# Market Reaction to Auditor Switching from Big Four to Smaller Accounting Firms


## Abstract

After the demise of Arthur Andersen, the public accounting industry has witnessed a significant migration of smaller clients to second tier (Grant Thornton and BDO Seidman) and smaller third-tier audit firms. While prior literature documents that smaller auditors are perceived by the stock market as an inferior substitute to a Big Four auditor, this perception appears to have changed in recent years. In this paper, we analyze data on auditor changes from Audit Analytics during the period 2002 to 2006. Our results indicate that the market rewarded audit clients switching from Big Four to mid-tier firms during the period 2002 to 2006, and to smaller third-tier auditors in the period after August 23, 2004. This latter result is particularly strong for larger audit clients, evident from a one percent market-adjusted return over a five-day window. Overall, our results suggest that investors have become more receptive to smaller accounting firms since these firms, like Big Four, may also be competent in providing high quality audit services to public companies.

Concerning high market concentration in the audit profession, regulators have been encouraging companies to select smaller accounting firms as their auditors. However, companies often worry about the investors' negative perception of using a non-name brand accounting firm. Our results should help ease such a worry; hence, enhance the regulators' encouragement of using small accounting firms to improve competition.


*Keywords: Market reaction, Auditor switching, Big Four, Small accounting firms*

## I. Introduction

After the Enron debacle and the failure of Arthur Andersen, the top-tier firms in the public accounting industry were reduced to four firms that occupy more than 98% of the market.[1] Regulators around the world were concerned about the degree of concentration in the audit profession. In a speech at the AICPA annual national conference on December 11 2006, Mark Olson, Chairman of the Public Company Accounting Oversight Board, expressed his concerns over the currently high level of concentration and his hope for future improvement:

> "*However, I am encouraged by the growth in size and skill taking place in firms following the Big 4. This will allow the market – in particular for small, medium, and even some larger issuers - to have additional choices, which I believe is important for the resiliency of the audit.*"

A year earlier (December 5, 2005), Christopher Cox, Chairman of the U.S. Securities and Exchange Commission, had also expressed his concern and encouraged public companies to consider hiring smaller accounting firms:

> "*In the very short run, however, there are modest steps that the SEC and the AICPA can take together to support competition and choice in the market for smaller public company auditing services. Certainly, a company that doesn't need the global reach or other unique services of the Big Four should feel it has the option of using other firms for audit services, non-audit services, or both. The Commission staff has found that there are many medium and small accounting firms that provide high quality audit services. It's easy for audit committee members to find information about these firms — in fact, significant portions of their inspection reports are available on the PCAOB web site.*"

Further echoes of these sentiments were expressed by members of the PCAOB. PCAOB member Kayla Gillian at the October 24, 2005 Association of Corporate

[1] Based on Audit Analytics data, audit fee market share (audit fees/total audit fees) for the Big 5/Big4 was about 98% in 2001 and 2002, which reduced to 96% in 2005 and further reduced to 94% in 2006.

Counsel annual meeting stated, "*I urge audit committees to challenge the assumption that they must use a Big Four audit firm, or risk perceived as somehow lesser worth*" (Nusbaum 2005). Then PCAOB Chairman William McDonough, expressed similar concerns in a Wall Street Journal article published on 17 October 2005, saying the PCAOB now encouraged issuers to:

> "*...really look for an audit firm that makes sense for... them. There's been a sort of a notion that rating agencies and maybe your lenders will think it's particularly spiffy if you're a small or medium sized company and you deal with a Big Four firm. Frankly, I don't think that makes a whole lot of sense*."(Q&A: William McDonough 2005)

While regulators believe that there are many smaller firms that are qualified to audit public companies and regulators are encouraging public companies to select them for auditing or non-auditing services, one of the biggest hurdles could be the "red-flag" that the stock market perceives when a company switches auditors, especially, switch to a smaller accounting firm. Prior to 2002, auditor changes often involved firms that are experiencing going concern and/or auditor disagreements; hence, the market responded negatively to the announcement of auditor changes. The majority of prior studies suggest that clients who switch auditors are more likely to be riskier.[2] Riskier clients are evident from poorer economic performance (Dhaliwal, Schatzberg, and Trombley 1993), greater agency conflicts (DeFond 1992), higher litigation risk (Krishnan and Krishnan 1997; Shu 2000), greater likelihood of violating debt-covenants (DeFond and Jiambalvo 1994), and of being issued a going-concern audit opinion (Krishnan and Stephens 1995; Chow and Rice 1982; DeFond and Subramanyam 1998; Carcello and Neal 2003). These riskier clients may be seeking a more favorable audit opinion by dismissing the incumbent

[2] They are also likely to have poorer information quality. A few studies have also reported that some auditor switching is for seeking lower fees and better service.

auditor (Haskins and Williams 1990; Schwartz and Menon 1985; Schwartz and Soo 1995; Dhaliwal, Schatzberg, and Trombley 1993) and thereby attempting to suppress unfavorable information (Kluger and Shields 1989).

Auditor switches are typically perceived as clients' opinion shopping or disagreements with their auditors, but this situation may have changed after the passage of the Sarbanes-Oxley act (SOX hereafter) in July 2002. Specifically, the evaluation of internal control effectiveness as required by Section 404 of SOX has increased the demand dramatically for auditing services. As the Big Four accounting firms reach full capacity, they have been dropping clients. As a result, public companies that are not big enough to be attractive to Big Four auditors, would want to switch to smaller accounting firms to obtain more personalized service, less turnover in audit team members, and more experienced team members (Louis 2005). This is also evident from the trend that more IPO's are relying on smaller accounting firms. Commenting on Grant Thornton's report, the Wall Street Journal noted that investors have become more receptive to smaller accounting firms (Reilly 2006). Since the PCAOB endorses the decision to shift to smaller accounting firms, investors may view the savings from lower audit fees outweigh the cost of lower audit quality or view similar audit quality between small and large accounting firms for larger clients, particularly when prior research shows that larger clients, who are more likely to be audited by a name brand auditor, receive more audit adjustment waivers (Wright and Wright 1997) and more leniency in managing earnings (Nelson, Elliott, and Tarpley 2002).

In a report, Grant Thornton provides empirical evidence that investors do not respond negatively to auditor changes from the Big Four to Grant Thornton (Whisenant

2006). Our study differs from that contained in the Grant Thornton report in that we examine how the market responds to auditor changes from Big Four firms to smaller (Small) accounting firms below the top 6 accounting firms (i.e. the Big Four and the Medium Two).[3]

To increase competition in the auditing profession, the participation of companies is crucial. If companies are not afraid of the market's misperception of auditor changes, we should see an increasing trend of switching from Big Four to Small accounting firms assuming public companies can find competent smaller accounting firms to suit their needs. Furthermore, if the market is receptive to auditor switching from Big Four to Small firms, we should not see a negative market response and we may even see a positive response if the market perceives such a switch benefits the company. Therefore, the objective of this paper is to document market responses for public companies switching from Big Four to Small accounting firms and to assess whether the evidence supports the regulators' belief in smaller firms and their encouragement for change.

Analyzing data on auditor changes from Audit Analytics[4], we find the ratio of switches to smaller firms out of all the switches from the Big Four has been increasing. For public companies, the ratio rises from 37.5% (out of 349 switches) in 2003 to 52.4% (out of 418 switches) in 2006. This trend suggests an increasing degree of comfort by public companies and Wall Street with respect to the perception of switching from a Big Four to a smaller accounting firm. Further, using stock return data from CRSP[5] over the

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[3] Based on audit fees filed in 2006, the Big Four occupy about 92.6% of the total market share followed by Grant Thornton (1.6%) and BDO Seidman (1.7%). The rest (about 643 firms reported in the audit fee data set from Audit Analytics) are the smaller firms with the highest one occupying only 0.2%.
[4] We use the 8-K filing data compiled by Audit Analytics who provide comprehensive coverage of audit industry: http://www.auditanalytics.com/.
[5] We use the daily return and price data from Center for Research in Security Prices: http://www.crsp.chicagogsb.edu/products/index.html

five year period from February 2002 to December 2006, we find that the market rewarded firms switching from Big Four to non Big Four. Specifically, the market rewarded smaller public companies switching from Big Four to Middle Two accounting firms for the period prior to August 23, 2004, but rewarded *large* public companies switching from Big Four to Small accounting firms for the period after August 23, 2004.

Our result that *the market rewards large companies who switch from a Big Four to a Small accounting firm in recent years*, has the following important implications. First, the market perceives the economic benefits from the audit switch to be positive. This may be a result of the company receiving more personalized services from the small accounting firm which assists management in making better decisions (Louis 2005). Second, smaller accounting firms are able to provide better quality services since the audit team may be staffed with more senior personnel and may have less turnover (Louis 2005). Third, companies choose the lower fee charged by the smaller audit firm given that the Big 4 audit risk premium is higher and the audit quality is similar (Hogan 1997). Finally, a more aggressive implication is that the market rewards large public companies in performing their social responsibility of engaging smaller accounting firms (assuming no loss of economic benefits). According to the political cost theory, larger companies with stronger corporate governance may be willing to forgo Big Four expertise to gain public favor by following the PCAOB view that non Big Four accounting firms are an acceptable alternative. Moreover, larger companies may have enough in-house expertise; hence, less need for expertise from Big Four than smaller companies.

The remainder of our paper is structured as follows. Section II reviews and discusses prior literature. Section III presents and discusses our empirical results and Section IV concludes the paper.

## II. Prior Literature

Early studies of stock market reactions to auditor changes found negative or insignificant results. Fried and Shiff (1981) found a negative market reaction to auditor switches between 1972 and 1975 for companies that switched to a Big 8 accounting firm, using a 21 week window (-10,0,10). In contrast, Nichols and Smith (1983) observed that there was no significant reaction to auditor changes between 1973 and 1979 using a shorter 8 week window (-4,0,3). Similarly, Johnson and Lys (1990) did not find a significant stock price reaction for auditor changes from 1973 to 1982 using a 3 day window around the time of the change announcement.

