

Which factors affect statement of cash flows restatements and how does the market respond to these restatements?

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Which factors affect restatements of cash flows and how does the market respond to these restatements?

Abstract: The Securities Exchange Commission (SEC) has become increasingly concerned with firms' misclassification of cash flow activities on the statements of cash flows (SCF). The SEC has maintained that the proper classification of cash flows gives financial statement users insight into how a firm generates and uses cash flows. This study investigates the relation between cash flow restatements, firm characteristics, and corresponding stock market reactions to these restatement disclosures from 2000 to 2006. In particular, we find that the likelihood of a restatement is higher for firms with more firm complexity as measured by the number of reported segments, firms with a BigN auditor, greater debt leverage and discontinued operations. The overstatement of cash flows from operations (CFO) occurs more likely in firms with a cash flow forecast, and book-to-tax difference (BTD). Interestingly, the overstatement of CFO occurs more likely in firms issuing dividends. The changes to total cash flows (TCF) more likely occurs in firms with BTD, but less likely in firms reporting a loss. Thus, firms with financial distress are less likely to change TCF in CF restatements. We find that investors react negatively, in some scenarios, to the SCF restatements. While we find that the market negatively reacts to negative changes to TCF, we find no significant reaction to positive or no changes to TCF. Interestingly, we find a significantly negative market reaction to firms with understated CFO restatements but no significant reaction to overstated CFO restatements. Our findings suggest that financial analysts, investors and regulators alike should pay close attention not only to an earnings restatement, but also to SCF restatements.

Keywords: Cash flow restatements, cash flows, cash flow reclassifications, market efficiency

Data Availability: Data are available from sources identified in the paper.

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1 Introduction

Regulators and prior research have shown that investors have suffered significant losses as market capitalizations have dropped by billions of dollars due to earnings restatements of audited financial statements (Levitt, 2000; Palmrose et al., 2004). However, to our knowledge, no study has examined the market effects of restatements of the statement of cash flows (SCF). As one of the first studies to examine these SCF restatements, our study further contributes to our understanding of reported cash flows. The statement of cash flows allows investors to understand how a company's operations are running, where its money is coming from, and how it is being spent. 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 with more reliable and transparent statement of cash flows 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. In this paper, using a cash flow restatement sample without any concurrent earnings or balance sheet restatement, we examine the determinants of SCF restatements, that is, whether cash flow restatements (CFRs) are influenced by particular characteristics of the firm. We then assess the market's response to CFRs using the above pure cash flow only restatement sample.¹

¹ This study examines only cash flow restatements without concurrent earnings or balance sheet restatements. This approach allows us to have a "pure" cash flow only restatement sample.

“Operating cash flow is the lifeblood of a company and the most important barometer that investors have. Although many investors gravitate toward net income, operating cash flow is a better metric of a company’s financial health for two main reasons. First, cash flow is harder to manipulate under GAAP than net income (although it can be done to a certain degree). Second, ‘cash is king’ and a company that does not generate cash over the long term is on its deathbed” (Quoted from Rick Wayman, *Operating cash flow: Better than net income?*, 2010).² Prior research has shown that cash flows, a component of earnings, is important because: (1) cash flows are value relevant (Barth et al., 2001); (2) price-earnings relation depends on the market perception of cash flow numbers (Barth et al., 2001); (3) analysts explicitly state that forecasting cash flows is an important objective of firm valuation (AIMR, 1993); and (4) the primary objective of financial reporting is to provide financial information that aids financial statement users in assessing the amount and timing of future cash flows (FASB, 1978).

The SCFs is one of the primary financial statements required to be in accordance with generally accepted accounting principles (GAAP). 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 Securities Exchange Commission (SEC) has become increasingly concerned with firms’ misclassifications of cash flow activities on their statements of cash flows. The SEC has seen an increase in misclassifications on the SCF (Levine, 2005), a presentation problem affecting firm’s financial reporting transparency. The SEC has maintained that the proper classification of cash flows gives financial statement users insight into how a firm generates and uses cash flows. Complementing the balance sheet and income statement, the SCF, a mandatory

² Posted Oct 4, 2010 on <http://www.investopedia.com/articles/analyst/03/122203.asp#axzz1ibAzKeX1>

part of a company's financial reports since 1987, 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 has been recorded on credit. Therefore, cash is not the same as net income, which, on the income statement and balance sheet, includes cash sales *and* sales made on credit. Cash flow is determined by looking at three components by which cash enters and leaves a company: cash flow from operating (CFO), cash flow from investing (CFI) and cash flow from financing (CFF).

In our sample, approximately 60% (40%) of all CFRs are overstatements (understatements) to CFO. Firms with overstatements are identified by having downward restatements to CFO, while understatements are identified by upward restatements to CFO. Approximately 24% of our observations have nonzero changes from the originally reported to the restated amounts of total cash flows (TCF). In other words, these firms report restated TCF differently from their originally reported TCF, which suggest more than just classification shifting may have occurred. Using a sample of 82 cash flow restatements announced from 2000 to 2006, we find that the likelihood of a restatement is higher for firms with more firm complexity as measured by the number of reported segments, firms with a BigN auditor, greater debt leverage and discontinued operations. The overstatement of cash flows from operations (CFO) occurs more likely in firms with a cash flow forecast, and book-to-tax difference (BTD). Interestingly, the overstatement of CFO occurs more likely in firms issuing dividends. The changes to total cash flows (TCF) more likely occurs in firms with BTD, but less likely in firms reporting a loss. Thus, firms with financial distress are less likely to change TCF in CF restatements. We find that investors react negatively, in some scenarios, to the CFRs. While we find that the market negatively reacts to negative changes to TCF, we find no significant reaction

to nonnegative changes to TCF. Interestingly, we find a significantly negative market reaction to firms with the disclosure of restatements with understated CFO restatements but no significant reaction to the disclosure of restatements with overstated CFO.

Our empirical findings are particularly relevant to academics, financial analysts, regulators and investors. The results of this study are important to academic researchers because it focuses on SCF restatements, which has been studied very little in the academic literature. We do find inconclusive results regarding whether firms with SCF restatements have lower SCF quality, as indicated by weaker market reactions to positive changes to total cash flows. Regardless of whether a firm has a negative or positive change to total cash flows, these changes are an indication of poor quality financial information. Therefore, we expected a negative market reaction whether the change is positive or negative. Our findings may be of particular interest to the auditing profession, where the identification of firms with a higher audit risk is extremely valuable. The evidence in this study suggests that financial analysts, investors, and regulators alike should pay close attention not only to an earnings restatement, but also to SCF restatements.

The remainder of the paper is organized as follows: Section 2 discusses cash flow restatement background and the related literature; Section 3 outlines our sample selection criteria and research methodology; Section 4 presents our summary statistics and empirical findings; and Section 5 summarizes and concludes the paper.

