

TYPES OF RESTATEMENT DECISIONS AND EX-ANTE RED FLAGS OF INTERNAL CONTROL QUALITY

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ABSTRACT

We investigate the association between financial restatements and internal controls by examining whether voluntary restatement decisions are associated with internal control quality. We focus on companies' voluntary restatements because they are more susceptible to the numerous provisions imposed by SOX. Empirical results show that voluntary restatement decisions are associated with internal control deficiencies, particularly when companies of voluntary restatements suffer higher restatement severity. Our findings imply that voluntary restatement decisions may interpret as signals of internal control quality.

JEL: K22, M41, M43, M49

KEYWORDS: Internal Control, Voluntary Restatement

INTRODUCTION

After a series of corporate scandals, SOX has imposed numerous provisions on weaker internal control quality and misstated financial statements to prevent deceptive accounting practices. For example, the SOX imposed increased responsibility on audit committees (Section 301 and 407) and determined that the primary responsibility of audit committees is to oversee financial controls and assure the quality of financial reporting. Prior studies have found that companies that restate, in general, have weaker corporate governance (Abbott et al. 2004; Farber 2005; Efendi et al. 2007; Agrawal and Chadha 2005), and Srinivasan (2005) documented a penalty for audit committee members in companies, which restate, because restatements were seen as a failure of financial reporting. In the post-SOX period, audit committees are closely associated with internal control quality (Krishnan 2005; Zhang 2007; Hoitash et al. 2009). For example, Hoitash et al. (2009) documented that lower internal control quality was associated with relatively fewer audit committee members with accounting or supervisory experience, and a weaker board committee. Internal control quality has improved since the implementation of Section 404, but few studies have investigated whether and how restatement disclose decisions lead to the detection and correction of ex-ante red flags of internal control severity. We argue that not all restatements are implying question internal controls, because restatement announcements have different meanings (e.g., voluntary disclosure, downward restatement, upward restatement, etc.) and may imply various ex-ante implications on internal control quality. For example, we expect that voluntary disclosure of downward restatements is a red flag of internal control severity. Therefore, this study investigates whether originally restatement decisions are implying ex-ante red flags of internal control quality, particularly following voluntary downward restatements.

Our results provide evidence that not all restatements are implying question internal controls. We find that voluntary restatement decisions are more likely to be associated with higher internal control severity only for companies with downward restatements. Our findings imply that voluntary disclosure of downward restatements is a red flag of internal control severity. Our findings provide important public policy implications to the regulators and policy-makers. This study contributes to three important streams of research. First, this investigation extends previous research into the quality of internal controls by examining different types of restatement decisions and the red flags of internal control environments. Second, this study contributes to the literature on the association between internal control quality and restatement decisions by analyzing different restatement decisions. Finally, this study provides important public policy implications that voluntary disclosure of downward restatements is a red flag of internal control severity. The remainder of this study is organized as follows: Section 2 discusses the previous

literature most relevant to this study. Section 3 describes the sample selection procedure and research design. Section 4 reports the empirical results and their implications. Conclusions are drawn in Section 5.

LITERATURE REVIEW

After Enron's bankruptcy, SOX has imposed numerous provisions on misstated financial statements to prevent deceptive accounting practices and, therefore, improve the quality of corporate financial reporting. For example, SOX Section 301 directs the SEC to require audit committees to establish procedures to handle complaints involving "accounting, internal accounting controls, or auditing matters" and to provide confidentiality to employees who submit complaints. The SEC (2003a) further states that the audit committee plays a critical role in providing oversight and serves as a check and balance to a financial reporting system of a company. The audit committee of a company provides independent review and oversight of financial reporting processes, internal controls, and independent auditors.

Furthermore, the SEC (2003b) mandates that all written communications, including "reports on observations and recommendations on internal controls", between accountants and management be provided to the audit committee. AICPA (2005) also indicates that the primary responsibility of the audit committee is the system of internal control over financial reporting. Indeed, prior studies have indicated that audit committee members accept responsibility for monitoring internal controls (Carcello et al. 2002; Gong et al. 2009; Barua et al. 2010), and that an effective audit committee can directly engage in overseeing company controls by reviewing with the financial and accounting staff the internal accounting procedures and controls (Gong et al. 2009). In short, the role of Section 301 in the internal control structure is to focus on assuring the internal control over financial reporting are in place and operating effectively. Recently, some studies have demonstrated a link between internal control quality and the likelihood of subsequent financial restatements (Hammersley et al.