Later studies used a shorter event window and mostly found a negative market reaction to the auditor change announcement. For example, Smith (1988) examines auditor changes between 1975 to 1982 and finds a negative and significant market reaction, using a one week event window, when a new auditor has not yet been appointed. DeFond et al. (1997) find a significant negative market reaction to an auditor resignation, between 1982 and 1987, using three event windows: from the auditor resignation date to the 8-K filing date, from the receipt of the 8-K filing through the following four business days (0,4), and combining these two periods. Wells and Loudder (1997) find a significant negative market reaction to auditor resignations, between 1988 and 1991, using a two day window (0,1). Similarly, Shu (2000) finds a significant negative market reaction on the announcement date (0,0) to an auditor resignation, between 1987 and 1996. Whisenant et al.(2003) find a significantly negative market response to an auditor change arising from weaknesses in internal controls and financial statement reliability concerns, between 1993 and 1996. Recently, Beneish et al. (2005) extends Whisenant et al.(2003) by adding controls for confounding events around the time of the auditor change announcement (e.g. earnings and management changes). Based on resignation announcements from 1994 to 1998 and using a three day window (-1,1), Beneish et al. find negative market responses to resignations only for those resignation announcements which provide a reason (disagreements over accounting treatment or over the adequacy of internal controls). Knechel, Naiker and Pacheo (2007) use a 3 day window(-1,1) to find a negative market response to companies that switch between an industry specialist auditor and a non-industry specialist in the 2000 to 2003 period. However, their sample period does not include the period when SOX Section 404 became effective in 2004.

While prior market studies have generally found a negative response to auditor switch announcements, few studies document a positive market reaction to the recent migration of larger clients from Big Four to smaller third-tier auditors. Sankaraguruswamy and Whisenant (2004) provides some evidence that the market responds positively to service and fee reasons, using a 7 day window (-5, 1), albeit the results are only marginally significant ($p<0.1$); and the time period examined,1993 to 1996, predates the SOX/Andersen era. Whisenant (2006) examines whether the market responds negatively to auditor changes from a Big Four audit firm or Arthur Andersen to Grant Thornton, during the period 2002 to 2006. He finds a non-negative market return (p=0.06) with a 11 day window (-5, 5) for auditor changes from Big Four (excluding Arthur Andersen) to Grant Thornton who are large clients. However, his study is restricted to Grant Thornton, rather than small third-tier firms, and it does not use market-adjusted returns to control for the economic trend reflected in the aggregate market response. Knechel, Naiker and Pacheo (2007) find a positive stock market response, with a 3 day window (-1,+1), between Big 4 auditors when the successor is a industry specialist auditor, and when the switch is between a non-Big 4 auditor and a Big 4 auditor who is not a specialist. However, their sample only examines the 2000 to 2003 period, and does not include examine the subsequent period when SOX Section 404 became effective in 2004 and when regulators encouraged companies in 2005 to switch to a non-Big 4 auditor.

As suggested by prior literature, a positive market response to auditor changes from a Big Four auditor to a smaller third-tier auditor may be imminent. Anecdotal evidence in the financial press, e.g. (Reilly 2006), suggests that investors are more receptive to companies switching to a smaller accounting firm. Auditors of larger clients are more likely to allow earnings management by their most important clients (Nelson, Elliott, and Tarpley 2002) by waiving more audit adjustments (Wright and Wright 1997). If detection of earnings management by an auditor is lower for larger clients, switching from a Big 4 auditor to a smaller audit firm may not change audit quality, if existing corporate governance is strong. Investors may view an audit switch by a large client with stronger corporate governance to a smaller less expensive audit firm as support for the PCAOB view that smaller audit firms are an acceptable alternative. Higher audit fees demanded by Big Four auditors over smaller third-tier auditors (Ho and Wang 2006) may indicate that Big Four auditors are pricing themselves out of the market if they charge a higher risk premium than smaller third-tier auditors, as Hogan (1997) observed with IPO companies. Service related reasons, such as more personalized services, more experienced personnel assigned, and more consistent audit team membership (Louis 2005) suggests that smaller third-tier audit firms may be an attractive audit alternative that could evoke a positive stock market response as also found in the pre-Enron era for such reasons (Sankaraguruswamy and Whisenant 2004).

## III. Empirical Analysis

Trend of Switching from Big Four to Smaller Firms

Based on 8-K filings compiled by Audit Analytics, we first analyze the trend of auditor switching. Since this study focuses on switching from Big Four to Small firms, we consider only firms that already have an auditor before the change and exclude initial public offerings. Table 1 summarizes the audit switching trend: Panel A reports for all companies that have filed such a change, Panel B is for companies whose common stock securities are publicly traded, and Panel C reports a restricted sample of public companies in Panel B that dismissed their auditors. For comparison purposes, however, we also list the switches among the Small accounting firms.

[Table 1]

Beginning with Panel A Table 1, the total number of auditor changes was highest in 2002 due to the failure of Arthur Andersen. Focusing on publicly-traded companies, Panel B reports a total 1,495 auditor changes by public-traded companies in 2002. In 2003, the total changes were reduced to 914; however, it increased to 1,274 in 2004. It is likely that the dramatic increase in auditor changes starting in 2004 is due to the implementation of Section 404. The number of changes increased slightly to 1,356 in 2005 and decreased slightly to 1,290 in 2006. Out of the total changes in 2006, slightly less than one sixth (17%) are from switching from a Big Four to a Small audit firm and the majority of the changes (58%) are switching from Small to Small. Out of the switches from Big Four, the ratio of switches to Small by companies with publicly-traded common stock increased from nearly 0% in 2002 to more than 50% in 2006. It is worth noting that the ratio of switching to Small from Small firms increases in 2002 (about 90%) with only a small increment in later years.

As the Big Four reached full capacity especially in the post SOX era, the Big Four have had to drop some of their less desirable clients (i.e. less profitable/more risky). However, a comparison of Panels B and C shows that the majority of the departures from the Big Four are initiated by the client. The number of publicly-traded companies that the Big Four resigned from increased from 76 in 2003 to 137 in 2004 (compare Panel B and Panel C) and decreases to only 78 in 2006. The increasing ratio of *Dismissed* cases (a 10% increase from 2004 to 2006) is consistent with the assumption of the increasing comfort level for public companies to switch from Big Four to Small accounting firms. If investors have significantly punished the companies that switched from Big Four to Small in 2005, we should not expect an increase in Big Four dismissals in 2006.

<u>Final Sample with Return Data</u>

To evaluate the market reaction to auditor changes, we collect daily returns from CRSP for each case of auditor change filed after January 2002. We focus on the period after the demise of Arthur Andersen because the audit profession and the market perception have changed dramatically. It is likely that *auditor change* will no longer be perceived as a negative event.[6] Our final sample requires observations to have both departed and engaged auditors, filing date, return and market value data[7]. This limitation generates a total of 1,824 observations for our final sample.[8] Table 2 provides descriptive statistics.

[Table 2]

Table 2 Panel A reports key variables we use in our analyses. We use market capitalization to measure firm size. Our sample has a wide spectrum of firm sizes. The mean is around $2 billion and the median is only $340 million, indicating varying firm sizes. The daily return has a mean of zero and a median of -0.001. The value-weighted market return[9] has a mean and a median that are both zero. The cumulative daily return over (-11,0) has a mean of -0.004 and a median of -0.001. However, the market-adjusted return (i.e. cumulative daily return less value-weighted market return) mean and median are both positive, both equal to 0.001. Similarly, returns cumulated over (-4,0) have a negative mean and median (-0.002), however, the market-adjusted return is non-negative. These simple statistics tell us that auditor changes, on average, do not draw a negative market response.

Panel B provides types and reasons for auditor change. *Dismiss* means the company dismissed its auditor (rather than the auditor resigned). Out of 1,824

[6] Grant Thornton's study by Whisenant uses the observations from January 1, 2002 to May 23 2006. Our sample period is similar to his except we exclude January since there are still filings of changes to Arthur Anderson. Also, we extend his period to December 31, 2006.
[7] We deleted one observation since it had the most extreme positive return.
[8] Merging the Audit Analytics and the CRSP file is challenging. To ensure a correct merge, we also verify data from Compustat with data from Audit Analytics such as with total assets. Hence, our sample firms also have to be included in the Compustat database.
[9] Value-weighted market returns are based on the CRSP value-weighted returns (including distributions) for the event period in question.

observations, 84.2% auditor changes are dismissals. In some cases, the company only switched auditors for its subsidiary, its retirement plan, or because of a merger or acquisition. Panel B reports 1.1% of switches are for its subsidiary, 13.7% are for its retirement plan and only 0.7% are for a merger or acquisition. Reasons for auditor changes are coded by Audit Analytics. We categorize them into three groups: Fee Reduction, Type 1, and Type 2. Type 1 reasons are likely to be bad from the company's perspective, e.g. financial restatement, audit opinion concerns and SEC investigation. Type 2 reasons are likely to be benign from the company's perspective such as scope limitation, PCAOB registration and auditor merger. Many of these reasons have very few observations when considered individually. Hence, we develop a dummy variable for Fee Reduction, Type 1, and Type 2 reasons, respectively. For each type, we code 1 if an observation has any of the reasons in that type. These dummy variables are used in the multivariate regression analysis.

It is surprising to see that Fee Reduction, as a reason for auditor change, has only 37 cases. The highest number of reasons are Internal Controls (261 cases) and Reportable Conditions (228 cases). The low percentage of reasons provided may be due to the ineffectiveness of coding developed by Audit Analytics or the lack of transparency in providing reasons in 8-K filings. While this creates errors in data and reduces the estimation efficiency, our conclusion on relative comparisons between different groups should not be affected if we assume this error is distributed randomly across groups. In other words, if this error biases the estimates of effect for Big Four switching to Small, the bias may also apply to other types of switching. Hence, relatively, we can still make inferences by comparing the effects of different groups of switching.