2 Background and related literature

2.1 Background on cash flow restatements

Traditionally, investors have mainly relied on the balance sheet and income statement, thus focusing more on companies' earnings as opposed to their cash position. But accounting scandals in the last decade have changed the landscape of Wall Street. Investors have seen how easily earnings can be manipulated so they are now focusing a lot more attention on how the company is doing operationally and cash wise. They pay more attention to non-GAAP measures such as backlog, bookings, etc. The statement of cash flows has become a more recent focus, and measures such as "free cash flow yield" have become an indication of financial health. Although the cash flow statement has become very important, it had been a while since the SEC announced any regulations strictly concerning the statement of cash flows. Most recently, in 2006, the Securities and Exchange Commission (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) assesses the impact of this one-time allowance. They find that, consistent with the SEC's concerns, firms generally overstated cash flows from operations and understated cash flows for investing activities, thereby misrepresenting overall cash flows; and the most frequent line-item reclassifications echoed the SEC's concerns about the presentation of discontinued operations and dealer floor plan financing arrangements. However, insurance claim proceeds and beneficial interests in securitized loans appeared less problematic than the SEC expected. Overall, their findings indicate that the SEC's plan was relatively successful for these firms in that these cash flow restatements only exerted a marginally negative impact on these firms' stock prices.

Before 2006, it was last in the year 1987, when FASB issued SFAS 95, Statement of Cash Flows which required companies to issue a statement of cash flows as opposed to a statement of changes in financial position, that the SEC announced any new regulation

concerning the SCF when the FASB encouraged companies to use the direct method rather than the indirect method – but they did and still do not require it. As opposed to the large number of guidelines available concerning earnings reporting, SFAS 95 only focuses on the classification of cash expenditures between three categories of cash activities: operating, investing and financing. This lack of guidance allows companies to use some discretion to classify items under these three categories. Many firms have been using techniques which allowed them to improve their cash flow situation. Some of the techniques used to inflate cash flow were: stretching out payables, financing of payables, securitizations of receivables, tax benefits from stock options, and stock buybacks to offset dilution.

Over the last few years, many of the companies that restated their SCF did so because of a misclassification of cash flows in their SCF. Many of them have used some of the techniques mentioned above in order to improve their cash flows from operations. Some examples of the companies that have used these techniques are General Motors which announced that it would restate financial results from 2000 to 2005 for GMAC, the automaker's financial arm. Apparently, GMAC classified cash flow from certain mortgage loan transactions as CFO instead of CFF. Loews and its affiliate CAN Financial Corp also announced a restatement due to misclassification of cash flows. This was actually the companies' third restatement in one year. Some cash flow items from operating activities were wrongly classified as investing ("net purchases and sales of trading securities, changes in net receivables and payables from unsettled investment purchases and sales related to trading securities"). Another example of CFR is International Rectifier. The company announced that it would be restating its results for the first two quarters of 2006 due to a cash flow misclassification of an excess tax benefit resulting from the exercise of stock options. The company stated that it had presented it as CFO so as a result of

the restatement; CFO will decrease while CFI will increase. Linkwell Corporation is another example in which one of the company's subsidiary, Shanghai Likang Disinfectant company bought a building from an affiliate company, Shanghai Likang Pharmaceuticals Technology. Shanghai Likang Disinfectant had previously leased some manufacturing space from Shanghai Likang Pharmaceuticals for about \$11,500 per year. Likang Disinfectant paid the \$333,675 purchase price for the building by reducing Linkang Pharmaceuticals accounts receivables. Appendix A provides an example with Lone Star Technologies Inc. (LST). Its SCF restated period began on January 1, 2003 and ended on December 31, 2004. The CFR disclosure announcement date is March 6, 2006. LST reported no concurrent earnings restatement with their cash flow restatement.

With the large amount of restatements occurring, the SEC had no choice but to address the topic. We investigate the determinants of firms that issue cash flow restatements from three different aspects. First, we analyze the determinants of firms that issue a cash flow restatement compared to a control group of Compustat firms. There is very limited prior literature on what exactly causes a firm to report a cash flow restatement. Second, given that a firm reports a cash flow restatement, we examine firm characteristics of firms that overstated operating cash flows instead of understating operating cash flows. Since operating cash flows are often viewed as an alternative performance benchmark incremental to earnings, managers have incentives to overstate operating cash flows. If earnings are significantly greater than CFO, investors often assume that managers are using upward earnings management. This was a major motivation for many companies, who were eventually caught, to shift financing inflows to the operating section and to shift operating outflows to investing section. On the other hand, if a firm faces high political costs, similar to downward earnings management, firms could have incentives to

understate operating cash flows. Third, we compare firms that reported an overall change in total cash flows versus reporting no change in total cash flows in the cash flow restatement. This latter is important because if the restatement was caused by a simple misclassification among the three categories in the cash flow statement, we would not expect ex ante a change in total cash flows reported. A change in total cash flows could be indicative of an unintentional error and/or an intentional irregularity. Since firms do not usually report the exact cause of the cash flow restatement and it is difficult to ascertain whether a restatement is due to an error or an irregularity, this is an important step in understanding the underlying nature of the cash flow restatement.

2.2 Related Literature on cash flows

Currently, there is limited guidance from prior research regarding cash flow restatements and little to no research related to the determinants of and market reactions to cash flow restatements. While we attempt to incorporate prior literature into this study, our study may be viewed as exploratory in nature and is an early attempt in examining the determinants of cash flow restatements. Prior research has shown that cash flow is thought to be a fundamental performance measure for firm valuation (Penman 2001), most research has focused on earnings (Bowen et al. 1987; Ali 1994; Dechow 1994; Barth et al. 2001, etc.). Nonetheless, examining the value of reported cash flows is potentially interesting because cash flows are usually viewed as an attribute of value relevance (FASB 1978; Barth et al. 2001). That is, while prior research on cash flows generally finds that earnings are superior to cash flows in explaining stock returns, evidence also suggests that cash flows are incrementally useful in valuing securities (Bowen et al. 1987; Ali 1994; Dechow 1994). Therefore, this study also focuses on the association between cash flow restatements and market returns. Within the accounting profession, and among

regulators, the debate about the proper format of cash flow statements may have contributed to classification errors. When finalizing the reporting requirements for cash flow statements, the Financial Accounting Standards Board (FASB) included interest-related cash flows in the operating section. In contrast, the AICPA suggested reporting interest payments as a non-operating cash flow item. Prior research suggests that the format of cash flow statements may be important to regulators, auditors, and other users of financial statements (Klammer and Reed, 1990; Bahnson et al., 1996; Drtina and Largay, 1985).