2008; Li and Wang 2006; Nagarajan and Carey 2008; Plumlee and Yohn 2010). Ashbaugh-Skaife et al. (2007), Grothe et al. (2007a) and Grothe et al. (2007b) have also indicated that companies with material weaknesses frequently find it necessary to restate earnings, and material weaknesses are often disclosed following restatements. In other words, prior research has suggested that high quality internal controls improve the financial reporting process and reduce the likelihood of restatements. As mentioned above, previous studies on the relationship between internal control quality and restatements focus on the consequences of internal control weaknesses. However, prior research ignores the fact that originally restatement announcements have different types and may imply various implications on internal control quality. This raises the question of whether originally restatement announcements are implying ex-ante red flags of internal control quality, particularly following voluntary downward restatements. Thus, this study differs from previous studies in attempting to examine the association between restatement decisions and internal control quality by examining whether originally restatement announcements reveal ex-ante red flags of internal control quality.

RESEARCH DESIGN

This study investigated financial accounting restatements announced between November 2004 and December 2005, using the probit and regression models. This section first details the data sources and selection methods used to generate the research sample. The research model is then introduced, and the test and control variables discussed.

Data and Sample Selection

To test the research questions, data on restatement announcements and internal control quality were hand-collected. We collect research observations on an annual basis to examine our research questions. All hand-collected data in this study are publicly available.

Quality of Internal Control

This study identified internal control weaknesses by searching each SEC file (e.g., 10-K, 10-K/A, etc.) to ensure disclosure of any material weakness in the internal control. Moreover, this study used the search term “did not maintain effective internal control” to identify internal control weaknesses. This term is frequently used in audit reports on internal control over financial reporting. The search covers 10-Ks from November 2004 through December 2005. Prior studies have mostly focused on the existence of control weakness. However, different types of weakness have different effects. Following Ge and McVay (2005), Doyle et al. (2007a) and Doyle et al. (2007b), this study also classified the disclosure of internal control weakness into two types: account-specific material weaknesses and company-level material weaknesses.

Restatement Announcements

This study hand-collected data on the dates of initial restatement announcements from the *Lexis-Nexis News Library*, which covers all interim and annual restatements announced between November 2004 and December 2005. Identifying precise announcement dates for restatements is challenging. Therefore, this study only considered the first release of the restatement announcement of each company in a given year. Similar to Palmrose et al. (2004) and Kinney et al. (2004), this study used several key words to search for restatements, including “restate,” “restatement,” “revise,” “revision,” “adjust,” and “error.” The event day is determined by the first restatement announcement date identified in the *Lexis-Nexis News Library*. This study also searched the EDGAR database to double-check the correctness of the event days. Finally, this investigation added restating companies mentioned in other sources discussing restatements, such as the GAO (2006) report, *Accounting Today News*, *BNET Today News*, *CFO.com News* and *Compliance Week News*.

Others

Company-level accounting data are obtained from the *Compustat* database. The *Compustat* database includes not only data from balance sheets, income statements, and cash flow statements, but also industry classifications, and audit opinions for U.S. companies. The database contains most variables of interest.

Model Specification – Internal Control Quality Vs. Determinants Of Voluntary Restatements