Univariate Analysis of Market Return During the Event Windows

This section analyzes the market reaction during specified event windows for two periods: Period One is prior to August 23, 2004 and Period Two is post August 23, 2004.

Typically, an event study examines dates surrounding the occurrence of an event. While a shorter window has advantages of capturing the direct effect of a specific event, whereas a longer event window has a higher chance to capture market effects of an event. Prior to 2002, academic studies have shown that the 8-K filing dates are usually too late to capture the market's reaction.[10] This is because the trigger event usually occurs prior to the filing date and news announcements are likely to be out way before the filing date.

On June 17, 2002, the SEC proposed to increase the number of events required to be disclosed on Form 8-K and to accelerate the filing deadline. This proposal shortens the form's filing deadline from five business days (7 calendar days), depending on the particular event, to two business days with an automatic two business day extension upon a company's filing of a Form 12b-25. After hearing public comments, the SEC finally decided to shorten the filing date to four business days without requiring filing of Form 12b-25. This new rule became effective on August 23, 2004. However, prior to August 23, 2004, notice of an auditor change was required to be filed within 5 business days. Since then the new rule changed it to 4 business days. Hence, ideally, event windows should be specified as (-5,0) prior to August 23, 2004 and (-4,0) post August 23, 2004. The effectiveness of using statutory rules to specify the correct event window depends upon public companies' compliance rate. Studies have shown the compliance rate is low (Carter and Soo 1999; Schwartz and Soo 1996). However, after the implementation of

[10] Carter and Soo (1999) summarized some of the literature. Schwartz and Soo (1996) documented a third of the sample over 1988-93 was late in filing.

Sarbanes-Oxley Act, especially, Section 404 on evaluation of internal control effectiveness,[11] the compliance rate should have improved. Hence, the short window of (-4, 0) should effectively capture the trigger event date in recent years.[12] This claim can be supported by the common belief that SOX, SEC investigations and public scrutiny have raised companies' awareness of compliance since penalties for noncompliance (either explicitly or implicitly) are much larger than before. Since timely compliance is less likely prior to August 23, 2004, we use a longer event window (-11, 0)[13] for observations prior to August 23, 2004, and for observations after August 23, 2004, we use the statutory event window (-4, 0).[14] Table 3 reports market responses to auditor changes from Big Four to Small (BtS), Big Four to Medium Two (BtM) and Big Four to Big Four (BtB) for the two event periods.

[Table 3]

Table 3 Panel A reports results for auditor changes filed prior to August 23, 2004. For each change group, Table 3 provides the number of observations, the mean daily return, the mean market-adjusted return and their respective p-values. The first major column heading "Dismiss and Resign" reports all Big Four auditor changes (resignations and dismissals) and the second major column heading "Dismiss Only" only reports dismissals of Big Four auditors. To measure whether a company's stock market return resulted from a triggering event and not from a change in the aggregate stock market level, the market-adjusted return is used in this study. Market-adjusted return is defined

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[11] On the list of items for internal control over financial reporting as required by Section 404, compliance of SEC required filing dates is also an item for companies and auditors to check.

[12] In our regression analysis, we provide some analysis to compare different windows specifications.

[13] We select -11 trading days to match with the 15 calendar days even though auditor change is required to be filed within 5 business days.

[14] These event windows are for our main analysis. We have also varied the event windows as a robustness check.

as the buy and hold return (daily return) less the value-weighted market return, accumulated over the return window.

Panel A indicates that prior to August 2004, the market responded positively to switches from Big Four to Medium Two (BtM) firms. Whether comparing the mean daily return or the mean market-adjusted return, for either the Dismiss and Resign group or the Dismiss Only group, the BtM auditor changes have the highest mean returns, when compared to either BtS or BtB auditor changes. Specifically, companies that had a BtM auditor change earned a 3.5% average market-adjusted return over (-11,0) when they dismissed their Big Four Auditors, significant at a 10% level (one-tailed).[15] However, for large firms (over $300 million market value) Panel B reports a negative (but insignificant) average market-adjusted return for companies that had a BtM auditor change. This implies that prior to August 23, 2004, the market rewarded small companies that switch from Big Four to the Medium Two accounting firms, but not for large companies.

Panel C reports the market response for auditor changes after August 23, 2004 for all companies, while Panel D focuses on large companies (over $300 million market value). During this period, there are more BtS auditor changes than the other two groups. Panel C reports that companies with a BtS auditor change earn a 0.8% mean daily return when the auditors are either dismissed or resign, significant at a10% level (one-tailed). However, it is interesting to see that large companies with a BtS auditor change actually earn a higher mean market-adjusted return than small companies, regardless of whether the auditor change includes a resignation or not. For example, Panel D reports a 1.5%

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[15] We also use the statutory window (-5,0) and find that BtM only earned 1.6% mean market-adjusted return with a p-value of 0.27 (not significant at the 10% conventional level).

mean market-adjusted return, significant at a 10% level (one-tailed), for large companies with a BtS auditor change with auditor dismissals and resignations. For auditor dismissals only, large companies with a BtS auditor change report a 1% mean market-adjusted return, significant at a 5% level (one-tailed).[16] Compare to either a BtM or BtB auditor change, large companies only earn a 0.8% and a 0.4% mean market-adjusted return respectively (not significant at the conventional 10% level), for auditor dismissals only.

It is interesting to see that it is the BtS auditor changes for large companies that have the highest positive market-adjusted return. A further investigation indicates that many of the BtS changes are for retirement plans (79 cases or 69%). However, when we analyze the remaining 35 cases, where the auditor change is not a retirement plan but for the entire company, we still find a positive mean market-adjusted return (not significant). Further, we continue to observe a significant positive mean market-adjusted return (0.6% with a lower p-value of 0.07) after we remove a large return outlier. Finally, while we are concerned that the reason for the auditor change (e.g. a fee reduction) may cause the effects, there are only two cases of a fee reduction in the BtS group for large companies. Hence, the fee reduction should not be a driving reason for the positive market response.

Multivariate Regression Analysis

The above univariate analysis does not control for potential confounding effects from audit change types and audit change reasons. In addition, due to small sample restrictions, we now turn to a multiple regression analysis. We use various event

[16] We also analyze for the (-11,0) window period and we find a higher mean market-adjusted return (1.4%), significant at a 10% level.

windows and models for samples prior to and post August 23, 2004. The full estimation model is expressed as follows:

$$R = \alpha_0 + \alpha_1 R^M + \beta_1 BtS + \beta_2 BtM + \beta_3 BtB + \gamma_1 Size + \gamma_2 Dismiss + \Sigma\rho_i\, Reason_i$$
$$+ \theta_1 BtS*Size^R + \theta_2 BtS*Dismiss + \theta_3 BtS*Subsidiary + \theta_4 BtS*Plan + \theta_5 BtS*Merger$$
$$+ \varphi_1 BtM*Size^R + \varphi_2 BtM*Dismiss + \varphi_3 BtM*Subsidiary + \varphi_4 BtM*Plan + \varphi_5 BtM*Merger$$
$$+ \delta_1 BtB*Size^R + \delta_2 BtB*Dismiss + \delta_3 BtB*Subsidiary + \delta_4 BtB*Plan + \delta_5 BtB*Merger + \varepsilon$$

where R is the daily return, $R^M$ is the value-weighted market return,[17] BtS, BtM and BtB are dummy variables indicating auditor switching from a Big Four firm to a Small, Medium Two or a Big Four firm. Size is the natural log of market capitalization. Dismiss is a dummy variable indicating whether the auditor change is initiated by the company (Dismiss=1) or is initiated by the auditor (Dismiss=0). $Reasons_i$ is the "*i*" th (or aggregated) reason provided by Audit Analytics.[18] The coefficients on these variables will reflect their effects on market return. Subsidiary is an indicator taking a value of 1 if the auditor change was for a subsidiary of the client, Plan is a dummy variable indicating if the auditor switch is for a client's benefit plan, and Merger is an indicator taking a value of 1 if the auditor change was due to a merger/acquisition of the client. Since their effects may differ between the switching groups, we also add interaction variables such as BtS*$Size^R$, BtS*Dismiss etc. $Size^R$ is a standardized decile ranking of Size. We first assign ranks of 0 to 9 to the Size variable and then divide the rank by 9 so the value of

[17] Instead of using market-adjusted return which restrict the market beta (i.e. the correlation between firm return and market return) is one, we include market return in the regression model. As reported in the empirical session, our sample reports the coefficient on market return is less than 1 for period prior to August 23, 2004 but a more than 1 after August 23, 2004 reflecting the sample difference between these two periods.
[18] see Table 2 for a list of Reasons and aggregation of Reasons by type.

$Size^R$ is between 0 and 1. This procedure makes the summation of coefficients more meaningful. For example, if we want to find out the effects of BtS auditor switching for large firms, we can sum the coefficient on BtS and BtS*Size (i.e. $\beta_1+\theta_1$) which represents the effect for the largest company size group.

The regression results without Reasons for auditor changes are reported in Table 4. The first major column is for Period One (February1, 2002 to August 23, 2004) which has a total of 1,121 observations; the second major column is for Period Two (August 24, 2004 to December 31, 2006) which has a total of 703 observations.

[Table 4]

Panel A reports regression results for a longer window (-11,0) and Panel B for a shorter window (-4,0). Recall that we use (-11,0) and (-4,0) for observations prior to and post August 23, 2004, respectively. Regression analysis provides the explanatory power of the dependent variables and may reveal the effectiveness of the event window in capturing the market responses. Hence, we report these two windows for both periods.