The inconsistencies arising when firms report their cash flows in accordance with SFAS No. 95 have been the focus of several studies. For example, Nurnberg (1993) identifies several ambiguities within cash flow statements, while Nurnberg and Largay (1996) identify differences in classifying similar cash flows that may be difficult to resolve. They also provide evidence that disclosing the nature and reasons for classification policies may enhance cash flow statement comparability and utility. Some studies have examined the economic implications of cash flow statement components or items (e.g., Barth et al., 2001; Cheng and Hollie, 2008; Luo, 2008).

Another series of studies (Mulford and Martins (2004, 2005a, 2005b) closely examines individual cash flow reporting practices at several publicly-traded companies. Mulford and Martins outline the cash flow problems associated with customer-related notes receivable (e.g., dealer-floor plan financing), sales-type lease receivables, and franchise receivables. They document several companies that classify changes in these types of receivables as investing cash flows, and argue for their reclassification as operating cash flows. Mulford and Martin's studies pre-date the SEC's actions related to cash flow reclassifications and have been credited with assisting the SEC in focusing on the issues outlined in Hollie et al., (2011), as well as this study.

Chuck Mulford, director of the Financial Analysis Lab at Georgia Tech, led a charge in 2004 and 2005 to get companies to pay more attention to how they classify cash flows, which prompted the SEC, in 2006, to allow firms to correct their misclassifications in their next filing period without having to formally restate the SCF. Hollie, et al. (2011) investigates the statement of cash flow reclassifications during this period. To our knowledge, Hollie et al., (2011) is the first study to examine statement of cash flows classification and restatements (i.e., reclassifications) concurrently. They examine a unique setting in which the SEC allowed management to avoid penalty for reclassifying its cash flows during a specified period. They also examine the reclassifications resulting from the SEC's increased scrutiny of cash flow reporting during the allowance period. To assess the impact of these reclassifications, they determine the types of firms affected by this allowance and the types of reclassifications in the operating, investing, and financing categories of the cash flow statement. They find that, consistent with the SEC's concerns, firms were overstating net operating cash flows and understating net investing cash flows, thereby misrepresenting cash flows. The most frequent line-item reclassifications were consistent with the SEC's concerns about the presentation of discontinued operations and dealer floor plan financing arrangements. Insurance claim proceeds and beneficial interests in securitized loans appeared to be less problematic than the SEC expected. Overall, their findings indicate that the SEC's plan was relatively successful and, for firms that took advantage of the allowance period, these cash flow restatements had a marginal negative effect on the capital market.

Lee (2011) examines when firms inflate 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 reported CFO when the incentives to do so are

particularly high. Specifically, she finds firms manage CFO by shifting items between the CFO categories both within and outside the boundaries of GAAP, and by timing certain transactions such as delaying payments to suppliers or accelerating collections from customers. This study differs from Lee (2011) and contributes to the literature in various ways. First, this study focuses on both overstated and understated restatements of cash flows. Second, we distinguish between firms with “pure” classification shifting (which refers to firms that do not have changes to TCF after restatement) and firms with classification shifting that result in changes to TCF. If the restatement is purely a function of misclassification (whether intentional or not), we would expect TCF to remain the same. Third, we assess the markets response to the disclosure of these CFRs.

3 Research methodology

3.1 Determinants of Cash Flow Restatements

We investigate the determinants of firms that issue cash flow restatements from three different aspects. First, we analyze the determinants of firms that issue a cash flow restatement compared to a control group of Compustat firms. There is very limited prior literature on what exactly causes a firm to report a cash flow restatement. Second, given that a firm reports a CFR, we examine the firm characteristics of firms that overstated operating cash flows instead of understating operating cash flows. Since operating cash flows are often viewed as an alternative performance benchmark incremental to earnings, managers have incentives to overstate operating cash flows. If earnings are significantly greater than CFO, investors often assume that managers are using upward earnings management. This was a major motivation for many companies, who were eventually caught, to shift financing inflows to the operating section and to shift operating outflows to investing section. On the other hand, if a firm faces high political

costs, similar to downward earnings management, firms could have incentives to understate operating cash flows. Third, we compare firms that reported an overall change in total cash flows versus reporting no change in total cash flows in the cash flow restatement. This latter is important because if the restatement was caused by a simple misclassification among the three categories in the cash flow statement, we would not expect ex ante a change in total cash flows reported. A change in total cash flows could be indicative of an unintentional error and/or an intentional irregularity. Since firms do not usually report the exact cause of the cash flow restatement and it is difficult to ascertain whether a restatement is due to an error or an irregularity, this is an important step in understanding the underlying nature of the cash flow restatement. Absent a theoretical model to guide the selection of potential variables which are associated with the likelihood of cash flow statement restatements, we use variables referenced in the literature on earnings restatements and cash flows.

Debt

SFAS-95 requires firms to classify uncapitalized interest payments as operating outflows and capitalized interest payments as investing outflows for both non-financial and financial companies (FASB, SFAS No. 95). This requirement has led to increased complexity for firms in choosing how to classify interest payments as it pertains to bonded debt, debt issuance costs, and capitalized interest (Nurnberg 2006). For example, classifying uncapitalized interest payments as operating outflows and principal payments as financing outflows leads to at least 4 different methods of reporting cash flows relating to bonded debt issued at a discount or premium. Furthermore, classifying capitalized interest payments as investing outflows leads to at least 3 alternative methods of reporting cash flows relating to capitalized and uncapitalized amounts. Nurnberg (2006) also states that some companies provide cash flow statements “based on largely

arbitrary classifications of cash flows that their own spokesmen claim are largely meaningless”. In addition, Hollie et al. (2011) find that firms with cash flow restatements have a greater debt ratio than overall Compustat firms with no cash flow restatement. Based on the difficulties in classifying uncapitalized and capitalized interest payments on the statement of cash flows, we expect firms with a larger amount of debt to be more likely to issue a cash flow restatement. Since firms have some degree of flexibility under SFAS-95 in classifying interest payments and managers have certain incentives to inflate operating cash flows (Lee 2012), we expect firms with a larger amount of debt to be more likely to overstate CFO, as opposed to understate CFO, when they issue a cash flow restatement. If the restatement is due to a misclassification of interest payments instead of unintentional errors, we expect the total change in cash flows to be unchanged.

Number of Segments

The number of segments is a well-established proxy for firm complexity (e.g., Bhushan 1989; Berger and Ofek 1995; Comment and Jarrell 1995; Servaes 1996; Dunn and Nathan 1998). As firms engage in more complex transactions and have more diverse operations, we expect the complexity of the firm to be a driver of restatements. Many companies such as Enron, Worldcom, and Symbol Technologies used their increased complexity and large number of segments to disguise shifting of financing cash inflows to operating section of the cash flow statement and shifting of normal operating cash flow outflows to the investing section (Schilit and Perler 2010). Since complex firms sometimes use their flexibility in classifying certain operating, investing, and financing activities with the objective of inflating operating cash flows (Lee 2012), we expect firms with more segments to be more likely to overstate CFO, as opposed

to understate CFO, when they issue a cash flow restatement. If the restatement is due to a shifting among the three categories on the cash flow statement instead of unintentional errors, we expect the total change in cash flows to be unchanged.

