

The Market Impact of Financial Restatements after Sarbanes-Oxley

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Abstract

This study analyzes the market price effect of financial restatements in a pre-versus post-SOX environment. Restatement of financials has long been an issue with investor groups and regulators alike. Since the advent of the Sarbanes-Oxley Act, we have seen a general increase in restatements and this has furthered to alarm these investor groups and regulators. Previous studies have analyzed predominantly pre-SOX effects of restatements on firm security prices, and have found the effects to be negligible. The studies that have attempted to assess the post-SOX security price effects have had limitations in years studied, numbers of firms, and robustness of models. This study overcomes many of these weaknesses by incorporating more study years (8 in each the pre-and post-SOX time periods), more firms (2,104 pre-SOX and 3,407 post-SOX firms), and greater robustness in the model (exclusion of overlapping announcements and tightening of the announcement window). Study results support prior pre-SOX studies that indicate minimal effect of financial restatements on security prices. However, the assessment of post-SOX firm restatements indicate that financial restatements have a significant downward effect on security prices, indicating that investors do perceive post-SOX financial restatements differently from those issued in pre-SOX time frames.

Index terms—

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4 III. LITERATURE REVIEW A) BACKGROUND OF THE RESTATEMENT ISSUE

The implication is that regulators and investor groups may be justified in their concern over the number of restatements subsequent to the passage of Sarbanes-Oxley. Although the vast bulk of the restatements do not result from misbehavior by management, there seems to exist a negative perception by stockholders of firms filing financial restatements. As a result, investors tend to bid down the market price of such firms. These results hold implications for all firms contemplating financial restatement.

2 I. Introduction

In July 2002, Congress enacted the Sarbanes-Oxley Act (SOX) in response to various corporate scandals including Enron, WorldCom, Tyco, and Global Crossing. Some of the major provisions of SOX include:

? The requirement that executive officers certify all Form 10-K and 10-Q reports filed with the Securities and Exchange Commission (SEC); ? The requirement that the CEO and CFO draft a written statement to accompany all financial

Author : Valdosta State University. e-mail: rastunda@valdosta.edu 1 statements that the latter present fairly the financial condition and results of the company's operations;

? The affirmation by the CEO and CFO that they have evaluated the effectiveness of the firm's internal controls and report any deficiencies or material weaknesses in such controls; ? The section 404 requirement of a report by management on the company's internal controls.

The report must include an assessment of internal controls and be reviewed by the firm's auditors; The risks associated with auditing increased significantly in the post-SOX period. SOX altered the regulatory regime of auditing by shifting the oversight of audit firms from the AICPA to the PCAOB. Also, Auditing Standard No. 2 lowers the risk threshold by mandating that the auditor examine all internal controls that could impact the occurrence of fraud that could have a material impact on the financial statements (Griffin and Lont 2010). "This standard also results in higher costs for auditors regarding significant deficiencies 'in internal controls' and 'reasonable assurance' that 'no material weakness' exists by defining a deficiency as significant and a weakness as material 'if there is more than a remote likelihood' that a material misstatement will not be prevented or detected (Griffin and Lont 2010). Also, the insurance and other liability-related costs increased significantly in the post-SOX period (Rama and Read 2006).

Increased auditor risks and costs may have led to a rise in auditor conservatism and thus restatement of financial reports (Bryan-Low 2003). Hence, SOX may have brought about a change in the implications associated with releasing a set of financials. Investors' concerns over the integrity of financial reports report may have significantly changed after SOX.

3 II. Purpose

This study examines the change in the market response to restatement announcements as a result of SOX. While it is well documented that the number of announced restatements increased dramatically since SOX (Weirich 2006), their impact on market value remains to be determined, as does the impact on investor confidence. It should be noted that announced restatements per se are not necessarily bad if they restore confidence in the reported financial numbers, and are more effective in incorporating information into share prices. By measuring the impact of restatement announcements on security prices of companies who have announced their intent to restate pre-and post SOX, it is possible to quantify changes in investor reaction to such announcements and therefore determine if investors react differently in an era of increased accountability and oversight.

4 III. Literature Review a) Background of the restatement issue

The number of financial restatements has been a concern for regulators even before the passage of SOX. In 2002, The General Accounting Office (GAO) conducted a comprehensive study of restatements from 1997 to 2002. The GAO found that the number of restatements grew from 92 in 1997 to 225 in 2001. The number of restatements grew even faster after that. A follow-up report by the GAO in 2005 reported over 650 restatements in that year. Taub (2010) finds that the number of restatements has remained high in subsequent years.

