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An Examination of Accounting and Auditing Enforcement: Releases and Restatements Related to the Statement of Cash Flows

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I. Introduction

Since 2010, several issues have been consistently disclosed each year for restatements: debt, quasi-debt, warrants and equity security issues, cash flow statements, revenue recognition, taxes, and liabilities. While cash flow statement classification errors are second (16.1% of restatements) in the top five most common issues cited in restatements in 2019, the actual restatements do not fall within the top five most common issues cited in adjustments.[1] In other words, errors related to issues with cash flow statements are infrequently corrected via adjustments. Given that cash flow restatements account for the second highest number of restatements and are less likely to be adjusted, this fact further emphasizes the importance of looking at accounting and auditing enforcement releases (AAERs) related to cash flow restatements.

In this study, we identify AAERs related to the statement of cash flows that resulted in a cash flow restatement (CFR). Overall, we found that these AAERs relate mostly to misrepresented total cash flows, cash from operations, and restricted cash flows. Some firms also engaged in fraudulent behavior, referred to as "round tripping," to misrepresent cash flows.[2] While the number of AAERs related specifically to the statement of cash flows (SCFs) may not seem to be significantly high, there are real economic consequences associated with their issuance. For example, some of the economic consequences of Peregrine Systems Inc.'s fraudulent behavior was the layoff of 1,400 employees as well as the company's canceling of its common stock, in which $4 billion in equity was lost. Many companies were impacted by Peregrine filing for federal bankruptcy; their losses also made the company susceptible to a merger/acquisition a year or so later, when they were acquired by Hewlett-Packard.

From an AAER perspective, the SCFs has been a somewhat overlooked area in both practice and academia compared to other financial statements. To date, studies on AAERs have typically focused on income statement items rather than items from the SCFs. Although this study is somewhat descriptive and exploratory in nature, it provides an in-depth analysis of some cash flow reporting issues related to AAERs and CFRs. The purpose of this study is to assess the AAERs and CFRs that are related to the SCFs. We describe some firm characteristics, the types of misreporting that are associated with AAERs and CFRs, auditor changes, and audit fees. Additionally, we provide details of the types of manipulations employed to perpetuate these misstatements. This study also focuses only on financial reporting misstatements that led to the issuance of AAERs that specifically referenced misstatements affecting the SCFs. As one of the first studies to examine these types of AAERs, our study further contributes to our understanding of misreported cash flows. We also shed light on the types of misstatement transactions that are more likely to result in cash flow restatements.

Prior research has shown that investors have suffered significant losses due to earnings restatements (Levitt, 2000; Palmrose et al., 2004). As a result, market participants have had an increasingly greater demand for cash flow information in valuing a firm's securities. Past studies have shown that when the earnings numbers become less reliable, investors turn to more reliable financial metrics, such as cash flows (Defond and Hung, 2003; Wasley and Wu, 2006; Call, 2008; Lee, 2012) and that a rise in analysts' cash flow forecasts is consistent with an increase in demand for cash flow information

[1] https://blog.auditanalytics.com/error-corrections-a-look-at-adjustment-and-restatement-trends-2/

[2] Round tripping is a form of barter that involves a company selling an unused asset to another company while, at the same time, agreeing to buy back the same or similar assets at about the same price.

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(Wasley and Wu 2006). Despite this increasing trend toward investors' utilizing more cash flow information, there is little research on the impact of cash flow related AAERs.

Based on the AAERs issued from 1996 to 2016, we identify 66 releases that are related to the SCFs. We found that net income (NIs), income before extraordinary items (IBs), and operating activities/net cash flows (OANCFs) are significantly lower for firms with both a CFR and an AAER than those in a matched-pair control group. Using a matched pair sample from Compustat, we compare firm characteristics of the sample and control groups, in which net income (NIs), income before extraordinary items (IBs), and operating activities/net cash flows (OANCFs) are significantly lower for firms with both a CFR and an AAER than those in the control group. Overall, our sample firms report a significantly worse firm performance, especially cash flow from operating activities, which is consistent with the fact that those firms might have intended to manipulate cash flows to disguise their cash flow shortcomings, which eventually led to an SEC investigation resulting in a CFR and AAER.