We constructed research model of internal control quality to assess whether voluntary restatement decisions are associated with internal control quality. The research model is as follows:

$$ICW_{i,t} / ICN_{i,t} = \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9 [Fixed\ Effects] + \varepsilon_{i,t} \quad (1)$$

where *ICW* equals 1 if a company has weak internal control, else 0; *ICN* equals the number of internal control weaknesses; *VREST* equals 1 if restatements are attributed to the companies, else 0; *LOSS* equals 1 if operating income is less than zero, else 0; *DEBT* equals 1 if the company has notes payable, else 0; *ROA* equals net income divided by book value of total assets; *QUICK* equals current assets (less inventories) divided by current liabilities; *SIZE* equals the natural log of total assets; *BIGN* equals 1 if the company's auditor is a Big N firm, else 0; *GC* equals 1 if the company receives a going concern opinion, else 0; and *Fixed Effects* control for fixed effects of industries and years. The variables, *ICW* and *ICN*, capture company internal control quality. This study uses two measurement methods to proxy for internal control quality: (1) occurrence of internal control weakness and (2) number of internal control weakness. Following Ge and McVay (2005), Doyle et al. (2007a) and Doyle et al. (2007b), this study also categorizes the disclosed internal control problems into two major deficiency types: account-specific and

company-level in following analyses. Account-specific material weaknesses relate to controls over specific account balances or transaction-level processes. Meanwhile, company-level material weaknesses relate to more macro-level controls such as control environment or overall financial reporting process. To understand degree of internal control deficiency, this study also considers company internal control weaknesses disclosed in their Internal Control over Financial Reporting.

RESULTS AND ANALYSIS

Our research sample is composed of 377 U.S. companies that announced restatements between November 2004 and December 2005. Table 1 presents the descriptive statistics for all the variables used in our analyses, partitioned by two distinct groups: voluntary disclosure restatement subsample ($n = 216$), and non-voluntary disclosure restatement subsample ($n = 161$). As such, comparing two subsamples provides evidence as to whether voluntary restatement decisions are associated with internal control quality. We find that companies voluntarily announcing restatements are more likely to have weak internal controls, and involve more internal control weaknesses than restating companies of non-voluntary disclosure. Further, we partitioned the voluntary disclosure restatement subsample into two distinct groups: upward restatement subsample ($n = 58$), and downward restatement subsample ($n = 158$). As depicted in this Panel B, downward restating companies voluntarily announcing restatements are more likely to have weak internal controls, and involve more internal control weaknesses than upward restating companies voluntarily announcing restatements. In essence, companies voluntarily announcing restatements suffer higher internal control severity in the downward restating subgroup.

Table 1: Descriptive Statistics (N=377)

Panel A : Voluntary and Non- Voluntary Restatement						
Type Var.	Voluntary(n=216)			Non- Voluntary (n=161)		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
ICW	0.43	0.00	0.50	0.35	0.00	0.48
ICN	1.44	0.00	2.94	1.21	0.00	2.58
LOSS	0.31	0.00	0.47	0.28	0.00	0.45
DEBT	0.27	0.00	0.46	0.25	0.00	0.43
ROA	-0.00	0.03	0.17	0.01	0.03	0.15
QUICK	1.82	1.18	2.50	1.70	1.17	1.90
SIZE	6.79	6.66	1.67	7.11	6.98	1.70
BIGN	0.89	1.00	0.32	0.91	1.00	0.28
GC	0.47	0.00	0.50	0.50	1.00	0.50
Panel B : Upward and Downward Restatement						
Type Var.	Upward(n=58)			Downward(n=158)		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
ICW	0.26	0.00	0.44	0.49	0.00	0.50
ICN	0.74	0.00	1.57	1.71	0.00	3.27
LOSS	0.26	0.00	0.44	0.34	0.00	0.47
DEBT	0.19	0.00	0.40	0.34	0.00	0.47
ROA	0.00	0.04	0.21	-0.01	0.03	0.15
QUICK	1.76	1.18	2.25	1.84	1.17	2.59
SIZE	6.85	6.78	1.77	6.77	6.60	1.64
BIGN	0.88	1.00	0.33	0.89	1.00	0.31
GC	0.43	0.00	0.50	0.39	0.00	0.49

This table summarizes descriptive statistics for all variables in our regression models. Panel A provides descriptive statistics of voluntary and non-voluntary restatements. Panel B presents descriptive statistics of upward and downward restatements.

