

Trends Of Accounting Restatements During The Period 2000-2007 And Big Four/Five Auditors

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ABSTRACT

The objective of this study is to provide further analysis on the trends of accounting restatements during the period 2000-07 and the role of Big four/five auditors. Given the changes in regulatory environment after the enforcement of Section 404 of the Sarbanes-Oxley Act, we find that there is a significant increase in restatements in recent years. We also find that restatements being disclosed in recent years are more serious, however, they are disclosed on a more timely basis. Consistent with the general belief that Big four/five auditors are better quality auditors, we find that they are associated with shorter restatement disclosure lags. In addition, restatements with positive financial statement effects are more likely to be disclosed sooner than those with negative effects.

Keywords: Sarbanes-Oxley; restatement; and auditors

1. INTRODUCTION

The corporate scandals of the early 21st century seriously affected investor confidence in the capital markets. In an effort to address these problems, the U.S. Congress passed the Sarbanes-Oxley Act of 2002 (SOX). Section 404 of SOX is considered by many as the most important aspect of the Sarbanes-Oxley Act¹. Under Section 404, the management and a firm's external independent auditor are required to report on the effectiveness of the firm's internal control on financial reporting. The Securities and Exchange Commission (SEC) requires all U.S. public companies that are considered as accelerated filers to report on the effectiveness of their internal control over financial reporting for fiscal years ending on or after November 15, 2004. Accelerated filers are generally defined as companies with at least \$75 million in public equity float. The SEC also requires foreign large accelerated filers to provide both management and auditor Section 404 reports for fiscal years ending on or after July 15, 2006. Large accelerated filers are generally defined as firms with public equity float of at least \$700 million. Non-accelerated filers are still not yet required to conduct Section 404 review given the high compliance costs.

Several studies have examined the increase in audit fees due to the expanded audit effort required under a Section 404 review. For example, Eldridge and Kealey (2005) find an average increase of 100% in audit fees among banks, and Raghunandan and Rama (2006) report an average increase of 86% in audit fees among industrial firms in 2004. Chan et al. (2008) find an average increase of 74% in audit fees among foreign firms listed on major U.S. exchanges in their first year of Section 404 compliance. Most interestingly, Benoit (2006) and Chan et al. (2008) also report that there are significant increases in audit fees even for the non-accelerated filers that are not yet required to comply with Section 404. These findings suggest that audits are generally more extensive for all firms given the stricter regulatory environment since 2004.

¹ Don Nicolaisen, the then chief accountant at the SEC, suggested that Section 404 could be the most important aspect of Sarbanes-Oxley, and he also stated that Section 404's "overriding objective is to provide comfort, to provide assurance that the process is there to enable accurate, reliable financial reporting ... for the investor" (PR Newswire, January 12, 2005).

There is a substantial increase in the number of accounting restatements in recent years. Many have attributed the increased number of restatements to the general change in audit efforts since the passage of SOX, and Section 404 in particular (Solomon 2007). The Government Accountability Office (GAO) reports that the number of financial restatements among public companies have increased from 3.7 percent of firms listed on major U.S. exchanges in 2002 to about 6.8 percent in late 2005 (GAO 2006). Turner and Weirich (2006) also document that the number of financial restatements among U.S. firms has increased to 613 in 2004 and jumped to 1,195 in 2005, most likely due to the more extensive internal control reviews conducted in 2004.

The objective of this study is to further analyze the association between accounting restatements in recent years and the role of Big four/five auditors. Specifically, we examine the numbers of accounting restatements disclosed during the period 2000-07 and whether there are more serious restatements in recent years. We also examine if the restatements are disclosed more timely in recent years. Finally, we analyze if the patterns of accounting restatements are different between Big four/five and non-Big four/five auditors, and between positive and negative financial statement effects of the restatements. One of the foremost criticisms of Section 404 is the additional amount of audit efforts. If the additional audit efforts lead to more timely discovery and disclosure of accounting errors, the additional work represents important benefits of SOX².

This study is organized as follows. Section 2 discusses the related literature and research objectives. Section 3 describes the research design and summarizes the empirical findings. Section 4 presents concluding comments.