We found that a significant number of our sample firms experienced an auditor change within three years prior to an AAER issuance. Such a finding is consistent with the argument that auditor rotation may enhance audit quality. We also found a notable decline in the amount of audit fees in the three years leading to an AAER issuance, which is consistent with DeAngelo's (1981) findings that while lowballing may occur with a reduction in audit fees after an auditor change, audit quality is not compromised. This result also suggests that auditors are independent by them uncovering misreporting not long after they are engaged by the client (restatements typically take two to three years to uncover and report). The amount of audit fees significantly increases in the SEC investigation year, which is consistent with the higher audit effort needed and/or the higher audit risk assumed during the SEC investigation period.

Our findings are particularly relevant to investors, regulators, academics, and financial analysts. They are important because they focus on the intentional misreporting of the SCF leading to an SEC investigation and a CFR, which has not been studied in the academic literature. Overall, our findings may also be of particular interest to the auditing profession, in which identifying firms with a higher audit risk, from a cash flow reporting perspective, can be extremely valuable. Additionally, much of the existing research provides little insight into managerial decisions that result in deliberate fraud at the SCF level. Since it is difficult to discern all firms that have committed fraud related to the SCF, it is difficult to determine the true extent of the SCF financial fraud occurring within firms. Despite the identification issues outlined in Appendix A, this study provides insights into areas of cash flow reporting that may be more susceptible to fraud than others based on our examination of firms with proven cases of SCF fraud.

The remainder of this article includes section II, which discusses the background and related research on CFRs and AAERs. Section III discusses the sample and empirical findings, and section IV summaries and concludes the article.

II. Background and Related Research on CFRs

The Statement of Financial Accounting Standards (SFAS) No. 95, *Statement of Cash Flows (SCF)*, issued in November of 1987 by the Financial Accounting Standards Board (FASB), specifies the content and composition of the statement. The SCF consists of three components by which cash enters and leaves a company: cash flow from operations, cash flow from investing, and cash flow from financing. Over the last two decades, the SEC has seen an increase in misreporting related to the SCF. Part of this misreporting is a presentation problem affecting a firm's financial reporting transparency (Levine, 2005). Complementing the balance sheet and income statement, the SCF records the amounts of cash and cash equivalents entering and leaving a company. The SCF is distinct from the income statement and balance sheet because it does not include the amount of future incoming and outgoing cash that had been recorded on credit.

Traditionally, investors and regulators have focused primarily on the balance sheet and income statement, thus focusing more on companies' earnings as opposed to their cash position. Investors have seen how easily manipulated earnings can be, so they are now focusing greater attention on how the company is doing operationally and cash wise. There is now more focus on measures, such as free cash flow yield, which have become an indication of financial health. Although the cash flow statement has become important, it had been somewhat ignored until 2005 when the SEC announced concern regarding SCFs.

In early 2006, the SEC announced a one-time allowance for firms with erroneous SCF classifications to correct these misstatements without officially restating their cash flows. Hollie et al. (2011) assessed the impact of this one-time allowance and found that consistent with the SEC's concerns, firms generally misrepresented cash flows by overstating cash flows from operations (CFO) and understating cash flows for investing activities. The most frequently misreported line-

item classification was the presentation of discontinued operations and dealer-floor plan financing arrangements. Overall, their findings indicate that the SEC's initiative was successful in firms only experiencing a marginally negative impact on their stock prices as a result of CFRs during the SEC restatement allowance period. Alfonso et al. (2018) examined whether the guidance the SEC/AICPA published in early 2006 changed the information content of CFRs. They also examined whether classification shifting within the SCFs affect the market and found that the market understands CFRs to be informative with some investor disagreement. They also found incremental volume reaction to changes in operating cash flows after the SEC allowance period.

Lee (2012) analyzed firms that inflate the reported CFO in the original SCF and the mechanisms through which firms manage CFO. She finds that even after controlling for the level of earnings, firms upward manage the reported CFO when the incentives to do so are particularly high. Some incentives for firms to inflate the reported CFO is when they are experiencing financial distress, have a long-term credit rating nearing the investment/non-investment grade cutoff, or have analyst cash flow forecasts. Specifically, she finds that firms manage CFO by shifting items between the CFO categories both within and outside the boundaries of Generally Accepted Accounting Principles (GAAP) and by timing certain transactions, such as delaying payments to suppliers or accelerating collections from customers.