Discontinued Operations

Levine (2005) refers to the misclassifications that occur when firms lump operating, investing, and financing cash flows from discontinued operations into a single line item—often included in the operating section of the cash flow statement—thereby distorting the firm’s cash flows. SFAS No. 95 and SFAS No. 144 contributed to the misunderstanding by presenting different interpretations of requirements and different options for reporting cash flows from discontinued operations. For example, SFAS No. 144 (Accounting for Impairment or Disposal of Long-Lived Assets) provides “broad criteria” for what should be classified as discontinued operations, while SFAS No. 95 provides more specific criteria in its application of cash flows (Whitehouse, 2006). Some companies use discontinued operations in an opportunistic manner to inflate CFO. For example, in 2006, Tenet Healthcare structured the sale of hospitals and medical centers but sold everything except for the accounts receivable. Tenet then was able to lower the sales price by \$10 million. When the company collected from its former customers, it reported the \$10 million as an operating inflow instead of an investing inflow, since it was related to the collection of the receivables (Tenet Healthcare 10-Q, 3/2004). Due to multiple interpretations in the accounting standards for presenting discontinued operations, we expect a firm to be more likely to issue a cash flow restatement when it reports discontinued operations. Since it is possible for firms to inflate operating cash flows, either as a result of ambiguities in SFAS-95 or managerial opportunism, we expect firms with discontinued operations to be more likely to

overstate CFO, as opposed to understate CFO, when they issue a cash flow restatement. If the restatement is due to a shifting among the three categories on the cash flow statement instead of unintentional errors, we expect the total change in cash flows to be unchanged.

The alert notes, although not a requirement of SFAS No. 95, that cash flow from discontinued operations be disclosed separately, companies choosing to disclose them separately must do so in conformity with SFAS No. 95 and they must be consistent for all periods. Levine also reiterated the SEC's preference for the direct method which provides clearer and more understandable information to investors. Although the indirect method is the most commonly used by corporations, Levine pointed out that in many cases, when applying this method, companies start their cash flow statements with income from continuing operations instead of starting with net income as per SFAS No. 95 guidelines.

The good news for corporations is that the SEC gave them a brief window to rectify their cash flow classification errors. Firms had to make the necessary corrections in order to comply with SFAS No. 95 during their next filing period after February 15, 2006 otherwise, they would have to restate at a later time. This grace period was a great opportunity for companies to avoid restatement and it reduced the number of companies having to restate their statement of cash flows. SFAS No. 95 allows companies to choose to report cash flow from continuing and discontinued operations together or treat them separately. However, companies must remain consistent in their choice from one period to the other. Unfortunately, many corporations have not been consistent and have combined them in one period and separated them in another. Additionally, in many cases, companies are not following the three categories format required by SFAS No. 95. They often put together all the cash flow from discontinued operations into a single line item making it difficult to identify which of the three sections (primarily CFO) was

affected. The misclassification is somewhat of a presentation issue, which probably explains why the SEC gave companies a chance to make the adjustment without dubbing it a restatement, notes L. Charles Evans, a partner with Grant Thornton, LLP". Some other requirements of this alert stipulate that companies taking advantage of this opportunity must provide "enhanced disclosures". The modified columns in the cash flow statements must be labeled either "revised" or "restated", and they cannot use "reclassified". The information also needs to be disclosed in the footnotes. According to Professor Mulford from Georgia Tech University, "the increased scrutiny on this issue is long overdue and that companies had become complaisant in classifying cash flow from discontinued operations." In April 2006, the AICPA published another alert aiming at clarifying things concerning the changes that companies need to make to comply with SFAS No. This alert focuses on companies with fiscal years which do not follow the calendar year-end. It provides guidelines on how they can still take advantage of the grace period offered by the SEC. Since the SEC announcement, companies seem to be more carefully applying the new guidelines.

In May 2006, Mitcham Industries, Inc announced that it filed its 10K with restated cash flow statements for the fiscal years ended January, 2004 and 2005 and the first three quarters of 2006. The company stated that the changes in the 10K consist of: (1) eliminating discontinued operations as a single line item and reflecting cash flows from discontinued operations within each category of operating, investing and financing activities; (2) reclassifying cash receipts from the sale of lease pool equipment from operating activities to investing activities and reflecting the "Gross profit from sale of lease equipment" as deduction in operating activities"; and (3) reclassified certain of its investments in certificates of deposit from cash and cash equivalents to short-term investments. More and more companies have followed Mitcham

Industries, which shows how eager companies were to comply with the new guidelines if it allowed them to avoid the stigma of a restatement.

CFO-Earnings Quality

Nwaeze et al. (2006) find that CFO becomes an important component in setting CEO cash compensation when the quality of earnings relative to the quality of CFO as a measure of performance is low. This is due to the stewardship information beyond earnings that is in CFO when the precision of earnings is low. Therefore, we predict that when earnings quality is low relative to CFO quality, managers will have greater incentives to overstate CFO in order to boost the cash component of the CEO's compensation. Likewise, we expect that firms are more likely to issue a cash flow restatement when the earnings quality is low relative to CFO quality. If managers are inflating CFO by shifting from either the investing or financing category instead of unintentional errors, then we expect total cash flows to remain the same.

Book-Tax Differences

Mills (1998) finds that firms with large book-tax differences are more likely to be audited by the IRS and have larger proposed audit adjustments. If firms have large book-tax differences and recognize that it is likely they will draw IRS scrutiny, they could be more likely to understate CFO in order to de-emphasize the significance of the amount of cash that is attributable to their daily operations. Therefore, we expect firms with larger book-tax differences to understate CFO, as opposed to overstate CFO, when they report a restatement. However, since there is no clear association based on prior research between book-tax differences and cash flow restatements, we do not make a prediction on the likelihood of restatement given a firm's book-tax difference. If

managers are deflating CFO by shifting from either the investing or financing category instead of unintentional errors, then we expect total cash flows to remain the same.

Agency Conflicts

Jensen (1986) shows that conflicts of interests between shareholders and managers are significantly greater when there are increased free cash flows being generated in the company. In addition, Dey (2008) finds that firms with greater levels of free cash flows have higher agency conflicts. Therefore, we proxy for agency conflicts with a firm's level of free cash flows. We expect that a firm with more agency conflicts will provide managers with more opportunity to inflate CFO since managers have varying incentives to report higher CFO (Lee 2012). Likewise, we expect a firm with more agency conflicts to be more likely to issue a cash flow restatement. If managers are inflating CFO by shifting from either the investing or financing category instead of unintentional errors, then we expect total cash flows to remain the same.