2. RELATED LITERATURE AND RESEARCH OBJECTIVES

Prior studies have examined different aspects of accounting restatements. Palmrose et al. (2004) and GAO (2006) find significant negative stock price reactions to announcements of accounting restatements. For example, GAO (2006) reports an average of 2% decline in stock price in the three trading days around the initial restatement announcements. Feldman, Livnat, and Segal (2008) further find that the stock prices of firms announced restatements continue to drift downward even after the initial announcements. Accounting restatements also have significant impacts on management turnover and other firms in the industry. Gleason, Jenkins, and Johnson (2008) find that restatement announcements of the restating firms also induce negative stock price reactions to non-restating firms in the same industry. The extent of the stock price declines of the non-restating firms is greater for non-restating firms with higher industry-adjusted accruals. This suggests that investors revise their perceptions of the quality of accounting practices of the non-restating firms downward if these firms are more likely to have earnings management. This finding is consistent with the results in Desai, Krishnamurthy, and Venkataraman (2006) that short sellers would accumulate short positions in restating firms several months before the restatements were announced. The average increase in short positions is larger for restating firms with higher level of accruals prior to the restatements. Aier et al. (2005) find that firms are less likely to have accounting restatement if their chief financial officers (CFO) have more work experiences as CFOs and have Certified Public Accountant or Master in Business Administration credentials. On the other hand, Desai, Hogan, and Wilkins (2006) find that firms are more likely to have at least one senior manager (chairman, chief executive officer, or president) change within two years of restatement announcements. In addition, the replaced senior managers faced deterioration in the quality of their new employments in terms of being re-hired by smaller firms and with lower compensation.

The substantial increase in accounting restatements in recent years is often considered as a result of the passage of Section 404. For example, Eldridge and Kealey (2005) find an average increase of 100% in audit fees among U.S. banks in 2004. Likewise, Raghunandan and Rama (2006) report an average increase of 86% in audit fees among U.S. industrial firms in 2004. Consistent with the increases in audit fees, Ettredge, Li, and Sun (2006) find significant audit delays due to Section 404 reviews. Chan, Farrell, and Lee (2008) report that firms reporting ineffective internal controls under Section 404 often also have accounting restatements caused by the material internal control weaknesses. Chan, Lee, and Seow (2008) also find that even with the significant increase in audit

² The examination of the overall net benefit of SOX and Section 404 is beyond the scope of this study. To determine the overall net benefit of SOX and Section 404, other potential costs and benefits such as the direct compliance costs, opportunity cost of managerial efforts, and deterrent on potential earnings management should be also considered.

fees, management and auditors failed to identify material internal control weaknesses of some firms. As a result, management and auditors have to amend their Section 404 opinions concluding that firms indeed have ineffective internal controls. Moreover, firms often have to restate their financial statements because of the amended Section 404 opinions. In addition, Section 404 has significant effects on the audit efforts among smaller firms that do not have yet to comply with Section 404. Benoit (2006) and Chan et al. (2008) report significant increase in audit fees among firms that are not required to conduct Section 404 reviews. This reflects the general stricter regulatory environment since Section 404 becomes effective in 2004.

This study examines whether there is a significant increase in restatement in recent years due to the effects of Section 404. We then examine if firms with Big four/five auditors are more likely to report restatements and report the restatements more timely since Big four/five auditors are generally considered as having better quality in disclosure decisions (Geiger and Rama 2006; Francis and Wang 2008)³. We also examine if restatements with positive financial statement effects are more likely to be reported sooner than those with negative financial statement effects since management are more likely to report good news early and bad news late (Bagnoll, Kross, and Watts 2002).

3. RESEARCH DESIGN AND FINDINGS

A sample of restatements disclosed in 2000-2007 is collected from the Audit Analytics database. Restatements related to accounting rule application failures, financial fraud, irregularities and misrepresentations, and errors related to accounting and clerical applications are included in our sample. A firm is considered as having a Big four/five auditor if the firm has a Big four/five auditor at the time of restatement disclosure. Data from Audit Analytics also reports if the restatements have net positive or negative effects to financial statement numbers. We define the restatement period as the number of calendar days between the beginning date and the ending date of the restatement period. We also define restatement disclosure lag as the number of calendar days between the ending date of the restatement period and the restatement disclosure date⁴. The restatement disclosure date is the earliest SEC filing date or press release related to the restatement as reported in Audit Analytics.