Over the last few years, many of the companies that restated their SCF did so because of a misclassification of cash flows in it. However, when accompanied by an AAER, many of the firms in our sample used some of the techniques shown in Appendix B to misreport their cash flows in their SCF. One example of these companies is Dynergy, which overstated its cash flows and net income, as well as hid its special purposes entities. Another example of a company issuing an AAER with a corresponding CFR is Direct Capital Investments, which misappropriated funds and overstated cash flows. These are just a couple of examples of the firms in our sample. Appendix A and B also provide a summary description of the misreporting related to the AAERs issued to the firms in our sample. And Appendix C provides additional details on sample firms.

To the extent that management uses their discretion to opportunistically manipulate accruals, earnings will become a less reliable measure of firm performance and cash flows a more reliable and preferred measure. Not only will a firm need more reliable and transparent SCFs to be more aware of its financial standing, but it will also help investors to make educated decisions on future investments. A firm with reliable cash flow statements shows more economic solvency and is more attractive to investors. This article sheds light on the types of intentional misreporting that can occur within the SCFs which can distort the reporting of cash flows.

III. Sample Description and Empirical Findings

Sample Selection

We searched the SEC's AAER filings and identified any AAERs related to CFRs by the date of the AAER and the central index key, which is a ten-digit number used by the SEC to identify corporations and individuals who have registered with it. More specifically, we searched the SEC website for litigation, enforcement, and AAERs to identify firms that were specifically cited for SCF related fraud. Our sample selection procedure included a search on the SEC website using keywords, such as "fraud" and "cash flows." For the purpose of this study, we focus on AAERs for firms with audited financial statements filed with the SEC. We identify a total of 66 AAERs and 18 unique firms in our sample using our selection criteria.

We define a SCF restatement consistent with that of Audit Analytics, where we obtained the initial data for this study. The Audit Analytics restatement data set covers all SEC registrants who have disclosed a financial statement restatement in electronic filings since January 2001. Annual and amended filings were analyzed by queuing for analysis those filings that contain any of the words "restate," "restatement," or "restated." The corresponding CFR information was extrapolated either from the SEC filings available on its online EDGAR database or from a copy of the annual report on the company's website.

Table 1 presents the sample of 66 cash flow related AAERs for 18 unique firms disclosed between 1996 and 2016. Panel B of Table 1 provides the list of firms with AAERs in our sample. It is not unusual that a multiple of CFR related AAERs were related to one firm. The number of AAERs issued for each firm range from one to 14 in the sample. [See Table 1, pg. 359]

Sample Description

We reviewed AAERs for each firm in our sample to identify the type of fraud affecting the reporting of the SCFs. Appendix A reports our findings. The most common type of fraud we discovered is misrepresenting cash. Such misrepresentation indicates that the amount of total cash (cash total) or the amount of cash flow from operating activities is not correctly stated without specifying an overstatement or understatement in the AAER. The amount of total cash or cash flow from operating activities is identified as either overstated or understated in the AAER. In the sample, 12 out of the 18 sample firms misrepresented cash, whereas five out of 12 firms specifically overstated cash. Two out of the five firms misrepresented cash flow from operating activities. There are a total 12 observations with incorrect reporting of cash: four misrepresent cash total; four overstate cash total; three overstate CFO total; and one understates restricted cash total. As noted, seven out of these 12 observations overstate either cash total or CFO total, contrary to the one observation understating cash flows, which was related to total restricted cash. This result is not surprising, since firms are more likely to overstate rather than understate cash flows.

Another type of fraud is round tripping of cash transaction, which is represented by two out of the 18 firms in the sample. This type of transaction is often accompanied by a misrepresentation of revenue. Four SEC investigations related to quarterly cash flow reporting, although most SEC investigations related to annual cash flow misrepresentations. The magnitude of these transactions is significant; for example, Satyam Computer Services Limited acknowledged that it falsely reported over $1 billion in revenue and cash, among other items, in its publicly filed financial statements. [See Appendix A, pg. 356]

Appendix B reports the summary of the outcome of the SEC investigations for each fraudulent CFR firm based on our findings. From the 18 firms in our sample, we identified the final results of the SEC's investigation for 16 firms. There are six firms (out of 16) that have more than one respondent from the SEC investigations, including CEOs, VPs, CFOs, controllers, and others. There are ten firms (out of sixteen) that report only one respondent from the SEC investigation. The company itself is the respondent in five out of 11 firms, CEOs or presidents represent four out of 11, the founder of the company represents one out of 11, and others represent one out of 11. It is noteworthy that out of the seven CEO or president as respondents, five were ordered to pay a disgorgement or monetary penalty. There were disgorgements or monetary penalties (represented by "**" in Appendix B) ordered to different respondents for ten out of the sixteen firms, ranging from hundreds of thousands to millions of dollars. [See Appendix B, pg. 356]