It is often assumed that a financial restatement is due to fraudulent behavior, however, there are other reasons far more likely than fraud. Plumlee and Yohn (2010) found four reasons that may be attributed to restatements. Those include: errors in the corporation's internal controls, intentional misrepresentation, problems from complex transactions, or a problem that arose from application of an accounting standard. In that study, the most common reason for restatement was found to be poor internal controls by the corporation. Plumlee and Yohn find this reason to be the prevailing cause of restatement in both pre-and post-SOX time frames. Williams (2012) finds that larger corporations (defined as greater than \$1 billion in market capitalization) in particular, have developed stronger internal controls since the passage of SOX, whereas smaller companies have been slower in this process. As a result, Badertscher (2013) discovers that because of greater internal controls, the numbers of financial restatements among larger firms has declined since SOX implementation.

The Plumlee and Yohn study also analyzed the effect of restatements on net income. The study revealed that the majority of the restatements had a negative impact on net income. This confirmed a GAO study of 2006 which analyzed firms restating financials. The result of that study showed that approximately 40% of

restatements were due to a revenue recognition problem, which resulted in lower income levels, while 20% of the restatements were due to an expense recognition problem, which resulted in lower income levels.

b) Regulatory concerns over restatements

The two regulators in the forefront of the U.S. capital markets are the Department of the Treasury and the Securities and Exchange Commission (SEC), and both are concerned with financial restatements. A report issued in 2008 by the Treasury Department detailed the changing nature of restatements (Scholz 2008). At about this same time, The SEC formed an Advisory Committee on Improvements in Financial Reporting (CIFR) to recommend ways to improve the usefulness of financial information to investors while reducing the complexity of the financial reporting system while minimizing restatements (CIFR 2008).

One major recommendation resultant from this committee was the need to clarify guidance of financial restatements. The committee found restatements to be confusing to the average investor and as a result, sought to have them reduced in number.

One way the committee recommended in accomplishing this dealt with materiality guidance. Under U.S. Generally Accepted Accounting Principles (GAAP), immaterial errors do not require restatement. CIFR believes that in some cases a quantitatively material error should be deemed immaterial if, for instance, the error relates to a business segment or one-time item that does not affect firm value or firm trends. CIFR also recommended that prior periods should not be restated for errors that are not material to those periods, even if the cumulative error is material in the current period.

Needless to say, these recommendations are controversial at the Financial Accounting Standards Board (FASB). Many market participants and investor They believe that the CIFR's recommendations grant too much discretion over disclosure issues to the preparers, and will thus make financials even more difficult for interpretation by the user. However, many see the CIFR recommendations as a valiant effort to at least stem some of the financial restatement growth.

c) Studies involving restatement returns

Plumlee and Yohn (2010) made no attempt to associate the impact of restatements on security prices. Studies conducted by Hranaiova and Byers (2007) and Scholz (2008) (2008) also examine the effect of restatements on security returns in a pre-SOX environment and also find negligible association between restatement and security returns. In addition, they also evaluate very short time periods in their analysis (ranging from 2-5 years), and utilize a long window for the restatement announcement (ranging from 3 days to 3 weeks).

This study will expand on prior research by assessing the market effect of financial restatements in a pre-versus post-SOX time frame. The pre-SOX time frame will consist of restatements made during the years 1996-2003, while the post SOX time frame will consist of restatements made during the years 2005-2012. The event window will center on the date that the restatement is made public. An event study will then be performed to assess market reaction to restatements made in a pre-SOX time period and then compared to the reaction in a post-SOX time period. Since U.S. regulators have placed importance on how investors perceive financial restatements, this study will be the first to indicate just how, and to what extent investor groups interpret financial restatements via stock price, before and after implementation of SOX.

IV. Hypotheses Development

As previously noted, extant studies focusing on market reaction to financial restatements tend to primarily utilize data from a pre-SOX (i.e., prior to 2002) time frame. These studies show minimal impact on the security prices of corporations filing restated financials. The other aspect of these prior studies is that they used rather limited data points (i.e., average 3 year periods and 330 restatements). Limited data points have a tendency to bring into question the robustness of the results, in other words, can the findings be generalized across a broader perspective of both time frames and corporations?

By utilizing both increased sample periods and total numbers of firms, the results of this study can then be compared to past studies and assessed for conformity. This gives rise to the first hypothesis, stated in the null form: H1: The share price responses to unexpected earnings in a pre-SOX environment for firms issuing restated financials are not significant.