Total Accruals

A firm with a greater level of accruals will, by definition, have earnings that are higher than the firm's CFO, holding CFO constant. When there is a wide gap between earnings and CFO, and earnings are significantly greater than CFO, this is often a "red flag" of potential earnings management (Wild et al. 2004). If firms are using earnings management and desire to narrow the gap between earnings and CFO, we expect these firms to be more likely to issue a cash flow overstatement, versus an understatement, when restating their cash flows. In addition, we expect firms with higher total accruals to be more likely to issue a cash flow restatement due to their desire of appeasing investors' concerns of possible earnings management.

Dividends

Beginning in 2003, when the FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*, there was some classification issues with respect to dividends (Nurnberg 2006). Under SFAS 150, mandatorily-redeemable preferred stock is reported as a liability in the balance sheet. Previously, companies were required to report these securities in the mezzanine section between liabilities and stockholders' equity. However, SFAS 150 changes the cash flow statement classification of dividend payments on these securities. Mulford and Comiskey (2005) show that since these securities are now classified as a liability, the dividends payments are now classified as interest payments, and must be reported as an operating outflow under SFAS 95. Under SFAS 150, the dividend payments were classified as a financing outflow. Therefore, we expect that, to the extent that firms issue mandatorily-redeemable preferred stock, a firm that issues dividend payments will be more likely to have a cash flow restatement, especially after 2003. If indeed firms use the classification of dividends as a method to report higher CFO, we expect firms to be more likely to overstate CFO, as opposed to understate CFO, when they issue a cash flow restatement. If the restatement is primarily due to the shifting of dividend payments between the financing and operating sections on the cash flow statement instead of unintentional errors, we expect the total change in cash flows to be unchanged.

Cash Flow Forecasts

Analysts' cash flow forecasts are important for investors of firms where accounting, operating, and financing characteristics suggest that cash flows are useful in

interpreting earnings and assisting in forecasting the firm's future performance (Defond and Hung 2003). Furthermore, Lee (2012) shows that firms with cash flow restatements are more likely have at least one analyst cash flow forecast during the fiscal year. Therefore, we expect that firms to be more likely to have a cash flow restatement when they have an analyst cash flow forecast. If the market rewards firms that meet or beat analyst cash flow forecasts, as Brown et al. (2010) show, we expect that firms with cash flow forecasts will be more likely to have a cash flow restatement. In addition, firms will be more likely to overstate CFO, versus understate CFO, when they have a restatement. If the restatement is caused by shifting among the three categories of the cash flow statement or unintentional errors will determine whether total change in cash flows will be unchanged.

Auditor Type

The size of the audit firm is often used as reference to the audit quality. Prior research has shown that bigger audit firms have better financial resources and research facilities, superior technology, more talented employees to undertake large company audits than smaller audit firms and are more likely to be sued (Lys and Watts, 1994; Deis Jr and Giroux, 1992; and Lennox, 1999). Therefore, we expect that firms with a Big N auditor would be more likely to understate CFO which would be consistent with more conservative reporting.

Political Sensitivity

If managers are using downward earnings management it is likely that CFO will be greater than operating income. Therefore, despite the direction of earnings management, managers want to close the gap between earnings and CFO because investors are scrutinizing

this gap on the basis that cash is “king” (Wild et al. 2004). Prior literature has found evidence of downward earnings management when applying the political cost hypothesis (Watts & Zimmerman, 1986) to larger firms and recent extreme performance (defined by abnormally high earnings or large losses). We use S&P 500 firms and loss firms as proxies for politically sensitive and highly visible firms which would have greater political costs on average (Saito 2012). Therefore, we expect S&P 500 firms to be more likely to understate CFO in order to disguise abnormally high earnings and we expect loss firms to overstate CFO to hide abnormally low earnings. Even though we acknowledge that the latter is not consistent with managers’ desire to close the gap between earnings and CFO, this only applies to a special case: loss firms.

Hollie et al. (2011) find that during an SEC restatement allowance period, cash flow restatement firms tend to have lower operating cash flow and return on assets. Therefore, we predict that loss firms are more likely to issue a restatement than non-loss firms. Since there is no clear association based on prior research between firm size and cash flow restatements, we do not make a prediction on the likelihood of restatement given a firm belongs to the S&P 500 Index. Depending on whether managers are inflating or deflating CFO by shifting among the three categories of the cash flow restatement versus unintentional errors would determine whether total cash flows remain the same or not.

3.1.1 Additional Cash Flow Restatement Determinant Variables

Total cash flows differ between restated and originally reported amounts³

In each of our restatements, CFO is either overstated or understated while total cash flows remain the same after the restatement. However, in some instances the restated total cash

³ We define total cash flows as the sum of cash flows from operating, investing, and financing activities.

flows differ from the originally reported total cash flows amount regardless of the CFO classification shift upward or downward. We suspect that when cash flow totals do not remain the same the company is less suspect of opportunistic shifting because changing total cash flows is probably more indicative of underlying errors in the reporting of cash flows. We are more suspicious of a company that engages in classification shifting among the statement of cash flows categories and total cash flows remain the same after the restatement. This suggests that the company may have known what they were doing ex ante and it was not merely a misclassification error. If this is so, then we would expect this variable to be insignificant in determining an over/understatement of CFO.

Logistic Regression Models

This study employs three logistic regression models to investigate the determinants of firms that issue cash flow restatements. The first logistic model tests the determinants of firms that issue a cash flow restatement compared to a control group of Compustat firms.

$$\begin{aligned} \text{RESTAT}_{it} = & \beta_0 + \beta_1 \text{DEBT}_{it} + \beta_2 \text{NSEG}_{it} + \beta_3 \text{DO}_{it} + \beta_4 |\Delta E / \Delta \text{CFO}|_{it} + \beta_5 \text{BTD}_{it} + \beta_6 \text{FCF}_{it} + \\ & \beta_7 \text{ACC}_{it} + \beta_8 \text{DIV}_{it} + \beta_9 \text{GROWTH}_{it} + \beta_{10} \text{LOSS}_{it} + \beta_{11} \text{CFF}_{it} + \beta_{12} \text{BIGN}_{it} + \\ & \beta_{13} \text{SP500}_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

The second logistic model tests the determinants for a firm that overstated operating cash flows versus understated operating cash flows, given the firm reported a cash flow restatement. A firm that overstated operating cash flows reported a higher amount of CFO on the restated cash flow statement compared to the firm's original cash flow statement.