Appendix C summarizes the sample firms and some details of the related AAERs. Some firms might have misstated cash flows in multiple prior years per SEC investigation. For example, Weatherford International Ltd. increased its earnings per share and cash flow from 2007 until 2012. [See Appendix C, pg. 357–358]

Descriptive Statistics and Empirical Findings

We identified 90 firm year observations in years -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, and 5 for firms with cash flow related AAERs. We next matched each sample year observation with the Compustat control firm that had the closest amount of total assets in the same industry but without cash flow related AAERs. We then deleted three observations with missing financial variables. We compared the firm characteristics of the sample and control groups in terms of sales (SALE), net income (NI), income before extraordinary items (IB), and operating activities/net cash flows (OANCF).[3] As presented in Panel A of Table 2, all variables are scaled by total assets and winsorized at the 1% and 99% level. The NI, IB, and OANCF are significantly negative in the firms with CFR-related AAERs (CFR_AAERs), whereas the mean of the OANCF is significantly positive in the control group. This negative firm performance may have led to the cash flow manipulations by the firms in our sample, which were eventually investigated by the SEC. [See Table 2, pg. 359]

Since the research design is limited by its small sample size, we used a t-test, Wilcoxon rank test, and the Kruskal-Wallis test, which is non-parametric method and does not assume a normal distribution of the observations. By using a matched sample design, we reported no significant difference in total assets between sample and control firms. As reported in Panel B of Table 2, the cash flow from operating activities in the sample firm is significantly lower than those in the control firm. The NI, IB, and OANCF are significantly lower in the firms with CFRs and AAERs than those in the control group. Overall, the firms with CFRs and AAERs report significantly worse firm performance, especially cash flow from

[3] We only compare a limited number of variables for analysis due to the small sample size. Increasing the number of variables reduces the number of observations.

operating activities, relative to the control firms, which is consistent with the fact that those firms might have intended to manipulate cash flows, which eventually led to an SEC investigation.

In Table 3, AAER_After_ACHG equals one if the AAER occurred within three years after an auditor change (that is, there is an auditor change within three years prior to an AAER/SEC investigation) and zero otherwise. AAER_Before_ACHG equals one if the AAER occurred within three years before an auditor change (that is, there is an AAER/SEC investigation within three years prior to an auditor change) and zero otherwise. Of the 18 firms with CFR_AAERs, there is no auditor change within the three years following the SEC investigation. However, seven out of 17 firms with CFR_AAERs experienced an auditor change within three years prior to the SEC investigation. Hence, it is more likely that the firm experienced an auditor change within the prior three years of the CFR AAER. Such a finding is consistent with the argument that auditor rotation may enhance audit quality by providing a potentially more independent review of the financial statements. We also present the number of auditor changes within two years prior to and after SEC investigations. The number of observations in the various tables fluctuates depending on the number of years before and after the AAER incident. [See Table 3, pg. 360]

As reported in Figure 1, there is a notable decline in the amount of audit fees three years prior to the AAER/SEC. Such a decline of audit fees from years -3 to -1, could be associated with reduced audit quality and a poor quality of financial reporting in the second year prior to the SEC investigation. The amount of audit fees increases significantly in the year of the SEC investigation. The percentage of the audit fees relative to the total fees is also the highest in the SEC investigation period, which is consistent with the higher audit effort needed and/or the higher audit risk during the SEC investigation period. Collectively, our results, in Table 3 and Figures 1, are consistent with DeAngelo's (1981) findings. Although lowballing may occur with a reduction in audit fees after an auditor change, we also find that the auditors appear independent and objective, as they uncover and report a restatement within a couple of years of taking over the audit helm (restatements typically take two to three years to uncover). [See Figure 1, pg. 361]