As we have seen, the focus on restated financial statements by U.S. regulatory agencies is primarily in a post-SOX time period. This is the time frame under which current governances apply and investor groups are most concerned. It is this time period that we therefore hope to gain better insight on the impact of financial restatements and their relevance to security prices. Again, prior studies indicate minimal impact of restated financials on security prices (in a pre-SOX era). Do these finding hold in a post-SOX environment? The answer to this question would seem very important to regulators, investor groups, and managers. This gives rise to the second hypothesis, stated in the null form: H2: The share price responses to unexpected earnings in a post-SOX environment for firms issuing restated financials are not significant.

8 V. Sample Selection

The aim of this study is to investigate the share price behavior of publicly traded firms to the presence of restated financial reports in both a pre-and post SOX time frame. Following Chang, Cheng and Reichelt (2010), August 2004 is used as the partition date between a pre-and post-SOX environment. The year 2004 is excluded from analysis to eliminate potential confounding events. The pre-SOX period is 1996-2003 and the post-SOX period is 2005-2012. A database was assembled for the above time periods first utilizing the Audit Analytics database, which represented 9 different industries and disclosed restatements for the study periods. A Lexis-Nexis and Electronic Data-Gathering, Analysis and Retrieval (EDGAR) search was then conducted to discover the appropriate release date of the restated financial report.

The database was compiled to capture all announced restatements of quarterly and annual financial statements. These included restatements filed through amended financial statements as well as "stealth" restatements. Glass and Lewis (2006) report that as many as 45% of restatements do not use amended reports to restate financials, thus they are considered "stealth restatements."

This study includes the "stealth" restatements in the database so as to not bias results.

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Volume XIV Issue II Version I Year () 2002), this study takes into consideration that there may exist overlaps between restatement events of issuers which would violate the independently identically distributed (IID) assumption set forth by Campbell and Wasley (1993) and later by Seiler (2000). To overcome this, an analysis is made of the database in order to eliminate any samples where the announcement dates overlap or "cluster." This not only permits adherence to the IID assumption but allows for more robustness in analyzing ultimate results.

Table 1 indicates the breakdown of the pre-and post-SOX samples before eliminating overlap announcements and after eliminating overlap announcements.

10 VI. Methodology a) Hypothesis One

The purpose of the test of the first hypothesis is to assess the relative information content of unexpected earnings of share prices in a pre-SOX environment for firms issuing restated financials. The following model is used to evaluate information content: (1) Where: CAR_{it} = Cumulative abnormal return firm i , time t A = Intercept term UE_{it} = Unexpected earnings for firm i , time t , for all pre-SOX firms in sample MB_{it} = Market to book value of equity as proxy for growth and persistence B_{it} = Market model slope coefficient as proxy for systematic risk MV_{it} = Market value of equity as proxy for firm size e_{it} = error term for firm i , time t $CAR_{it} = a + b_1 UE_{it} + b_2 MB_{it} + b_3 B_{it} + b_4 MV_{it} + e_{it}$

The coefficient "a" measures the intercept. The coefficient b_1 is the earnings response coefficient (ERC) for all pre-SOX firms in the sample (2,104). The coefficients b_2 , b_3 , and b_4 , are assessed for any potential contributions to the ERC for all firms in the sample. To investigate the effects of the information content of the pre-SOX restated financials on ERC, there must be some control for variables shown by prior studies to be determinants of ERC. For this reason, the variables represented by coefficients b_2 through b_4 are included in the study. Unexpected earnings (UE_{it}) is measured as the difference between the actual earnings (EA_{it}) and security market participants' expectations for earnings proxied by consensus analyst following as per Investment Brokers Estimate Service (IBES) (EX_{it}). The unexpected earnings are scaled by the firm's stock price (P_{it}) 180 days prior to the forecast: $(EA_{it} - EX_{it}) / P_{it}$ (2) $UE_{it} = P_{it}$

For each cross sectional sample firm, an abnormal return (AR_{it}) is generated for event days -1, 0, and +1, where day 0 is defined as the restated earnings release date identified by EDGAR. The Dow Jones News Retrieval Service (DJNRS) is also reviewed to insure that confounding factors, such as change of corporate ownership or form, or management change, are minimized by excluding any firms which contain these events. The market model is utilized along with the CRSP equally-weighted market index and regression parameters are estimated between -290 and -91. Abnormal returns are then summed to calculate a cumulative abnormal return (CAR_{it}). Hypotheses 1 is tested by examining the coefficient associated with the unexpected earnings of pre-SOX firms restating financial reports. There are two possible conclusions; results may be noisy, or interpreted as being less beneficial to investors, which in this event, $b_1 < 0$, or these firms will possess an information-enhancing signal to the investor, which will result in $b_1 > 0$. Subsequent significance is then assessed.