We first evaluate whether our assumptions of (-11,0) and (-4,0) are appropriate event windows for Period One and Period Two respectively. Panel A, an event window of (-11,0), reports the highest adjusted $R^2$ in Period One (0.073), but the lowest adjusted $R^2$ in Period Two (0.061). Panel B, an event window of (-4,0) reports the lowest adjusted $R^2$ in Period One (0.067). This confirms our conjecture that (-11,0) is a better measure of the event window for Period One (prior to August 24, 2004) while (-4,0) is a better measure of the event window for Period Two (after August 23, 2004). In discussing the effects of auditor changes, we will now focus on (-11,0) for Period One and (-4,0) for Period Two.

Starting with Period One, Panel A reports a negative (-0.044) significant interaction coefficient for BtM*Size (significant at a 10% level, one-tailed) which again is consistent with our univariate analysis, that in the first period, the market has not yet accepted the BtM switch for large public companies. BtB becomes significantly positive (0.080) with BtB*Dismiss significantly negative (-0.059). This result implies that the market still prefers a switch from a Big Four to another Big Four in Period One.

For the second period, we examine the results reported in Panel B that continue to report significant positive coefficients on BtS (0.026) and BtS*Size (0.023). However, the coefficients on BtM and BtB become higher (0.031 and 0.034 respectively). To determine the combined effect of the coefficients on the stock market response (daily return), we add the coefficients of BtS and BtS*Size together to obtain 0.049 (0.026+0.023). The combined coefficient of BtS is higher than the combined coefficients of BtM (0.045=0.031+0.014) and BtB (0.033=0.034-0.001). This result is consistent with our finding from the univariate analysis that the market rewards large companies that switched from Big Four to Small more than those that switched to either a Medium Two or a Big Four.

Table 5 adds the Reasons for audit changes to the models reported in Table 4. Table 2 Panel B provides the distribution of the reasons provided by Audit Analytics. Since many reasons have very few observations, we aggregate the reasons into three groups: Fee Reduction, Type 1 and Type 2 reasons. We then add them as control variables in our regression models to determine whether our conclusions from the previous analyses alter. As we observed from Table 5, the adjusted $R^2$ are similar to those reported in Table 4; however, there is a general decrease for Period One but an increase for Period Two.

Since Period Two is the period that we are more interested in, we focus our discussion for Period Two in Panel B. The adjusted $R^2$ increased from 0.071 to 0.074, suggesting that the reasons have some explanatory power. We find that Type 1 Reasons, those which are bad from the company's perspective such as internal controls, and financial restatement concerns, has a positive but insignificant coefficient (0.006). Type 2 Reasons, those which are benign from the company's perspective such as an SEC inquiry into the Auditor and Lack of Independence, have a significant positive coefficient (0.025). Fee reduction has a negative but insignificant coefficient (-0.012).

[Table 5]

After adding the control variables for Reasons, the coefficient on BtS increased from 0.026 (Table 4, Panel B for the second period) to 0.028. Similarly, the coefficients on BtM and BtB have also increased. The interaction variables BtS*Dismiss, BtM*Dismiss and BtB*Dismiss are all significantly negative (-0.031, -0.037 and -0.029 respectively). However, combining all the coefficients together (such as $\beta_1 + \theta_1 + \theta_2$), BtS still has a positive sum of 0.021, larger than the sum for BtM (0.012) and the sum for BtB (0.006). Therefore, our conclusion that the market rewarded BtS more than the other two groups after August 23, 2004 continues to be valid.

Robustness Tests

For robustness check purposes, we modify the multivariate model with two alternative specifications with fewer variables in the model. The first version has no interaction variables so it tests the average market reaction to BtS switches, regardless of firm size.  The second version adds interaction variables *only* for BtS so it tests the market reaction to the size of BtS switches.  Although these two alternative specifications are incomplete, the results obtained are consistent with our main findings discussed earlier.

[Tables 6 and 7]

Regression results from the first version model, which has no interaction variables, support our finding that after August 23, 2004 the market rewarded BtS switches more than the BtM or BtB.  In the period after August 23, 2004, we find that the BtS coefficient is positively significant (at a 5% level, two-tailed) and greater than either the BtM coefficient or the BtB coefficient.  For instance, using a 5 day (-4,0) window and controlling for audit change reasons (Table 7 Panel B), the BtS coefficient is 0.020, while the BtM and BtB coefficients are 0.017 and 0.014, respectively.  As well, we find that the BtS coefficient is significantly positive (at a 5% level, two-tailed) in Period Two (after August 23, 2004), but is insignificant in Period One.  These results are robust to using either a 12 day (-11, 0) window or a 5 day (-4, 0) window, and whether reasons for auditor changes are included as explanatory variables or not.  Since these models are incomplete, the results are conservative due to the downward bias.

Results from the second model version, which includes an interaction term for BtS and firm size, support our finding that after August 23, 2004 the market rewarded large company BtS switches over BtM and BtB switches.  In Period Two, we find that BtS*Size coefficient is significantly positive (10% level, two-tailed) when the return window is 5 days (-4, 0), and the BtS*Size coefficient is not significant in Period One.  When we control for audit change reasons (Table 7 Panel B), we find that the BtS*Size coefficient is 0.022, but it is not significant in Period One. In Period One, the BtM and BtB coefficients are positive and marginally significant (10% level, one-tailed), while BtS is -0.014 and insignificant. In Period Two, the BtS coefficient is 0.017 (10% level, one-tailed), greater than the BtM coefficient at 0.016 (10% level, two-tailed) and the BtB coefficient at 0.015 (10% level, two-tailed). While the differences may not be significant, these results are at least consistent with the more conservative conclusion (due to downward bias) that the market did not punish firms switching from Big Four to smaller auditing firms.

Results from the two alternative model versions support our univariate findings that the market rewarded BtM switches in both Periods One and Two. Table 6 Panel A reports in Period One, using a 12 day window (-11, 0), that the BtM coefficient is significantly positive in the first model version (0.025, 10% level, two-tailed) and in the second model version (0.024, 10% level, one-tailed). Panel B reports in Period Two, using a 5 day window (-4, 0), that the BtM coefficient is significantly positive (0.016, 10% level, two-tailed) and the same in both model versions. These results are consistent in Table 7, when controls for reasons are added. Table 7 Panel A reports in Period One that the BtM coefficient is significantly positive in both model versions (0.027 and 0.026, respectively, 10% level, two-tailed). Panel B reports for Period Two that the BtM coefficient is significantly positive in both model versions (0.017 and 0.016. respectively, 10% level, two-tailed).

Our conclusions are restricted by the correct specification of the event dates and the prompt responses by the market. To see if the positive effects are temporary or if there are any delayed effects, we depict market reactions for six firms: they are the top three ‘positive’ return firms and three are the bottom three low ‘negative’ return firms in the specified event window. These cases are depicted in Appendix A (positive return cases) and Appendix B (negative return cases) respectively. Appendix A illustrates that stock prices of the top performing firms in the event window (Anadigics Inc., Consolidated Water Company, Urstadt Biddle Properties Inc.) continued to increase following the auditor change announcement. This strengthens our belief that the positive return we find during the event window is not temporary. Appendix B illustrates the stock prices of three cases (Cray Inc., Nara Bancorp, Inc., and Zix Corp) even initially went down in the event window but increased eventually. This may imply a delayed reaction to the auditor change announcement.

## IV. Conclusion

In this paper, we evaluate the market reaction to auditor switching from Big Four to smaller accounting firms. Using data on auditor changes from Audit Analytics over the period from 2002 to 2006, we find that the market rewarded auditor changes from Big Four to Medium Two and Big Four to Small accounting firms. Specifically, we find that the market rewarded large companies switching to Small (not Medium Two – Grant Thorton and BDO Seidman) accounting firms the most (among the switches from the Big Four) in recent years. We used two different event windows, deleted one large positive return, added reasons for auditor changes, and controlled for the type of auditor change; however, we still observe that the switch for large companies from Big Four to Small is rewarded more than other two groups -Big Four to Big Four and Big Four to Medium Two. Like most other studies, our study cannot control for all confounding effects and cannot clearly distinguish the reasons for higher market returns for large companies in the

BtS group. However, we are comfortable to conclude that the market did not punish large companies that switched from Big Four to Small firms in recent years.

Our findings have important policy and managerial implications. For example, it indicates that the market has confidence in large companies in choosing smaller accounting firms and this enhances the economic benefit of the company. Aside from the economic benefits, an aggressive implication could be that the market rewards large companies because it believes that large companies have the resources to work with (or invest in) smaller accounting firms, which is part of their social responsibility. While regulators encourage companies to select smaller accounting firms as their auditors, companies are often reluctant due to their worries of a negative market reaction even if the companies believe it is beneficial for them to switch to a smaller accounting firm. Our findings should ease such a worry and promote regulators' encouragement of selecting small accounting firms to improve competition.

Our paper also contributes to the literature by demonstrating that a shorter 5 day window (-4,0) is less effective in the period before August 23, 2004 than the 12 day window (-11.0); however, it is more effective after August 23, 2004 in capturing the market reaction to news contained in 8-K filings. For studies investigating the market reaction to events reported in 8-K filings, our findings may assist in designing the length of the event periods. We believe that the shorter window fits better after August 2004 may be attributed to improved compliance rates by companies after implementation of Section 404 which requires companies to set up effective internal controls over financial reporting. However, we leave this to future research.