Table 4 summarizes the results of the regression analysis examining whether the CFR_AAER event is identifiable within three years (Test 1) and/or within five years (Test 2) prior to the SEC investigation. The dependent variable equals to one if there is a CFR_AAER in the firm year observation and zero otherwise. There are eight observations with CFR_AAER, whereas the remaining observations represent either five years before or after the CFR_AAER or the Compustat control observations, which have the closest amount of total assets in the same industry but without cash flow related AAERs in the same period. Since the research design is limited by its small sample size, we are constrained by using the variables that have minimum impact on our sample size. Our sample size also limits our use of control variables, which limits the generalizability and usability of the related findings. SALE is sales scaled by total asset. NI is the net income scaled by total asset. IB is income before extraordinary items scaled by total asset, and OAMCF is the net cash flows from operating activities scaled by total asset. The value of the variables is calculated based on the annual data that is originally reported. We found a significantly positive association between the NI, OANCF, and the CFR_AAER. The association between IB and CFR_AAER is significantly negative. Such findings suggest a higher (lower) probability of a future restatement of SCF in the following five years if NI and OANCF are higher (IB is higher). Since the empirical findings here are consistent with the findings in Appendix A, in which it is more likely that firms overstate their cash, they provide some support for the use of our research design for this analysis despite its limitations. [See Table 4, pg. 360]

Table 5 summarizes the results of the logistic analysis. We examined whether the CFR_AAER event is identifiable within three years (Test 1) and five years (Test 2) prior to the SEC investigation. The dependent variable equals to one if there is a CFR_AAER in the firm year observation and zero otherwise. There are eight observations with CFR_AAER, whereas the remaining observations represent either five years before or after the CFR_AAER or the control observations in the same period. As designed, logistic regression models the probability that there is a CFR_AAER. That is, the dependent variable equals one if year zero and zero otherwise. We found a significantly positive association between the NI, OANCF, and CFR_AAER, which suggests a probability that CFR_AAER is positively associated with the amount of NI and OANCF. The association between IB and CFR_AAER is significantly negative, which indicates the negative association of the probability of a CFR_AAER given IB. These results are consistent with those of the linear regression analysis in Table 5. [See Table 5, pg. 361]

IV. Summary and Conclusions

Using the sample of 66 cash flow related AAERs for 18 unique firms disclosed between 1996 and 2016, we report the wrongdoers involved in the fraud for the SCF related AAERs. Using a matched pair sample from Compustat, we

compared the firm characteristics of the sample and control groups, in which net income, income before extraordinary items, and operating activities/net cash flows are significantly lower for firms with both a CFR and an AAER than those in the control group. Overall, our sample firms report significantly worse firm performance, especially in terms of cash flow from operating activities relative to control firms, which is consistent with the fact that those firms might have intended to manipulate cash flows to disguise their cash flow shortcomings, which eventually led to an SEC investigation resulting in a CFR and AAER.

We found that a significant number of our sample firms experienced an auditor change within three years prior to an AAER issuance. Such a finding is consistent with the argument that the auditor rotation may enhance audit quality. We also found a notable decline in the amount of audit fees in the three years leading to an AAER issuance. This finding, coupled with a high likelihood of an auditor change prior to an AAER issuance, is consistent with DeAngelo's (1981) findings that lowballing may occur with a reduction in audit fees after an auditor change. We also found that the auditors appear independent and objective, as they uncover and report a restatement after they are engaged by a client (restatements typically take two to three years to uncover). The amount of audit fees significantly increased in the SEC investigation year, which is consistent with the higher audit effort needed and/or the higher audit risk during the SEC investigation period. Last, we found a positive association between the net income, operating activities/net cash flows, and the reporting of both a CFR and AAER. The negative association between income before extraordinary items and CFR_AAER suggests a higher (lower) probability of a future restatement of SCF in the following five years if net income and operating activities/net cash flows are higher (income before extraordinary items is higher).

Our empirical findings are particularly relevant to forensic accountants, fraud auditors, academics, auditors, regulators, and investors. The results of this study are important because they focus on the intentional CFR_AAERs and a control group, which have been studied little in the academic literature. Overall, our findings may also be of particular interest to the auditing profession, in which the identification of firms with a higher audit risk, from a cash flow reporting perspective, is extremely valuable. Our small sample size poses limitations on the types of analysis that are possible as well as the overall inferences that can be made from the study. However, this study can begin to address some of the deficiencies that may result in jointly issued AAERs and CFRs.