Table 2 documents the association between voluntary restatement decisions and internal control quality. The first column of Table 2 reports the results using the preliminary sample of 377 companies. The results did not provide evidence that voluntary restatements are associated with internal control quality (*VREST* is insignificantly positive). Further, we partitioned the voluntary disclosure restatement subsample into upward restatement subsample and downward restatement subsample to perform probit regressions. The second column of Table 2 shows that the coefficient of *VREST* is -0.21, which is insignificantly negative. Notably, the coefficient of *VREST* is significantly positive ($z = 2.23$, $p < 0.05$) in the downward restatement subsample (column (3)), suggesting that voluntary restatement announcements of downward

restatements are associated with internal control deficiencies.

Table 2: Internal Control Weakness and Voluntary Restatement Decision

Model		(1)		(2)		(3)	
Var.	Pred. Sign	Total sample		Upward		Downward	
		Coef.	z-value ¹	Coef.	z-value	Coef.	z-value
CONSTANT		0.40	0.62	-1.21	-1.00	1.24	1.49
VREST	+/-	0.36	1.51	-0.21	-0.47	0.69	2.23**
LOSS	+	0.89	2.70***	1.95	3.61***	0.23	0.53
DEBT	+	0.41	1.56*	-0.00	-0.00***	0.34	1.07
ROA	-	-1.13	-0.98	0.79	0.53	-2.85	-1.64*
QUICK	-	-0.10	-1.55*	-0.01	-0.10	-0.18	-1.73**
SIZE	-	-0.25	-2.99***	-0.08	-0.48	-0.31	-2.93***
BIGN	-	0.06	0.14	-0.01	-0.01	-0.25	-0.45
GC	+	0.93	3.76***	0.67	1.44*	1.20	3.77***
Fixed Effect		Included		Included		Included	
Wald Test, F(p-value)		62.03(0.00)		22.67(0.00)		51.09(0.00)	
Pseudo R ²		12.28%		14.93%		14.78%	
Nobs.		377		125		252	

Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. One-tailed for directional expectations, two-tailed for others. This table shows the regression estimates of the equation: $ICW_{i,t} / ICN_{i,t} = \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9 [Fixed\ Effects] + \varepsilon_{i,t}$. Table 2 summarizes the regression of internal control weaknesses on voluntary restatement decisions, and associated control variables. All models include year and industry fixed effects.

Panel A of Table 3 details the type of internal control deficiencies of restatement companies. As depicted in Panel A, restating companies with weak internal control system have the highest percentages of company-level material weaknesses (64.19%).

Table 3: Descriptive Statistics for Internal Control Severity

Panel A : Account-Specific and Company-Level Material Weakness					
Classification	Type	Voluntary		Non-Voluntary	
		Upward	Downward	Upward	Downward
Account-Specific		8(5.41%)	11(7.43%)	3(2.03%)	31(20.94%)
Company-Level		14(9.46%)	23(15.54%)	12(8.11%)	46(31.08%)
Total		22(14.87%)	34(22.97%)	15(10.14%)	77(52.02%)
Panel B : Number of Internal Control Weaknesses and Restatement					
Quantity	Type	Voluntary		Non-Voluntary	
		Upward	Downward	Upward	Downward
1		9(6.08%)	10(6.76%)	4(2.70%)	35(23.65%)
2		2(1.35%)	9(6.08%)	4(2.70%)	14(9.46%)
3		4(2.70%)	4(2.70%)	3(2.03%)	5(3.38%)
4		2(1.35%)	1(0.68%)	1(0.68%)	3(2.03%)
5		1(0.68%)	3(2.03%)	1(0.68%)	4(2.70%)
6		2(1.35%)	2(1.35%)	1(0.68%)	2(1.35%)
7		0(0.00%)	2(1.35%)	1(0.68%)	2(1.35%)
8		0(0.00%)	0(0.00%)	0(0.00%)	3(2.03%)
9		1(0.68%)	1(0.68%)	0(0.00%)	3(2.03%)
10		0(0.00%)	1(0.68%)	0(0.00%)	3(2.03%)
11		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
12		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
13		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
14		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
15		0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)
16		1(0.68%)	1(0.68%)	0(0.00%)	0(0.00%)
17		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
18		0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)
19		0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
20		0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)
Total		22(14.87%)	34(22.97%)	15(10.14%)	77(52.02%)

This table summarizes descriptive statistics for internal control severity. Panel A provides descriptive statistics of account-specific and company-level material weaknesses. Account-specific material weaknesses relate to controls over specific account balances or transaction-level processes. Company-level material weaknesses relate to more macro-level controls such as control environment or overall financial reporting process. Panel B presents descriptive statistics for number of internal control weaknesses and restatements.