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**Table 1: Trend Analysis of Auditor Changes for Small Engaged Firms**

| | | Switch from Big Four to Small | | | Switch from Small to Small | | |
|---|---|---|---|---|---|---|---|
| Year | Total | Departed Big4 | Engaged Small | Ratio | Departed Small | Engaged Small | Ratio |
| ***Panel A: Companies Filing an Auditor Change*** | | | | | | | |
| 2000 | 961 | 460 | 45 | 9.8% | 392 | 302 | 77.0% |
| 2001 | 1,553 | 573 | 57 | 9.9% | 730 | 623 | 85.3% |
| 2002 | 2,947 | 456 | 3 | 0.7% | 814 | 748 | 91.9% |
| 2003 | 1,615 | 599 | 244 | 40.7% | 860 | 801 | 93.1% |
| 2004 | 2,070 | 790 | 338 | 42.8% | 1,161 | 1,102 | 94.9% |
| 2005 | 2,033 | 775 | 348 | 44.9% | 1,145 | 1,053 | 92.0% |
| 2006 | 1,868 | 625 | 292 | 46.7% | 1,163 | 1,091 | 93.8% |
| ***Panel B: Publicly-Traded Companies*** | | | | | | | |
| 2000 | 343 | 139 | 13 | 9.4% | 161 | 122 | 75.8% |
| 2001 | 632 | 256 | 32 | 12.5% | 289 | 231 | 79.9% |
| 2002 | 1,495 | 186 | 0 | 0.0% | 408 | 371 | 90.9% |
| 2003 | 914 | 349 | 131 | 37.5% | 488 | 450 | 92.2% |
| 2004 | 1,274 | 480 | 207 | 43.1% | 718 | 674 | 93.9% |
| 2005 | 1,356 | 505 | 246 | 48.7% | 765 | 705 | 92.2% |
| 2006 | 1,290 | 418 | 219 | 52.4% | 804 | 750 | 93.3% |
| ***Panel C: Publicly-Traded Companies with Reason as Dismiss*** | | | | | | | |
| 2000 | 261 | 101 | 12 | 11.9% | 123 | 90 | 73.2% |
| 2001 | 525 | 216 | 31 | 14.4% | 239 | 185 | 77.4% |
| 2002 | 1,339 | 154 | 0 | 0.0% | 312 | 278 | 89.1% |
| 2003 | 673 | 273 | 96 | 35.2% | 343 | 315 | 91.8% |
| 2004 | 900 | 343 | 141 | 41.1% | 506 | 469 | 92.7% |
| 2005 | 933 | 372 | 180 | 48.4% | 511 | 476 | 93.2% |
| 2006 | 886 | 340 | 176 | 51.8% | 501 | 458 | 91.4% |

*The data are from Audit Analytics as of January 2007.

**Table 2: Descriptive Statistics**
**(Number of Observations is 1,824 for the period of 2002-2006)**

***Panel A: Key Variables Used in Regression***

| **Variable** | **Mean** | **Std Dev** | **Median** | **1st Pctl** | **99th Pctl** |
|---|---|---|---|---|---|
| Size ($millions) | 2,271 | 14,385 | 340 | 12 | 30,198 |
| Daily Return | 0.000 | 0.043 | -0.001 | -0.089 | 0.103 |
| Value-weighted Daily Return | 0.000 | 0.011 | 0.000 | -0.030 | 0.035 |
| Market-adjusted Daily Return | 0.000 | 0.042 | -0.001 | -0.090 | 0.101 |
| Cumulative Daily Return (-11,0) | -0.004 | 0.119 | -0.001 | -0.323 | 0.311 |
| Market-adjusted Daily Return (-11,0) | 0.001 | 0.114 | 0.001 | -0.282 | 0.302 |
| Cumulative Daily Return (-4,0) | -0.002 | 0.079 | -0.002 | -0.218 | 0.214 |
| Market-adjusted Daily Return (-4,0) | 0.000 | 0.076 | 0.000 | -0.202 | 0.208 |

**Size** is Market capitalization ($ millions) is the stock price times the number of shares outstanding (in $millions).
**Daily return** is the buy-hold return for one day during the period February 2002 to December 2006.
**Value-weighted daily return** is the CRSP daily return for one day during the period February 2002 to December 2006.
**Market-adjusted daily return** is the daily return less the value-weighted return for one day during the period February 2002 to December 2006.
**Cumulative daily return (x,0)** is the total buy-hold return for the x days before the filing date through to the filing date of the Form 8-K for the auditor change announcement, where x = -11 or -4, for the sample period February 2002 to December 2006..
**Market adjusted daily return (x,0)** is the total market-adjusted return for the x days before the filing date through to the filing date of the Form 8-K filing through to the filing date of the Form 8-K filing for the auditor change announcement, where x = -11 or -4, for the sample period February 2002 to December 2006.

**Table 2: Descriptive Statistics (Continued)**

***Panel B: Types and Reasons for Change***

| | N | Percentage |
|---|---|---|
| **Type:** | | |
| Dismiss | 1,536 | 84.2% |
| Subsidiary | 20 | 1.1% |
| Retirement Plan | 249 | 13.7% |
| Merger or Acquisition | 13 | 0.7% |
| **Reason for Change:** | | |
| Fee Reduction | 37 | 2.0% |
| Type 1 Reasons: | | |
| Going-Concern | 42 | 2.3% |
| Internal Controls | 261 | 14.3% |
| Reportable Conditions | 228 | 12.5% |
| Financial Restatement | 98 | 5.4% |
| Audit Opinion Concerns | 76 | 4.2% |
| Bankruptcy | 4 | 0.2% |
| Management Not Reliable | 13 | 0.7% |
| Illegal Acts | 4 | 0.2% |
| Accounting | 55 | 3.0% |
| SEC Investigation | 2 | 0.1% |
| SEC Inquiry - Company | 3 | 0.2% |
| Consulted with incoming auditor | 25 | 1.4% |
| Type 2 Reasons: | | |
| Scope Limitation | 9 | 0.5% |
| Lack of Independence | 21 | 1.2% |
| PCAOB Registration | 8 | 0.4% |
| Incoming Will Reaudit | 4 | 0.2% |
| Exiting Public Audits | 2 | 0.1% |
| Auditor Merged | 14 | 0.8% |
| Other | 30 | 1.6% |

**Dismiss** = 1 if the auditor was dismissed by the client, and zero otherwise.
**Subsidiary** =1 if the auditor change was for a subsidiary and zero otherwise.
**Plan** =1 if the client is a benefit plan, and zero otherwise.
**Merger** =1 if the auditor change was due to a merger/acquisition of the client.
**Reason Type 1** is defined in Panel B of this table.
**Reason Type 2** is defined in Panel B of this table.
**Fee Reduction** =1 if there is a fee reduction, as indicated in the Form 8-K filing as a reason for the auditor change, and zero otherwise.

**Table 3: Market Responses to Auditor Changes - Univariate Analysis**

| | Dismiss and Resign | | | Dismiss Only | | |
|---|---|---|---|---|---|---|
| | BtS | BtM | BtB | BtS | BtM | BtB |
| ***Panel A: Prior to August 23, 2004: event window (-11,0)*** | | | | | | |
| Number of Observations | 71 | 81 | 226 | 59 | 57 | 191 |
| Mean Daily Return | -0.004 | 0.015 | 0.011 | 0.003 | 0.036 | 0.002 |
| p-value | 0.76 | 0.44 | 0.13 | 0.81 | 0.18 | 0.78 |
| Mean Market-adjusted Return | -0.008 | 0.017 | 0.006 | -0.001 | **0.035** | -0.001 |
| p-value | *0.58* | *0.39* | *0.40* | *0.96* | ***0.17*** | *0.86* |
| ***Panel B: Prior-to August 23, 2004 for Large Firms, event window: (-11,0)*** | | | | | | |
| Number of Observations | 30 | 31 | 145 | 26 | 23 | 126 |
| Mean Daily Return | 0.009 | -0.009 | 0.008 | 0.002 | -0.007 | 0.001 |
| p-value | 0.59 | 0.56 | 0.24 | 0.90 | 0.73 | 0.87 |
| Mean Market-adjusted Return | 0.005 | -0.007 | 0.003 | -0.002 | -0.008 | -0.002 |
| p-value | *0.73* | *0.60* | *0.63* | *0.87* | *0.61* | *0.78* |
| ***Panel C: Post August 2004, event window: (-4,0)*** | | | | | | |
| Number of Observations | 243 | 148 | 181 | 182 | 99 | 160 |
| Mean Daily Return | 0.008 | 0.007 | 0.005 | 0.004 | 0.000 | 0.003 |
| p-value | 0.18 | 0.23 | 0.20 | 0.30 | 0.99 | 0.47 |
| Mean Market-adjusted Return | 0.006 | 0.004 | 0.003 | 0.003 | -0.003 | 0.001 |
| p-value | *0.31* | *0.46* | *0.49* | *0.49* | *0.47* | *0.89* |
| ***Panel D: Post August 2004 for Large Firms, event window: (-4,0)*** | | | | | | |
| Number of Observations | 115 | 70 | 117 | 100 | 50 | 103 |
| Mean Daily Return | 0.017 | 0.015 | 0.008 | 0.011 | 0.012 | 0.006 |
| p-value | 0.11 | 0.02 | 0.06 | 0.06 | 0.09 | 0.18 |
| Mean Market-adjusted Return | **0.015** | 0.011 | 0.006 | **0.010** | 0.008 | 0.004 |
| p-value | ***0.16*** | *0.06* | *0.16* | ***0.09*** | *0.22* | *0.37* |

**Note:**
All observations are from February 2002 to December 2006.
Event window (-x,0) indicates the return starts to accumulate at x days prior to the 8-K filing and ends on the filing date.
BtS, BtM and BtB indicate the switch from Big Four to Small, Big Four to Medium Two and Big Four to Big Four firms respectively.
Mean Daily Return is the mean buy-and-hold return cumulated over the event window.
Mean Market-adjusted Return is the mean Daily Return less the mean CRSP value-weighted market return.
Large companies (Panels B and D) are those whose market capitalization exceeds the sample median (approximately $300 million).
p-values are two-tailed tests of no difference from zero.