$$\text{CFO OVER}_{it} = \beta_0 + \beta_1\text{DEBT}_{it} + \beta_2\text{NSEG}_{it} + \beta_3\text{DO}_{it} + \beta_4|\Delta\text{E}/\Delta\text{CFO}|_{it} + \beta_5\text{BTD}_{it} + \beta_6\text{FCF}_{it} + \beta_7\text{ACC}_{it} + \beta_8\text{DIV}_{it} + \beta_9\text{GROWTH}_{it} + \beta_{10}\text{LOSS}_{it} + \beta_{11}\text{CFF}_{it} + \varepsilon_{it} \quad (2)$$

The third logistic model tests the determinants of the total change in cash flows reported in the cash flow restatement. The total change in cash flow is determined by summing the restated operating, investing, and financing amounts less the original operating, investing, and financing amounts. The dependent variable is a dummy variable indicating whether or not there is a difference in the total change in cash flows.

$$\text{TCF_Differ}_{it} = \beta_0 + \beta_1\text{DEBT}_{it} + \beta_2\text{NSEG}_{it} + \beta_3\text{DO}_{it} + \beta_4|\Delta\text{E}/\Delta\text{CFO}|_{it} + \beta_5\text{BTD}_{it} + \beta_6\text{FCF}_{it} + \beta_7\text{ACC}_{it} + \beta_8\text{DIV}_{it} + \beta_9\text{GROWTH}_{it} + \beta_{10}\text{LOSS}_{it} + \beta_{11}\text{CFF}_{it} + \varepsilon_{it} \quad (3)$$

where,

RESTATER is a dummy variable equal to one if a firm has a cash flow restatement and zero otherwise. CFO OVER is a dummy variable equal to one if a firm's restated CFO is greater than its originally reported CFO. TCF_Differ is a dummy variable equal to one if a firm's restated total cash flows differs from the originally reported total cash flows. The variables we use to determine these three dependent variables and control firms are as follows: (1) Debt/Assets (DEBT) is estimated as short-term plus long-term debt (item #9 and item#34); (2) The number of segments (NSEG) is from the Compustat Segment file and is a surrogate for operating complexity; (3) DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66); (4) $|\Delta\text{E}/\Delta\text{CFO}|$ is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308); (5) BTD, temporary book-tax difference, is the sum of

federal and foreign deferred tax expense (item #269 and item #270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise; (6) FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item #128); (7) ACC, total accruals, is equal to income before extraordinary items minus CFO (item #18 and item #308); (8) DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21); (9) GROWTH is the market to book ratio [(item #199 * item #25)/item #60]; (10) LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise; (11) CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. (12) BIGN is an indicator variable equals to one if the firm is audited by a big auditor (currently the Big 4); (13) SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

In the model, we exclude the variables OCF_RESTATE, ICF_RESTATE, and FCF_RESTATE. These variables generally cause the complete and quasi-complete separation in the logistic model. OCF_RESTATE is a dummy variable equal to one if a firm restates operating cash flows and zero otherwise; ICF_RESTATE is a dummy variable equal to one if a firm restates investing cash flows and zero otherwise; and FCF_RESTATE is a dummy variable equal to one if a firm restates financing cash flows and zero otherwise.

3.2 Market Reactions to Cash Flow Restatements

We assess the market's reactions to SCR reclassification announcements. We examine the various windows centered on the CFR announcement, allowing for any early news leakage that may occur on day -1 and any news delay that may occur as a result of a restatement

announcement after the close of trading on day 0.⁴ We use a market-adjusted returns model based on a value-weighted market index to estimate abnormal returns. The model subtracts the CRSP market index return from a company's daily return to obtain the market-adjusted abnormal return (AR) for each day and company. The daily abnormal returns are summed to calculate the cumulative abnormal return (CAR) for a given time period. We further test whether the total market reactions to the total cash flow restatement for vary based on changes.

4 Summary statistics and empirical findings

4.1 Sample Selection

We identify firms that restated cash flows in the Audit Analytics, Inc., database. We define a statement of cash flows restatement consistent with that of Audit Analytics (AA) where we obtain the data for this study. AA restatement data set covers all SEC registrants who have disclosed a financial statement restatement in electronic filings since 1 January 2001. Annual and amended filings are analyzed by queuing for analysis those filings which contain any of the words “restate”, “restatement” or “restated.” Corresponding cash flow restatement information is extrapolated either from 10-K wizard, SEC filings available in the SEC's online EDGAR database, or from a copy of the annual report on the company's website. The initial study population comprises 329 unique firms. After removing observations with missing data and keeping only 10-K restatements, our remaining sample consists of 42 firms each of which disclosed at least one reclassified cash flow statement between 2000 and 2006. If a firm disclosed restatements for multiple years, we record each year restated. This resulted in 82

⁴ We lost six firms from the sample because of market data unavailability. We also searched for prior disclosures of a cash flow restatement announcement to ensure that we were using the first known disclosure date for our analysis.

observations for the 42 firms in our sample. We use all other firms covered in Compustat in the same period as our control group, which consists of 26,939 firm year observations. Thus, the total sample size of our study is 27,021 firm year observations ranging between 2000 and 2006.

4.2 *Descriptive statistics*

Table 1 presents the summary statistics and comparisons between CFR firms and control firms samples. The `_RESTATE` variables by design identify firms that restated its operating, investing, or financing cash flows, which applies to all sample firms. Each company may have more than one activity category reclassification. While some firms clearly listed individual cash flow line-items that had been reclassified, others provided aggregated amounts within activity categories types. Panel A of Table 1 shows that approximately 94% of the firms with restatements to the statement of cash flow restated its cash flows from operating activities. Approximately 85% of the restating firms restated cash flows from investing. And approximately 46% of the restating firms restated cash flows from financing. Generally firms were restating operating cash flows downward, while restating investing and financing cash flows upwards. This finding is consistent with those found in Hollie et al. (2011). In some cases, firms only restate their total cash flows without making reference to whether the cash flow restatement was related to the operating, investing, or financing activities of the firm.

Panel C of Table 1 shows that sample firms have significantly more number of segments, more discontinued operations, more book-tax differences, higher free cash flow, more dividends paid, more cash flow forecasts, are audited more often by a Big N auditor, and are more often S&P 500 firms. On the contrary, control firms have greater losses than the sample firms. Most of these preliminary results are consistent with our predictions. Specifically, firms are more likely to have a cash flow restatement if they are more complex, have more flexibility in determining

discontinued operations, attract higher levels of IRS scrutiny, have more agency conflicts, are subject to ambiguity in the standards surrounding dividends paid, and are subject to meeting analysts' cash flow forecasts.