11 b) Hypothesis Two

The purpose of the test of the second hypothesis is to assess the relative information content of unexpected earnings of share prices in a post-SOX environment for firms issuing restated financials. A model similar to the one utilized for hypothesis one is again used for hypothesis two. The only difference is that the coefficient of interest (b_1) measures all post-SOX firms in the sample (3, ??07). Similar metrics are used in order to keep comparisons between the two sample periods as similar as possible.

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Ordinary least squares (OLS) regression is used to test the model for hypothesis one and two. Crosssectional dependence and heteroskedasticity are not likely to be present in stock return metrics since sample firms are not affected by common event dates. (Binder 1985; Bernard 1987; Grammatikos and Yourougou 1990). However, whenever a set of multiple regression variables are employed, there is a probability of the presence of multicollinearity within the set of independent variables which may be problematic from an interpretive perspective. To assess the presence of multicollinearity, the Variance Inflation Factor (VIP) is utilized.

14 VII.

15 Results

16 a) Hypothesis One

As indicated in Table 2, the response coefficient b_1 , representing unexpected earnings for all firms during the pre-SOX study period was -.02 with a p-value of .15. The other control variables were not found to be significant at conventional levels. This finding indicates that when assessing the impact of restated financials on security prices in a pre-SOX time period, the association, even though negative (i.e., -.02) is not significant at conventional levels. This supports prior research that finds that in a pre-SOX environment, there is minimal effect of the restated financial statements on firms' security prices. Hypothesis one, which suggests that the security price effect of restated financials in pre-SOX time periods is insignificant, cannot be overturned.

In addition, whenever a set of multiple regression variables are employed, there is a probability of the presence of multicollinearity within the set of independent variables which may be problematic from an interpretive perspective. To assess the presence of multicollinearity, the Variance Inflation Factor (VIP) was utilized. Values of VIP exceeding 10 are often regarded as indicating multicollinearity. In the test of hypothesis 1, a VIP of 1.5 was observed, thus indicating the nonpresence of significant multicollinearity. b_3 , the response coefficient b_1 , representing unexpected earnings for all firms during the post-SOX study period was -.08 with a p-value of .01. The other control variables were not found to be significant at conventional levels. This finding indicates that when assessing the impact of restated financials on security prices in a post-SOX time period, the association is negative and significant. These results seem to indicate that in a post-SOX environment, investors perceive restated financials to have a negative or bad news impact and therefore adjust stock prices downward accordingly. Hypothesis two, which suggests that the security price effect of restated financials in post-SOX time periods is insignificant, must be rejected.

The Variance Inflation Factor (VIP) is again utilized to assess multicollinearity in the regression model. In the test of hypothesis 2, a VIP of 1.7 was observed, thus indicating the non-presence of significant multicollinearity.

17 VIII. Conclusion

This study analyzes the market price effect of financial restatements in a pre-versus post-SOX environment. Restatement of financials has long been an issue with investor groups and regulators alike. Since the advent of the Sarbanes-Oxley Act, we have seen a general increase in restatements and this has furthered to alarm these investor groups and regulators. Previous studies have analyzed predominantly pre-SOX effects of restatements on firm security prices, and have found the effects to be negligible. The studies that have attempted to assess the post-SOX security price effects have had limitations in years studied, numbers of firms, and robustness of models. This study overcomes many of these weaknesses by incorporating more study years (8 in each the pre-and post-SOX time periods), more firms (2,104 pre-SOX and 3,407 post-SOX firms), and greater robustness in the model (exclusion of overlapping announcements and tightening of the announcement window).

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Although the vast bulk of the restatements do not result from misbehavior by management, there seems to exist a negative perception by stockholders of firms filing financial restatements. As a result, investors tend to bid down the market price of such firms. These results hold implications for all firms contemplating financial restatement.

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Figure 1: I 1 Global

1	
Pre-SOX	Post-SOX

Figure 2: Table 1 :

2	
Test of Hypothesis 1	
Model: CARit = a + b 1 (UEit) + b 2 MBit + b 3 Bit + b 4 MVit + eit	
	a b 1 b 2 b 3 b 4 Adj. R 2
. 07	-.02 .15 .08 .09 .218
(.60)	(1.47) (.46) (.34) (
	a

Figure 3: Table 2 :

3

Test of Hypothesis 2 Model: $CAR_{it} = a + b_1 (UE_{it}) + b_2 MBit + b_3 Bit + b_4 MV_{it} + e_{it}$						Year Volume X Version I) (Global J Manageme Business R
a	b 1	b 2	b 3	b 4	Adj. R 2	
. 05 (.42)	-.08 (2.36) a	.10 (.32)	.11 (.29)	.15 (.18)	.243	
b 1 = information content of all firms in the full sample						

Figure 4: Table 3 :

[Bryan-Low (2003)] ‘Accounting firms aim to dispel cloud of corporate fraud’. C Bryan-Low . *Wall Street Journal* 2003. May 27. p. C1.