**Table 4: Regression Analysis – Dependent Variable is Daily Return**

***Panel A: Event Window is from 11 days before the 8-K filing date to the filing date (-11,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | Aug. 24, 2004 to Dec.31, 2006 (N=703) | |
|---|---|---|---|---|
| Adjusted $R^2$ | 0.073 | | 0.061 | |
| Intercept | -0.048 | ! | -0.051 | ** |
| Market Return | 0.774 | *** | 1.381 | *** |
| **BtS(Big to Small)** | **-0.014** | | **0.039** | ** |
| BtM(Big to Medium) | 0.009 | | 0.018 | |
| BtB(Big to Big) | 0.080 | ** | 0.034 | |
| Dismiss | 0.014 | | 0.012 | |
| Size (log value) | 0.005 | * | 0.005 | ! |
| BtS*Size | 0.020 | | 0.010 | |
| BtS*Dismiss | 0.021 | | -0.024 | |
| BtS*Subsidiary | -0.097 | | -0.039 | |
| BtS*Plan | -0.019 | | -0.013 | |
| BtS*Merger | 0.112 | | | |
| BtM*Size | -0.044 | ! | 0.011 | |
| BtM*Dismiss | 0.063 | ! | -0.012 | |
| BtM*Subsidiary | | | 0.009 | |
| BtM*Plan | -0.064 | ! | -0.026 | |
| BtM*Merger | -0.017 | | | |
| BtB*Size | -0.021 | | -0.016 | |
| BtB*Dismiss | -0.059 | * | -0.014 | |
| BtB*Subsidiary | -0.044 | | -0.098 | |
| BtB*Plan | -0.011 | | -0.003 | |
| BtB*Merger | -0.067 | | 0.015 | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using a one-tailed test.

**See Tables 2 & 3 for variable definitions**

**Table 4: Regression Analysis - Dependent Variable is Daily Return (Continued)**

***Panel B: Event Window is from 4 days before the 8-K filing date to the filing date (-4,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | |
|---|---|---|---|---|
| Adjusted $R^2$ | 0.067 | | 0.071 | |
| Intercept | -0.005 | | -0.021 | ! |
| Market Return | 0.791 | *** | 1.350 | *** |
| **BtS(Big to Small)** | **-0.020** | | **0.026** | * |
| BtM(Big to Medium) | -0.002 | | 0.031 | ** |
| BtB(Big to Big) | 0.007 | | 0.034 | * |
| Dismiss | -0.013 | | 0.008 | |
| Size (log value) | 0.002 | | 0.001 | |
| **BtS*Size** | 0.012 | | **0.023** | * |
| BtS*Dismiss | 0.032 | | -0.028 | ! |
| BtS*Subsidiary | -0.049 | | -0.032 | |
| BtS*Plan | -0.015 | | -0.003 | |
| BtS*Merger | 0.016 | | | |
| BtM*Size | -0.007 | | 0.014 | |
| BtM*Dismiss | 0.023 | | -0.030 | * |
| BtM*Subsidiary | | | -0.048 | |
| BtM*Plan | -0.001 | | -0.033 | ! |
| BtM*Merger | -0.016 | | | |
| BtB*Size | 0.000 | | -0.001 | |
| BtB*Dismiss | 0.003 | | -0.026 | |
| BtB*Subsidiary | -0.005 | | -0.044 | |
| BtB*Plan | -0.005 | | -0.010 | |
| BtB*Merger | -0.051 | ! | -0.004 | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Table 5: Regression Analysis - Control for Reasons - Dependent Variable is Daily Return**

***Panel A: Event Window is from 11 days before the 8-K filing date to the filing date (-11,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | |
|---|---|---|---|---|
| Adjusted $R^2$ | 0.072 | | 0.062 | |
| Intercept | -0.042 | ! | -0.060 | ** |
| Market Return | 0.774 | *** | 1.369 | *** |
| Reason Type 1 | -0.003 | | 0.011 | |
| Reason Type 2 | -0.023 | | 0.023 | |
| Fee Reduction | -0.016 | | -0.018 | |
| **BtS(Big to Small)** | **-0.012** | | **0.039** | ** |
| BtM(Big to Medium) | 0.009 | | 0.021 | |
| BtB(Big to Big) | 0.078 | ** | 0.032 | |
| Dismiss | 0.009 | | 0.019 | |
| Size (log value) | 0.005 | * | 0.005 | ! |
| BtS*Size | 0.021 | | 0.010 | |
| BtS*Dismiss | 0.020 | | -0.026 | |
| BtS*Subsidiary | -0.100 | | -0.036 | |
| BtS*Plan | -0.019 | | -0.008 | |
| BtS*Merger | 0.111 | | | |
| BtM*Size | -0.045 | ! | 0.011 | |
| BtM*Dismiss | 0.065 | ! | -0.018 | |
| BtM*Subsidiary | | | 0.002 | |
| BtM*Plan | -0.066 | ! | -0.020 | |
| BtM*Merger | 0.004 | | | |
| BtB*Size | -0.020 | | -0.016 | |
| BtB*Dismiss | -0.056 | ! | -0.014 | |
| BtB*Subsidiary | -0.040 | | -0.115 | |
| BtB*Plan | -0.011 | | -0.003 | |
| BtB*Merger | -0.068 | | 0.010 | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Table 5: Regression Analysis - Control for Reasons - Dependent Variable is Daily Return (Continued)**

***Panel B: Event Window is from 4 days before the 8-K filing date to the filing date (-4,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | |
|---|---|---|---|---|
| Adjusted $R^2$ | 0.065 | | 0.074 | |
| Intercept | -0.005 | | -0.028 | * |
| Market Return | 0.791 | *** | 1.327 | *** |
| Reason Type 1 | -0.002 | | 0.006 | |
| Reason Type 2 | 0.002 | | 0.025 | ** |
| Fee Reduction | -0.019 | | -0.012 | |
| **BtS(Big to Small)** | **-0.017** | | **0.028** | ** |
| BtM(Big to Medium) | -0.001 | | 0.036 | ** |
| BtB(Big to Big) | 0.009 | | 0.035 | * |
| Dismiss | -0.013 | | 0.015 | |
| Size (log value) | 0.002 | | 0.001 | |
| **BtS*Size** | 0.015 | | **0.023** | * |
| BtS*Dismiss | 0.030 | | -0.031 | * |
| BtS*Subsidiary | -0.051 | | -0.030 | |
| BtS*Plan | -0.016 | | -0.001 | |
| BtS*Merger | 0.016 | | | |
| BtM*Size | -0.007 | | 0.013 | |
| BtM*Dismiss | 0.023 | | -0.037 | ** |
| BtM*Subsidiary | | | -0.051 | |
| BtM*Plan | -0.002 | | -0.029 | ! |
| BtM*Merger | -0.019 | | | |
| BtB*Size | -0.001 | | 0.000 | |
| BtB*Dismiss | 0.002 | | -0.029 | ! |
| BtB*Subsidiary | -0.003 | | -0.066 | |
| BtB*Plan | -0.006 | | -0.012 | |
| BtB*Merger | -0.051 | ! | -0.013 | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Table 6: Regression Analysis – Dependent Variable is Daily Return - Robustness Checks**

***Panel A: Event Window is from 11 days before the 8-K filing date to the filing date (-11,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | | | |
|---|---|---|---|---|---|---|---|---|
| Adjusted $R^2$ | 0.067 | | 0.065 | | 0.072 | | 0.069 | |
| Intercept | -0.029 | ! | -0.022 | | -0.040 | ** | -0.042 | ** |
| Market Return | 0.813 | *** | 0.812 | *** | 1.388 | *** | 1.394 | *** |
| **BtS(Big to Small)** | **0.000** | | **-0.032** | | **0.024** | ** | **0.034** | ** |
| **BtM(Big to Medium)** | **0.025** | * | **0.024** | ! | 0.014 | | 0.014 | |
| BtB(Big to Big) | 0.012 | | 0.011 | | 0.017 | ! | 0.015 | |
| Dismiss | 0.005 | | 0.000 | | -0.002 | | 0.005 | |
| Size (log value) | 0.003 | ! | 0.003 | | 0.004 | * | 0.004 | ! |
| BtS*Size | | | 0.024 | | | | 0.012 | |
| BtS*Dismiss | | | 0.035 | | | | -0.016 | |
| BtS*Subsidiary | | | -0.099 | | | | -0.040 | |
| BtS*Plan | | | -0.017 | | | | -0.012 | |
| BtS*Merger | | | 0.113 | | | | | |

***Panel B: Event Window is from 4 days before the 8-K filing date to the filing date (-4,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | | | |
|---|---|---|---|---|---|---|---|---|
| Adjusted $R^2$ | 0.075 | | 0.072 | | 0.072 | | 0.072 | |
| Intercept | -0.014 | | -0.010 | | -0.022 | * | -0.014 | |
| Market Return | 0.792 | *** | 0.794 | *** | 1.358 | *** | 1.362 | *** |
| **BtS(Big to Small)** | **0.007** | | **-0.014** | | **0.019** | ** | **0.017** | ! |
| **BtM(Big to Medium)** | 0.014 | ! | 0.013 | ! | **0.016** | * | **0.016** | * |
| BtB(Big to Big) | 0.009 | ! | 0.008 | ! | 0.015 | * | 0.016 | * |
| Dismiss | -0.004 | | -0.007 | | -0.012 | * | -0.010 | |
| Size (log value) | 0.002 | | 0.002 | | 0.003 | ! | 0.001 | |
| **BtS*Size** | | | 0.013 | | | | **0.022** | * |
| BtS*Dismiss | | | 0.026 | | | | -0.010 | |
| BtS*Subsidiary | | | -0.049 | | | | -0.031 | |
| BtS*Plan | | | -0.015 | | | | -0.003 | |
| BtS*Merger | | | 0.016 | | | | | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Table 7: Regression Analysis - Control for Reasons - Dependent Variable is Daily Return - Robustness Checks**