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Appendix A: Descriptions of Fraudulent Behavior at Sample Firms

Types of Fraudulent Behavior	Number of Firms
Misrepresent cash Total	4
Overstate cash Total	4
Overstate CFO Total	3
Round tripping of cash transactions Total	2
Improperly recording deposits in cash receipts Total	1
Move fund to cover cash flow shortage Total	1
Omron cash registers Total	1
Reimburse company for cash bonuses Total	1
Understate restricted cash Total	1
Grand Total	18

Appendix B: Outcome at Sample Firms

	Count	Disgorgement or Penalty
Number of Respondents	16	
The Company	7	2
CEO/President	7	5
VP	3	1 (1**)
CFO	3	(1**)
Controller	3	1
Founder	1	1
Others	6	3 (1**)

** Represents that the SEC pursues the disgorgement or monetary penalty.

Appendix C: Sample Firms

Obs	Company Name	Explanation	Restated Period
1	A.C.L.N. Ltd.	Inflated revenues, assets by inflating the volume of its used car transactions and new car sales and misrepresented cash balances, grossly misrepresented the amount of its cash assets from 1998 through the third quarter of 2001.	2001
2	American Home Mortgage Investment Corp	Understated reserves and restricted cash and failed to write off aged receivables	2007
3	American Italian Pasta Company	Fraudulently capitalized costs to long-lived assets and manipulated trade promotion accounting to eliminate earnings shortfalls. Activities also included failing to write-off obsolete or missing spare parts; round-tripping of cash transactions; booking fictional receivables; and recording revenue from sales of products not yet shipped.	2002–2004
4	Aurum Mining, LLC	Material misrepresentations and omissions about Aurum's ownership interest, test results, financial projections, the timing of production, and cash flow	2011–2013
5	Burrill Capital Management, LLC.	Move fund to cover cash flow shortage, misappropriation of more than $18 million in investor funds	2007–2013
6	Beazer Homes USA, Inc.	Beazer, acting through certain of its officers and employees, fraudulently misstated its net income for the purpose of improperly managing its quarterly and annual earnings. reimburse Company for cash bonuses, incentive and equity-based compensation	2000–2007
7	Charter Communications, Inc.	Setup contracts to increase revenues and expenses at the same time to inflate revenue and operating cash flows	1993–1994
8	Direct Capital Investments Ltd.	Misappropriation of funds; overstated cash	2000
9	Dollar General Corporation	Under-reported freight expenses and overstated cash accounts; engaging in an $11 million sham sale of outdated, essentially worthless, Omron cash registers	1997–2000
10	Dynegy Inc.	Overstated cash flows from ops, net income and hid SPEs	2001

Appendix C: Sample Firms (cont)

Obs	Company Name	Explanation	Restated Period
11	Epicor Software Corp.	Overstated revenue by using backdating and side letters. Also misstated cash to decrease days sales outstanding. March 1993 through January 1994, PSC's top officers, including Erickson, devised and perpetrated a scheme to overstate PSC's revenues and cash receipts. (EPICOR SOFTWARE CORP is formerly known as PLATINUM SOFTWARE CORP)	1993–1994
12	Harrison Securities, Inc.	Improperly recording deposits in cash receipts; improperly accruing expenses either by not accruing an expense or by improperly removing liabilities	2001–2002
13	Max Worldwide, Inc.	Improper barter transactions; overstated revenue by "check-swapping" or "round-tripping" cash with one or more third parties; recorded R&D expenses as operating expenses. (Max Worldwide, Inc. is formerly known asL90, Inc.)	2000
14	Peregrine Systems, Inc	Failure to allow for bad debt, overstated cash flows by selling a false receivable to a bank	1999–2000
15	Powerball International, Inc.	Overstated cash. (Powerball International, Inc. is now Apollo Resources Intl Inc.)	2002
16	Satyam Computer Services Limited	Falsified the company's revenue, income, earnings per share, cash, and interest-bearing deposits. Falsely reported over $1 billion in revenue and cash, among other items, in its publicly filed financial statements	2006–2007
17	Southern Financial Group, Inc.	Overstated a cash balance and failed to report when it was corrected and the company failed to meet its minimum net asset value	2001–2002
18	Weatherford International Ltd	Four-year income tax accounting fraud, overstated net income, understated ETR and tax expense, increased EPS and cash flow.	2007–2012