Notably, downward restating companies have higher percentages of company-level material weaknesses than upward restating companies, no matter whether downward restatements are announced voluntarily or non-voluntarily (31.08% and 15.54%, respectively). Panel B also shows that downward restatements have more internal control deficiencies in their internal control system, no matter whether downward

restatements are announced voluntarily or non-voluntarily (52.02% and 22.97%, respectively). Overall, these findings suggest that voluntary disclosure of downward restatements are more likely to be associated with higher internal control severity.

Table 4 documents the results of the number of internal control weaknesses regressed on voluntary restatement decisions. Then we further explore the association between internal control deficiencies and voluntary restatement decisions in the upward restatement subsample and downward restatement subsample. The first column shows that the coefficient of *VREST* is insignificantly positive, and the coefficient of *VREST* is insignificantly negative in the second column (upward restatement subsample). Further, empirical results show that the coefficient of *VREST* is significantly positive in the downward restatement subsample (column (3)), suggesting that voluntary disclosure restatements are more likely to be associated with higher internal control severity only for downward restating companies.

Table 4: Internal Control Severity and Voluntary Restatement Decision

Model		(1)		(2)		(3)	
Var.	Pred. Sign	Total sample		Upward		Downward	
		Coef.	t-value	Coef.	t-value	Coef.	T-value
CONSTANT		2.05	2.81***	3.08	3.09***	1.21	1.26
VREST	+/-	0.22	0.82	-0.30	-0.83	0.51	1.35*
LOSS	+	0.82	2.21**	1.53	3.16***	0.46	0.90
DEBT	+	0.42	1.35*	0.15	0.31	0.34	0.86
ROA	-	-2.35	-2.14**	1.99	1.43*	-4.84	-3.27***
QUICK	-	-0.11	-1.74**	-0.10	-1.17	-0.13	-1.58*
SIZE	-	-0.16	-1.70**	-0.16	-1.18	-0.12	-0.99
BIGN	-	-0.43	-0.89	-1.77	-2.90***	0.29	0.43
GC	+	1.16	4.03***	0.82	2.16**	1.30	3.38***
Adj. R ²		13.41%		16.18%		15.68%	
Nobs.		377		125		252	

Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. One-tailed for directional expectations, two-tailed for others. This table shows the regression estimates of the equation: $ICW_{i,t}/ICN_{i,t} = \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9 [Fixed\ Effects] + \epsilon_{i,t}$. Table 4 summarizes the regression of internal control severity on voluntary restatement decisions, and associated control variables. All models include year and industry fixed effects.

This study also examines the sensitivity of the reported empirical results by excluding companies of auditor changes, management turnover, and merging. After rerun our research models, this study obtains results similar to those reported in the tables.

CONCLUSIONS

To improve the quality of financial reporting, SOX strengthened audit committee composition and authority, audit committee responsibilities, and the monitoring role of the audit committee (§202, §204, §301, §407). Section 404 aims to enforce strict rules requiring companies and auditors to monitor internal controls to prevent fraud. Internal control quality and financial reporting quality should be improved since the implementation of SOX, but professional institutions and the public press have reported a dramatic increase of voluntary disclosure restatements after SOX. Therefore, this study investigates whether internal control quality is associated with voluntary restatement decisions. By using 377 restating companies during 2004-2005, we employed probit/regression models and found that voluntary restatement decisions are more likely to be associated with higher internal control severity only for companies with downward restatements. Our findings imply that voluntary disclosure of downward restatements is a red flag of internal control severity. One major limitation of our study is that our sample includes data for two year. Internal control systems and external auditors are the important line of defense for quality financial reporting and quality internal controls. Hence, a potentially interesting line of future research is whether auditor changes are associated with internal control failures, particularly when companies of internal control failures suffer higher restatement severity.

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