***Panel A: Event Window is from 11 days before the 8-K filing date to the filing date (-11,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | | | |
|---|---|---|---|---|---|---|---|---|
| Adjusted $R^2$ | 0.066 | | 0.064 | | 0.074 | | 0.070 | |
| Intercept | -0.023 | | -0.018 | | -0.050 | *** | -0.050 | ** |
| Market Return | 0.811 | *** | 0.811 | *** | 1.378 | *** | 1.383 | *** |
| Reason Type 1 | -0.005 | | -0.004 | | 0.013 | ! | 0.012 | ! |
| Reason Type 2 | -0.025 | | -0.026 | | 0.019 | | 0.019 | |
| Fee Reduction | -0.011 | | -0.013 | | -0.020 | | -0.020 | |
| **BtS(Big to Small)** | **0.002** | | **-0.028** | | **0.024** | ** | **0.033** | * |
| **BtM(Big to Medium)** | **0.027** | * | **0.026** | * | 0.014 | | 0.013 | |
| BtB(Big to Big) | 0.013 | | 0.012 | | 0.014 | | 0.013 | |
| Dismiss | 0.000 | | -0.005 | | 0.003 | | 0.008 | |
| Size (log value) | 0.003 | ! | 0.003 | | 0.005 | * | 0.004 | ! |
| BtS*Size | | | 0.024 | | | | 0.012 | |
| BtS*Dismiss | | | 0.033 | | | | -0.015 | |
| BtS*Subsidiary | | | -0.102 | | | | -0.037 | |
| BtS*Plan | | | -0.017 | | | | -0.008 | |
| BtS*Merger | | | 0.111 | | | | | |

*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Table 7: Regression Analysis - Control for Reasons - Dependent Variable is Daily Return - Robustness Checks (Continued)**

***Panel B: Event Window is from 4 days before the 8-K filing date to the filing date (-4,0)***

| | Feb. 1, 2002 to Aug. 23, 2004 (N=1,121) | | | | Aug. 24, 2004 to Dec. 31, 2006 (N=703) | | | |
|---|---|---|---|---|---|---|---|---|
| Adjusted $R^2$ | 0.073 | | 0.070 | | 0.074 | | 0.074 | |
| Intercept | -0.013 | | -0.009 | | -0.028 | ** | -0.019 | ! |
| Market Return | 0.791 | *** | 0.794 | *** | 1.325 | *** | 1.334 | *** |
| Reason Type 1 | -0.002 | | -0.001 | | 0.007 | | 0.007 | |
| Reason Type 2 | 0.002 | | 0.002 | | 0.017 | ! | 0.018 | ! |
| Fee Reduction | -0.018 | | -0.019 | | -0.014 | | -0.014 | |
| **BtS(Big to Small)** | **0.008** | | **-0.011** | | **0.020** | ** | **0.017** | ! |
| **BtM(Big to Medium)** | 0.015 | ! | 0.014 | ! | **0.017** | * | **0.016** | * |
| BtB(Big to Big) | 0.009 | ! | 0.009 | ! | 0.014 | ! | 0.015 | * |
| Dismiss | -0.004 | | -0.007 | | -0.009 | ! | -0.007 | |
| Size (log value) | 0.002 | | 0.002 | | 0.003 | * | 0.001 | |
| **BtS*Size** | | | 0.015 | | | | **0.022** | * |
| BtS*Dismiss | | | 0.024 | | | | -0.009 | |
| BtS*Subsidiary | | | -0.051 | | | | -0.029 | |
| BtS*Plan | | | -0.016 | | | | -0.001 | |
| BtS*Merger | | | 0.016 | | | | | |

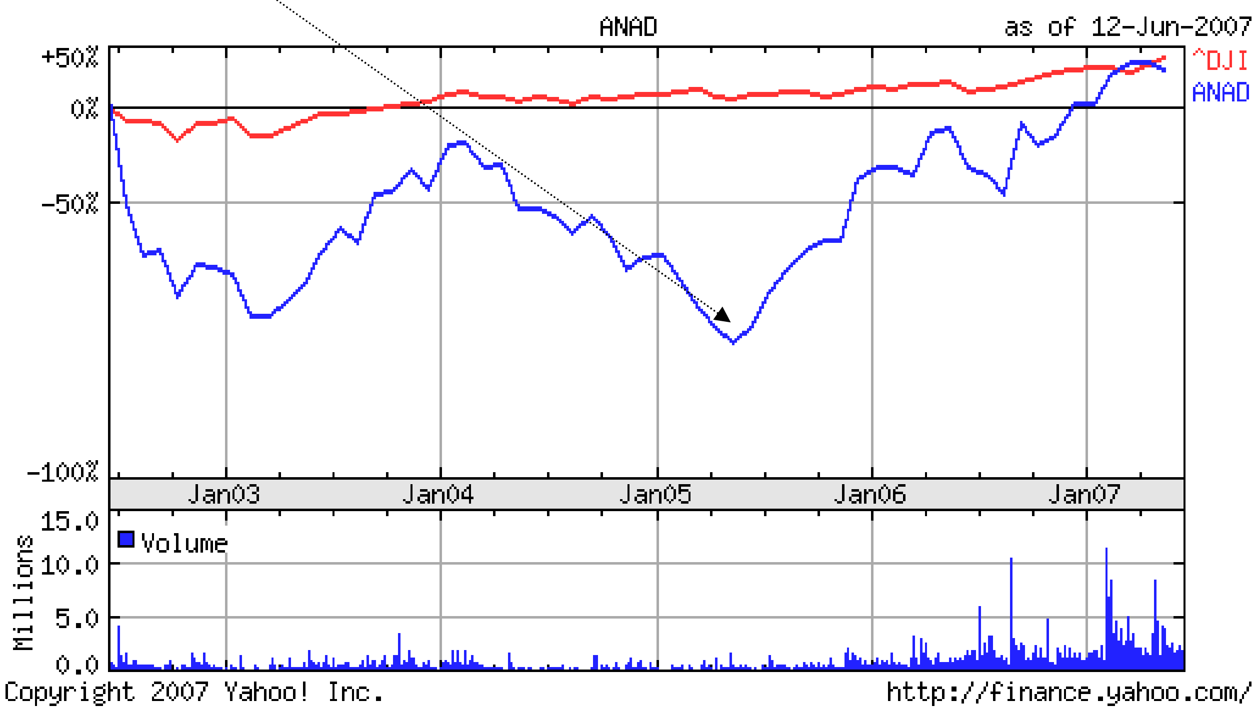
*** significant at 0.01, ** significant at 0.05, * significant at 0.10, ! significant at 0.10 if using one-tailed test.

See Tables 2 & 3 for variable definitions

**Appendix A – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Top Three Positive Returns**

**Case A1 – Anadigics Inc. (ANAD)**

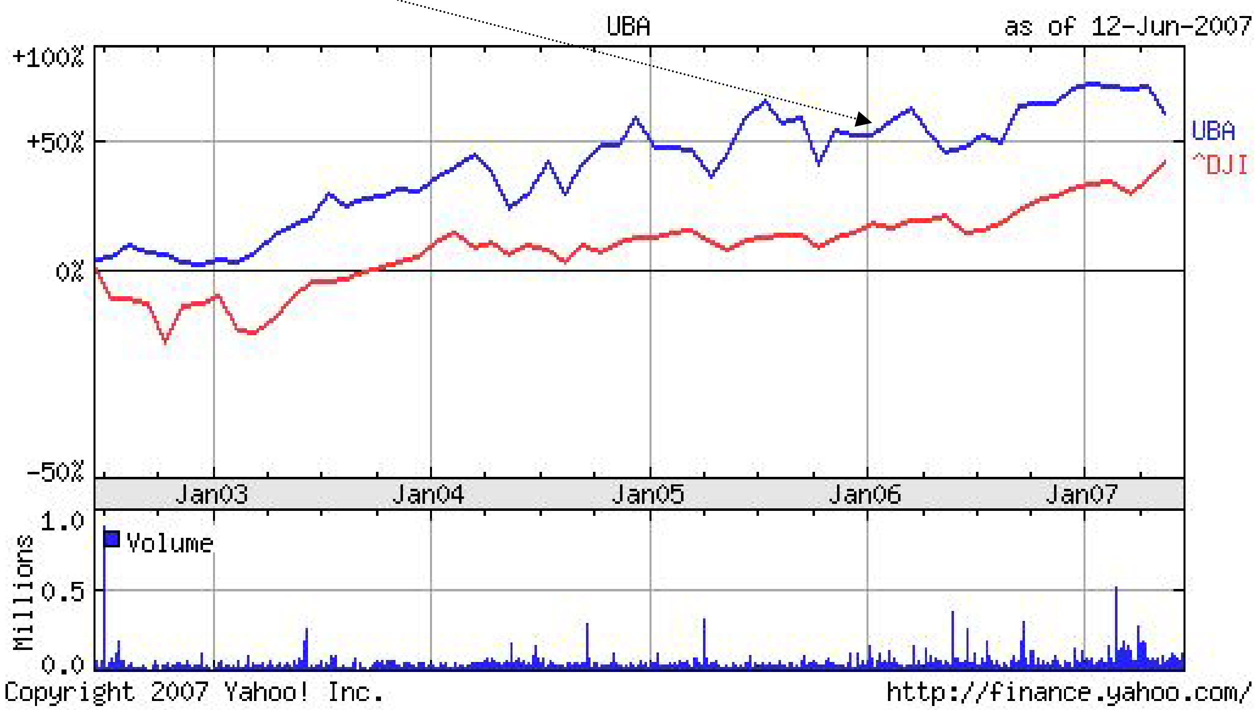
- **$700 Million market capitalization**
- **April 27, 2005 – Ernst and Young resign**
- **May 30, 2005 J. H. Cohn appointed**