{Insert Table 1 about here}

4.3 *Pearson Correlations*

Table 2, Panel A, presents the Pearson correlations for the firms which had a cash flow restatement. The Pearson correlation between CFO_OVER and BTD is positive and significant (0.254, p-value = 0.026). The Pearson between CFO_OVER and Big N is positive and significant (0.356, p-value = 0.002). The Pearson between CFO_OVER and DIV is negative and significant (-0.218, p-value = 0.057). The majority of the correlations among the independent variables are statistically significant but their magnitudes are not large. This suggests that multicollinearity should not be of concern. To verify, we run untabulated tests of multicollinearity using the Variance Inflation Factor (VIF) and show that multicollinearity does not pose a problem since all VIFs are below 3 (significantly less than 10 which indicates a multicollinearity generally).

4.4 *Determinants for Statement of Cash Flows Restatements*

Table 3 provides the results of the logistic regression analysis for firms with cash flow restatements, where the dependent variable is one for statement of cash flows restaters and zero for control firms. We find that firms are more likely to have a cash flow restatement when have higher levels of debt, more number of segments, discontinued operations, and are audited by a Big N auditor. The positive association between the likelihood of cash flow restatements and debt is consistent with the difficulties firms have faced in classifying uncapitalized and

capitalized interest payments on the statement of cash flows as documented by Nurnberg (2006). The positive association between the likelihood of cash flow restatements and the number of segments is consistent with more complex firms using their flexibility in classifying certain operating, investing, and financing activities with the objective of inflating operating cash flows. It is also consistent with these firms having more difficulty in making the correct classifications due to having numerous segments which is compounded by the ambiguities inherent in SFAS95. The positive association between the likelihood of cash flow restatements and the existence of discontinued operations is consistent with having difficulties with multiple interpretations in the accounting standards for presenting discontinued operations. Lastly, the positive association between the likelihood of cash flow restatements and having a Big N auditor is not consistent with our expectations since having a Big N auditor would imply higher audit quality and less restatements.

{Insert Table 3 about here}

Table 4 provides the results of the logistic regression analysis for firms with cash flow overstatements as compared to cash flow understatement. We find that firms when firms issue a cash flow restatement, firms are more likely to have a cash flow overstatement when they have a book-tax difference and analysts' issue a cash flow forecast. On the other hand, when firms issue a cash flow restatement, firms are less likely to have a cash flow overstatement, when they issue dividends. The positive association between cash flow overstatements and book-tax differences is not consistent with our expectations. However, the positive association between cash flow overstatements and cash flow forecasts is consistent with our expectations following Lee (2012). Firms are more likely to attempt to inflate their operating cash flows when analysts issue cash flow forecasts.

{ Insert Table 4 about here }

Table 5 provides the results of the logistic regression analysis for firms with total cash flow changes compared to firms that restate cash flows and have no change in total cash flows. We find that firms are more likely to have a change in total cash flows when they have a book-tax difference. On the contrary, firms are less likely to have a change in total cash flows when they experience a loss. If the change in total cash flows is indicative of an unintentional error instead of intentional classification shifting, it is possible that this means that firms have cash flow restatements due to unintentional errors when they have a book-tax difference or experience a loss. As mentioned earlier, because firms do not disclose the details of the misclassification or whether it is an error or an irregularity, it is difficult to interpret these findings as evidence of errors in cash flow misclassification. Nevertheless, we show that the change in total cash flows at the time of restatement is partially driven by firms that have book-tax differences and losses.

4.5 Market reactions to cash flow restatements

Table 6 shows the abnormal return (AR_t) and its statistical significance for each day of the return window ($t = -1, 0$ and $+1, +2$), along with the cumulative abnormal return for the entire three-day window ($CAR_{-1,+1}$). We are currently finalizing the analysis as it relates to the market reactions to cash flow restatements. We are sure that this analysis will be completed by the workshop date.

{ Insert Table 6 about here }

4.6 Additional analysis & sensitivity analysis to be completed

We plan to examine whether any firms have upward restatements to cash flows from operations. The general inclination is to see downward revisions, however like earnings restatements, we may find certain situations where upward restatements occur within our sample period. We will also examine the number of restating firms that employ the direct versus indirect methods for cash flow statement reporting.

We plan to perform sensitivity analysis by deleting all Restaters with more than one restatement. We will then repeat our main tests separately for cash flow restatements in the fourth quarter, when an audit is required, and all other quarterly cash flow restatements as one group. For example, we will look at partial year restatements separately from annual audited full year restatements. Next, all Restaters' public announcements between the cash flow statement disclosure and the subsequent SEC filing dates will be examined to determine if the firm issued a press release that announced the upcoming cash flow restatement in the SEC filing. We then examine the robustness of our results to whether revisions are to core or non-core cash flows. We expect when the restatements are to core items that the reduction in market reactions to the total cash flow surprise of Restaters as compared to non-Restaters is more pronounced than for non-core items. These additional tests are sure to give us more insight into the occurrence of statement of cash flows restatements.

5 Summary and conclusions

To be summarized and concluded when the last of the analysis is completed very soon.

Appendix A
Example of a Statement of Cash Flows Restatement

LONE STAR TECHNOLOGIES INC

Year	Original Report			Restatements			Changes		
	OP	INV	FIN	OP	INV	FIN	OP	INV	FIN
2003	-40.6	-48	0.5	29.5	-39.2	6.4	-32.2	32.2	0
2004	61.7	-71.4	6.4	-8.4	-80.2	0.5	32.2	-32.2	0
Total	21.1	-119.4	6.9	21.1	-119.4	6.9	0	0	0

Note: The variables defined are as follows: OP – cash flows from operating activities, INV – cash flows from investing activities, and FIN – cash flows from financing activities.

