>0.3991</td>
<td>Switchers: Post - Pre</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.593 (&lt;0.001)</td>
</tr>
<tr>
<td>Peers (n = 3506)</td>
<td>0.587</td>
<td>0.6345</td>
<td>Peers: Post - Pre</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.354 (&lt;0.001)</td>
</tr>
<tr>
<td>Difference in Differences Peer(Post - Pre) - Switchers(Post - Pre)</td>
<td></td>
<td></td>
<td>0.761 (0.008)</td>
</tr>
</tbody>
</table>
Table 3. Difference-in-differences Regression Analysis

This table reports the difference in differences regression analysis. The dependent variable is absolute value of discretionary accruals. The independent variables are defined as follows: Post = dummy variable equal to 1 if the observation is from the year following the forced switch, Switcher = dummy variable equal to 1 if the company was forced to switch audit firms, and Client_Growth = percentage change in the number of public clients of the company's audit firm. P-values are in parentheses. (N = 6,664)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.576</td>
<td>0.574</td>
</tr>
<tr>
<td></td>
<td>(&lt;0.001)</td>
<td>(&lt;0.001)</td>
</tr>
<tr>
<td>Post</td>
<td>-0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(0.821)</td>
<td>(0.871)</td>
</tr>
<tr>
<td>Switcher</td>
<td>-0.015</td>
<td>-0.016</td>
</tr>
<tr>
<td></td>
<td>(0.909)</td>
<td>(0.907)</td>
</tr>
<tr>
<td>Post*Switcher</td>
<td>-0.321</td>
<td>-0.323</td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.031)</td>
</tr>
<tr>
<td>Client_Growth</td>
<td>0.006</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.485)</td>
</tr>
<tr>
<td>Adj R-Sq</td>
<td>0.004</td>
<td>0.004</td>
</tr>
</tbody>
</table>