## Appendix A – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Top Three Positive Returns

**Case A2 – Urstadt Biddle Properties Inc. (UBA)**

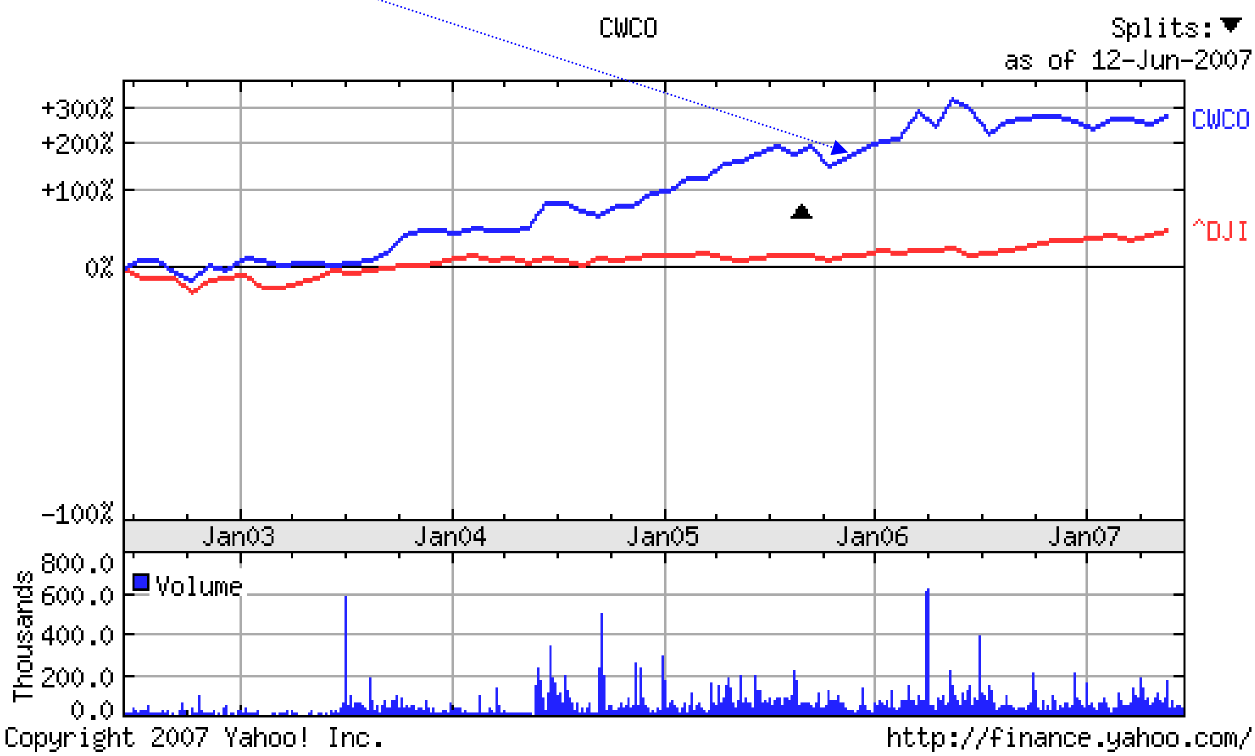
- **$450 Million market capitalization**
- **January 27, 2006 announced switch from Ernst and Young to PFK due to audit fee**



**Appendix A – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Top Three Positive Returns**

**Case A3: Consolidated Water Co. Ltd. (CWCO)**

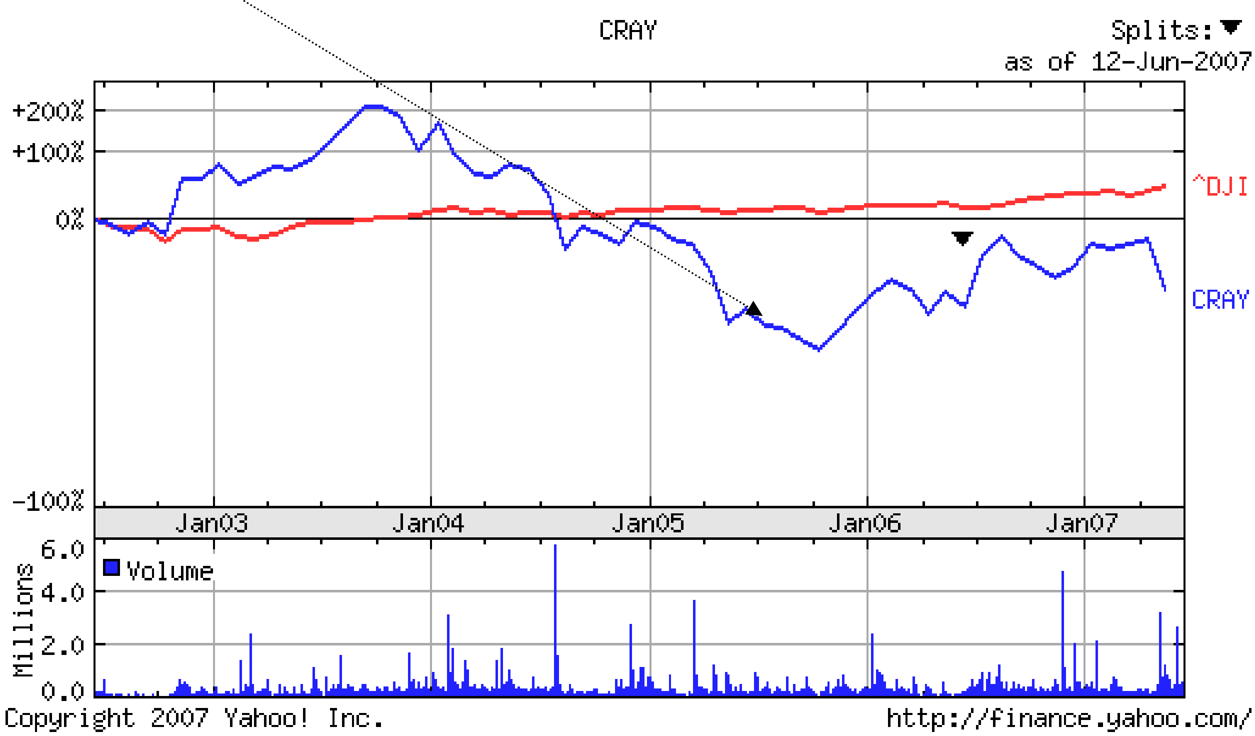
- **$350 Million market capitalization**
- **August 23, 2005 KPMG resigned due to internal control weaknesses**
- **October 28, 2005 Rachlin Cohn & Holtz appointed**



## Appendix B – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Bottom Three Negative Returns

**Case B1: Cray Inc. (CRAY)**

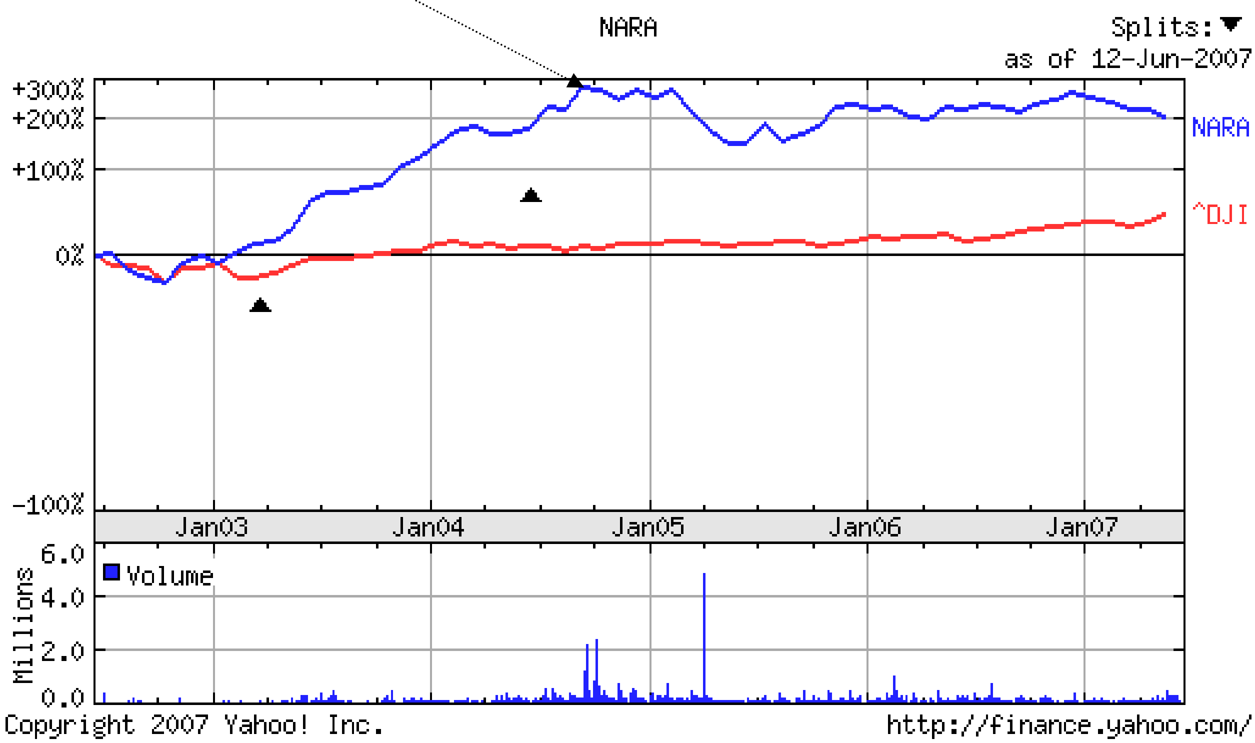
- **$250 Million market capitalization**
- **April 11, 2005 Deloitte and Touche resigned due to internal control weaknesses**
- **July 1, 2005 Peterson Sullivan appointed**



**Appendix B – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Bottom Three Negative Returns**

**Case B2: Nara Bancorp, Inc. (NARA)**

- **$400 Million market capitalization**
- **September 8, 2004 Deloitte and Touche resigned**
- **September 17, 2004 Crowe Chizek and Company appointed**



**Appendix B – Cases of Market Responses to Audit Switches from Big Four to Third Tier – Bottom Three Negative Returns**

**Case B3: Zix Corp (ZIXI)**

- **$103 Million market capitalization**
- **September 26, 2006 dismissed Deloitte and Touche due to "cost reduction"**