[Badertscher ()] ‘Accounting restatements and the timeliness of disclosures’. B Badertscher . *Accounting Horizons* 2013. 25 p. .

[An audit of internal control over financial reporting performed in conjunction with an audit of financial statements Auditing Standard 2004. PCAOB. (2) . (Public Company Accounting Oversight Board)

[Hranaiova and Byers ()] ‘Changes in market responses to financial statements restatement announcements in the Sarbanes-Oxley era. Working paper’. J Hranaiova , S Byers . *Public Company Accounting Oversight Board* 2007.

[Committee on Improvement in Financial Reporting (CIFR) (2008)] *Committee on Improvement in Financial Reporting (CIFR)*, 2008. May, 2008. Washington, D.C.. (The Securities and Exchange Commission)

[Bernard ()] ‘Cross-sectional dependence and problems in inference in market-based accounting research’. V Bernard . *Journal of Accounting Research* 1987. 25 (Spring) p. .

[Gordon et al. ()] *Disclosure credibility and market reaction to restatements. Working paper*, E Gordon , E Henry , M Peytcheva . 2008. Rutgers University

[Griffin and Lont ()] ‘Do investors care about auditor dismissals and resignations? What drives the response?’. P Griffin , D Lont . *Auditing: A Journal of Practice & Theory* 2010. 29 (2) p. .

[U ()] ‘Financial restatements: Update of public company trends, market impacts, and regulatory enforcement activities. GAO-06-678’. U . *Government Accountability Office (GAO)*, (GAO, Washington, D.C) 2006.

[U ()] *Financial statement restatements: Trends, market impacts, regulatory responses, and remaining challenges. GAO-03-138*, U . 2002. GAO, Washington, D.C. (Government Accountability Office (GAO))

[Glass-Lewis Company (2006)] *Getting it wrong the first time*, Llc Glass-Lewis & Company . 2006. March Trend Alert. March, 2006.

[Weirich (2006)] ‘Investor Perceptions of an Auditor’s Adverse Internal Control Opinion’. R Weirich . *Journal of Accounting and Public Policy* 2006. May 2006.

[Grammatikos and Yourougou (1990)] ‘Market expectations of the effects of the Tax Reform Act of 1986 on banking organizations’. T Grammatikos , P Yourougou . *Journal of Banking and Finance* 1990. December. 14 p. .

[Chang et al. ()] ‘Market reaction to auditor switching from Big 4 to third-tier small accounting firms’. H Chang , C S Cheng , K Reichelt . *Auditing: A Journal of Practice & Theory* 2010. 29 (2) p. .

[Campbell and Wasley ()] ‘Measuring security price performance using daily NASDAQ returns’. C Campbell , C Wasley . *Journal of Financial Economics* 1993. 33 p. .

[Binder ()] ‘Measuring the effects of regulation with stock price data’. J Binder . *Rand Journal of Economics* 1985. p. .

[Taub ()] *Restatement plunge after record years*, S Taub . **CF0.com** 2010.

[SEC Staff Accounting Bulletin: No. 99-Materiality. SEC Staff Accounting Bulletin No. 99. The Securities and Exchange Commission SEC Staff Accounting Bulletin: No. 99-Materiality. SEC Staff Accounting Bulletin No. 99. The Securities and Exchange Commission, August, 1999.

[Swanson et al. ()] *Stealth disclosure of accounting restatements: is silence golden? Working paper*, E Swanson , S Tse , R Wyalda . 2008. Texas A & M University

[Scholz ()] *The changing nature and consequence of public company financial restatements. The U.S. Department of the Treasury*, S Scholz . 2008. 2008.

[Anderson and Yohn ()] *The effect of 10-K restatements on firm value, information asymmetries, and investor’ reliance on earnings. Working paper*, K Anderson , T Yohn . 2002. Georgetown University.

[Seiler ()] ‘The efficacy of event study methodologies: Measuring EREIT abnormal performance under conditions of induced variance’. M Seiler . *Journal of Financial and Strategic Decisions* 2000. 13 p. .

[Hennes et al. ()] *The importance of distinguishing errors from irregularities in restatement research*, K Hennes , A Leone , B Miller . 2007. Penn State University (Working paper)

[Sun ()] *The market reaction to financial restatements. Working paper*, L Sun . 2008. Rutgers University

[Williams ()] *Update of public company trends, United States Government Accountability Office*, O Williams . 2012. July, 2007.