Table 1: Sample Selection

Panel A: Cash Flow Restatement Sample

	No. of Observations
CFR Related AAERs (1996–2019)	66
Number of Firms	18

Panel B: Number of AAERs

Number of AAERs	**Number of Observations**
1	5
2	3
3	3
4	4
8	2
14	1
Grand Total	**18**

Table 2: Firm Characteristics

Panel A: Firm Characteristics

	Obs	**Variable**	**N**	**Mean**	**Median**	**t Value**	**Pr > |t|**
Control	90						
		SALEs	90	0.9835	0.8391	13.47***	<.0001
		NIs	90	-0.0578	0.0407	-1.20	0.2319
		IBs	90	-0.0552	0.0385	-1.21	0.2304
		OANCFs	90	0.0430	0.0729	1.82*	0.0724
AAER	90						
		SALEs	87	0.9515	0.6647	11.11***	<.0001
		NIs	87	-0.2461	-0.0227	-2.48**	0.0153
		IBs	90	-0.2338	-0.0277	-2.56**	0.0122
		OANCFs	87	-0.0917	0.0208	-1.49	0.1387

Panel B: Firms with CFR_AAER versus Control Firms

	SALEs	**NIs**	**IBs**	**OANCFs**
Wilcoxon Two-Sample Test				
Z	-0.744	-3.1998***	3.3831***	-3.7456***
One-Sided Pr < Z	0.2285	0.0007	0.0004	<.0001
Two-Sided Pr > |Z|	0.457	0.0014	0.0007	0.0002
t Approximation				
One-Sided Pr < Z	0.229	0.0008	0.0004	0.0001
Two-Sided Pr > |Z|	0.458	0.0016	0.0009	0.0002
Kruskal-Wallis Test				
Chi-Square	0.5555	10.248***	11.455***	14.0405***
Pr > Chi-Square	0.4561	0.0014	0.0007	0.0002

SALEs is sales scaled by total asset. ***NIs*** is the net income scaled by total asset. ***IBs*** is income before extraordinary items scaled by total asset. ***OAMCFs*** is the net cash flows from operating activities scaled by total asset. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 3: Change of Auditors around CFR AAER

	Prior to the SEC Investigation		**After the SEC Investigation**	
	Year -3	**Year -2**	**Year 3**	**Year 2**
No Auditor Change	10	12	1	1
Auditor Change	7	5	Missing	Missing

Table 4: Regression Analysis

		Test 1 **Years of (-3, 0)**	**Test 2** **Years of (-5, 0)**
intercept	**Para. Est.**	-0.0319	-0.0343
	t Value	-0.33	-0.56
	Pr > |t|	0.7445	0.5786
SALE		0.0410	0.0258
		1.23	1.36
		0.2233	0.1753
NI		0.8170	0.7963
		2.89***	3.62***
		0.0051	0.0004
IB		-1.0757	-1.0430
		-3.22***	-4.05***
		0.0019	<.0001
OANCF		0.3154	0.2882
		1.45	2.09**
		0.1519	0.0391
R-Square		0.1886	0.1688
Adj R-Sq		0.1306	0.1324
No. Of Obs Used		75	119

SALE is sales scaled by total asset. ***NI*** is the net income scaled by total asset. ***IB*** is income before extraordinary items scaled by total asset. ***OANCF*** is the net cash flows from operating activities scaled by total asset. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Logistic Analysis

		Test 1 Years of (-3, 0)	Test 2 Years of (-5, 0)
intercept	**Estimate**	-3.3498	-8.9141
	Wald Chi-Square	0.259	0.9878
	Pr > ChiSq	0.6108	0.3203
SALEs		-1.9901	-2.5412
		14.0361***	19.8435***
		0.0002	<.0001
NIs		4.131	4.3996
		0.8408	1.2213
		0.3592	0.2691
IBs		-4.6814	-5.3003
		1.0234	1.6213
		0.3117	0.2029
OANCFs		0.9914	0.2444
		0.11	0.0071
		0.7401	0.9331
Event		0 / 1	0 / 1
Total Frequency		67 / 8	111 / 8

SALE is sales scaled by total asset. ***NI*** is the net income scaled by total asset. ***IB*** is income before extraordinary items scaled by total asset. ***OANCF*** is the net cash flows from operating activities scaled by total asset. Event equals 1 if Year 0, otherwise 0. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Figure 1: Audit Fees around CFR AAERs