Table 1
Summary statistics of accounting restatements in 2000-2007
Total number of restatements = 8,591

Year	# of restatements ^a	Positive effects ^b	Negative effects ^c	Big four/five auditors ^d	non-Big four/five auditors ^e
2000	476	9	467	255	221
2001	620	39	581	346	274
2002	737	47	690	452	285
2003	930	76	854	615	315
2004	1061	87	974	662	399
2005	1619	191	1428	941	678
2006	1847	218	1629	725	1122
2007	1301	135	1166	503	798

a: number of accounting restatements reported in Audit Analytics.

b: number of accounting restatements with net positive effects to financial statements.

c: number of accounting restatements with net negative effects to financial statements.

d: number of accounting restatements from firms audited by Big four/five accounting firms.

e: number of accounting restatements from firms audited by non-Big four/five accounting firms.

A total of 8,591 restatements are included in our final sample. Table 1 provides the descriptive statistics of the restatements. The number of restatements disclosed in each year has increased gradually from 476 in 2000 to

³ Arthur Anderson is considered as one of the Big 5 auditors in 2000-02 in the data.

⁴ In the few cases that the ending dates of the restatement period are after the restatement disclosure dates, we define the disclosure lag as zero. We also deleted a few isolated cases that Audit Analytics doesn't report whether the restatements have positive or negative financial statement effects.

1,061 in 2004 with a big jump to 1,619 in 2005 probably due to the effects of Section 404 review. About 91% of the restatements have net negative effects on financial statement numbers. The total number of restatements associated with Big four/five or non-Big four/five auditors are about the same. One interesting pattern is that there are more restatements associated with Big four/five auditors in 2000-05. However, the trend has reversed in 2006-07 with more restatements associated with non-Big four/five auditors. This is consistent with the findings in the literature that Section 404 reviews among larger firms has caused more audit efforts even among smaller firms that are not required to comply with Section 404.

Table 2 reports the descriptive statistics for restatement periods and restatement disclosure lag. Panel A shows that the length of the restatement periods has increased in recent years and the increase is larger among restatements associated with Big four/five auditors. Panel B suggests that the time lag between the restatement ending period and restatement disclosure date has reduced in recent years. Comparing the disclosure lags between the restatements associated with Big four/five and non-Big four/five auditors, restatements associated with Big four/five auditors always have a shorter average disclosure lag.

Table 2
Restatement periods and disclosure lags

Panel A: average # of calendar days covered in the restatement period			
<u>Year</u>	<u>All restatements</u>	<u>Big four/five auditors^a</u>	<u>Big four/five auditors^b</u>
2000	529	521	538
2001	468	490	440
2002	525	585	429
2003	539	584	450
2004	602	684	467
2005	747	883	559
2006	714	1063	489
2007	651	882	506

Panel B: average # of calendar days from the end of the restatement period to the restatement disclosure date			
<u>Year</u>	<u>All restatements</u>	<u>With Big four/five auditors^a</u>	<u>With non-Big four/five auditors^b</u>
2000	286	244	335
2001	316	277	366
2002	267	245	303
2003	314	307	327
2004	288	281	301
2005	234	205	273
2006	267	255	275
2007	289	281	294

a: accounting restatements from firms audited by Big four/five accounting firms.

b: accounting restatements from firms audited by non-Big four/five accounting firms.

We also conduct regression analysis on the restatement period and restatement disclosure lag using the following model:

Restatement period_i or Restatement disclosure lag_i

$$= \beta_0 + \beta_1 \text{Year}_i + \beta_2 \text{Big four/five}_i + \beta_3 \text{Positive Effect}_i + e_i \tag{1}$$

where

Year_i = the calendar year of the restatement disclosure ; Year = 2000 to 2007.

Big four/five_i = 1 if restatement i is associated with a Big four/five auditor; = 0 otherwise.

Positive Effect_i = 1 if restatement i has a net positive effect to financial statements; = 0 otherwise.

Table 3 reports the results of the regression analysis on the restatement period. Model (1) shows that the coefficients on Year and Big four/five are both significantly positive. Positive Effect is added in Model (2) and the coefficient is negative and significant. These findings suggest that restatements disclosed in more recent years are generally more serious problem in term of the length of the restatement periods. The results also show that restatements associated with Big four/five auditors have longer restatement periods as Big four/five auditors could be more forceful in restatement decisions. The negative coefficient on Positive Effect indicates that restatements with positive effects on financial statements covered shorter restatement periods than that of the restatements with negative effects. Models (3) and (4) re-examine the analysis using an indicator variable, Year 04_07, for the 2004-07 period. Consistent with the findings in Models (1) and (2), the coefficients on Year 04_07 in Models (3) and (4) are significantly positive. This suggests that restatements disclosed in 2004-07 have longer restatement period when compared to the restatements disclosed in 2000-03.

Table 3
Results of regression analysis on restatement period
Dependent variable = restatement period
Sample size = 8591

Model	(1)	(2)	(3)	(4)
Variables:				
Intercept	-91366.00***	-92888.00***	343.43***	346.66***
Year	45.82***	46.58***		
Year 04_07			205.70***	208.60***
Big four/five	294.28***	295.29***	288.28***	289.11***
Positive effect		-62.87***		-60.45***
Adj. R ²	0.0743	0.0751	0.0752	0.0760
F-statistic	345.78***	233.61***	350.46***	236.50***

, * Significant at 5% and 10% level, respectively in two-tailed test.

Restatement period = # of calendar days from the beginning of the restatement period to the end of the restatement period.

Year = a trend variable of 2000-07 corresponding to the year that the disclosure of each restatement was made.

Year 04_07 = 1 if the restatement was disclosed in 2004-07; = 0 otherwise.

Big four/five = 1 if the firm has a Big four/five auditor; = 0 otherwise

Positive effect = 1 if the net effect of the restatement to financial statement is positive; = 0 otherwise.

Table 4
Results of regression analysis on restatement disclosure lag
Dependent variable = restatement disclosure lag
Sample size = 8591

Model	(1)	(2)	(3)	(4)
Variables:				
Intercept	12468.00***	11911.00***	322.29***	323.48***
Year	-6.07***	-5.79***		
Year 04_07			-35.61***	-34.54***
Big four/five	-41.43***	-41.06***	-41.50***	-41.19***
Positive effect		-23.02***		-22.26**
Adj. R ²	0.0094	0.0101	0.0116	0.0123
F-statistic	41.63***	30.19***	51.43***	36.58***

, * Significant at 5% and 10% level, respectively in two-tailed test.

Restatement disclosure lag = # of calendar days from the end of the restatement period to the restatement disclosure date.

Table 4 reports the regression results on restatement disclosure lag. In Models (1) and (2), the coefficients on Year, Big four/five, and Positive Effect are all negative and statistically significant. This indicates that the restatements are disclosed more timely in more recent years and the disclosures are even more timely among firms with Big four/five auditors. This is consistent with the stronger regulatory environment in more recent years and

with the notion that Big four/five auditors are of better quality in terms of the association with more timely firm disclosure. Consistent with findings in the literature that firms are more likely to report good news sooner than bad news, restatements with positive financial statement effects, have shorter disclosure lag. Models (3) and (4) replace the variable Year with the indicator variable of Year 04_07 and provide similar conclusions that restatements disclosed in 2004-07 are disclosed more timely than the restatements disclosed in 2000-03.

4. CONCLUSIONS

This study examines the trends of accounting restatements during the period 2000-07. Given the changes in regulatory environment after the passage of Sarbanes-Oxley Act, and Section 404 in particular, we find that there is a significant increase in restatements in more recent years. Moreover, the restatements disclosed in more recent years are more serious restatements in terms of longer restatement periods. However, the restatements disclosed in recent years are more timely in terms of short disclosure lag. We find the Big four/five auditors are associated with longer restatement periods and shorter disclosure lags. The number of restatements disclosed in 2007 is less than that of 2005 and 2006. Furthermore, we also find that the restatements disclosed in 2007 have shorter restatement period when compared to that of 2006 for the overall sample and firms with Big four/five auditors. This may be indications that Section 404 has positive effects in forcing firms to disclose previous accounting errors and the number of restatements might have peaked in 2006.

AUTHOR INFORMATION

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