References

- Abarbanell, J., and V. Bernard. 1992. Test of Analysts' Overreaction/Underreaction to Earnings Information as an Explanation for Anomalous Stock Price Behavior. *Journal of Finance* 47:1181-1207.
- Bernard. 1992. Test of Analysts' Overreaction/Underreaction to Earnings Information as an Explanation for Anomalous Stock Price Behavior. *Journal of Finance* 47:1181-1207.
- AICPA. 2006. Center for Public Company Audit Firms Alert No. 90, SEC staff position regarding changes to the statement of cash flows relating to discontinued operations.
- AICPA. 2006. Center for Public Company Audit Firms Alert No. 98, Update to SEC staff position regarding changes to the statement of cash flows relating to discontinued operations.
- Bahnson, P., P. Miller and B. Budge. 1996. Nonarticulation in cash flow statements and implications for education, research, and practice. *Accounting Horizon* 10: 1-15.
- Barth, M., D. Cram and K. Nelson. 2001. Accruals and the prediction of future cash flows. *The Accounting Review* 76: 27-58.
- Berger, P., and E. Ofek. 1995. Diversification's effect on firm value. *Journal of Financial Economics* 37: 39-65.
- Brown, L., A. S. Pinello, and K. Huang. 2010. To Beat or Not to Beat? the Importance of Analysts' Cash Flow Forecasts. Working paper, Georgia State University.
- Bhushan, R. 1989. Firm characteristics and analyst following. *Journal of Accounting and Economics* 11 (July): 255-274.
- Cheng, C.S.A. and D. Hollie. 2008. Do core and non-core cash flows from operations persist differentially in predicting future cash flows? *Review of Quantitative Finance and Accounting* 31: 29-53.
- Cheng, C. S. A., Liu, C. S., and T. Schaefer, 1996. Earnings Permanence and the Incremental Information Content of Cash Flows from Operations. *Journal of Accounting Research* 34:173-181.
- DeFond, M., and M. Hung. 2003. An empirical analysis of analysts' cash flow forecasts. *Journal of Accounting and Economics* 35 (1): 73-100.
- Deis Jr, Donald R & Giroux, Gary A. "Determinant of Audit Quality in the Public Sector." *The Accounting Review* Vol 67, No. 3. (1992).
- Dey, A. 2008. Corporate governance and agency conflicts. *Journal of Accounting Research* 46:1143-1181.

Drtina, R. and Largay III. 1985. Pitfalls in calculating cash flow from operations. *The Accounting Review* 60: 314-326.

Dunn, K., and S. Nathan. 1998. The effect of industry diversification on consensus and individual analysts' earnings forecasts. Working Paper, CUNY – Baruch College, NY.

FASB. 1978. Statement of Financial Accounting Concepts No. 1: Objectives of Financial Reporting by Business Enterprises. Stamford, Conn.: FASB.

FASB. 1987. Statement of Financial Accounting Standards No. 95, Statement of Cash Flows, Stamford, CT.

FASB. 2001. Statement of Financial Accounting Standards No. 144, Accounting for Impairment or Disposal of Long-Lived Assets, Stamford, CT.

FASB. 2003. Statement No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. Norwalk Conn.

Hollie, D., C. Nicholls, Q. Zhao. 2011. Effects of cash flow statement reclassifications pursuant to the SEC's one-time allowance. *Journal of Accounting & Public Policy* 30: 570-588.

Jensen, M. "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers." *American Economic Review* 76 (1986): 323–9.

Klammer, T. P., and S. Reed. 1990. Operating cash flow formats: Does format influence decisions? *Journal of Accounting, and Public Policy* 9: 217-235.

Lee, Lian. 2012. Incentives to inflate reported cash from operations using classification and timing. *The Accounting Review* 87: 1-33.

Leone, M. 2006. Act Now, and Avoid a Restatement. *CFO.com*, March 20, 2006.

Lennox, Clive S. "Audit Quality and Auditor Size: An Evaluation of Reputation and Deep Pockets Hypothesis." *Journal of Business Finance & Accounting*, 26. (1999).

Levine, J. 2005. Speech by SEC staff: Remarks before the 2005 thirty-third AICPA National Conference on Current SEC and PCAOB Developments. Securities Exchange Commission www.sec.gov/news/speech/spch120605jl.htm

Luo, M. 2008. Unusual operating cash flows and stock returns. *Journal of Accounting, and Public Policy*. 27: 420-429.

Mills, L., 1998. Book-tax differences and Internal Revenue Service adjustments. *Journal of Accounting Research* 36 (2), 343–356.

- Mulford, C.W., and Comiskey, E., 2005. *Creative Cash Flow Reporting: Uncovering Sustainable Financial Performance*. New York: John Wiley & Sons, Inc.
- Mulford, C.W. and Martins, M. 2004. Cash-flow reporting practices for customer-related notes receivable. *Georgia Tech Financial Analysis Lab*.
- Mulford, C.W. and Martins, M. 2005a. Cash-flow reporting practices for customer-related notes receivable:an update. *Georgia Tech Financial Analysis Lab*.
- Mulford, C.W. and Martins, M. 2005b. Customer-related notes receivable and reclassified cash flow provided by operating activities. *Georgia Tech Financial Analysis Lab*.
- Nurnberg, H. 1983. Issues in funds statement presentation. *The Accounting Review* 58: 799-812.
- Nurnberg, H. and J. Largay 1996. More concerns over cash flow reporting under FASB statement no. *Accounting Horizons*. 10: 123-136.
- Nurnberg, H. 2006. Perspectives on the Cash Flow Statement under FASB Statement No. 95. Columbia Business School: Center for excellence in accounting and security analysis (Occasional paper series). New York, NY: Columbia Business School.
- Nwaeze, T., S. Yang, and Q. Yin. 2006. Accounting information and CEO compensation: The role of cash flow from operations in the presence of earnings. *Contemporary Accounting Research* 23 (1): 227–265.
- Palmrose, Z, Richardson, V. J., and S. Scholz. 2004. Determinants of Market Reactions to Restatement Announcements. *Journal of Accounting and Economics*. 37: 59-89.
- Previts, G. J., R. J. Bricker, T. R. Robinson, and S. J. Young. 1994. A content analysis of sell-side financial analysts company reports. *Accounting Horizons* 8 _2_: 55–70.
- Romero, S. and A. Berenson. 2002. WorldCom says it hid expenses, inflating cash flow \$3.8 billion. *The New York Times*, June 26, 2002.
- Roychowdhury, S. 2006. Earnings management through real activities manipulation. *Journal of Accounting and Economics*. 42: 335-370.
- Saito, Y., 2011. The demand for accounting information: young NASDAQ listings versus S&P 500 NYSE listings. *Review of Quantitative Finance and Accounting*. 38: 149-175.
- Schilit, H. and J. Perler. 2010. *Financial Shenanigans: How to Detect Accounting Gimmicks and Fraud in Financial Reports*. New York, NY: McGraw-Hill.
- Servaes, H. 1996. The value of diversification during the conglomerate merger wave. *Journal of Finance* 51: 1201-1225.

Wayman, Rick. 2010. Operating cash flow: better than net income?
<http://www.investopedia.com/articles/analyst/03/122203.asp>

Whitehouse, T. 2006. SEC Gives More Guidance On Cash Flow Corrections. *Compliance Week*, March 21, 2006.

Watts, R. and J. Zimmerman. 1986. *Positive Accounting Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Wild, J., K. R. Subramanyam, and R. Hasley. 2004. *Financial Statement Analysis*. New York, NY: McGraw-Hill/Irwin.

Table 1
Summary Statistics on Variables for Sample and Control Firms

Panel A: Descriptive Statistics for Sample Firms

Variable	N	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl	Minimum	Maximum
OCF RESTATE	82	0.939	0.241	1.000	1.000	1.000	0.000	1.000
ICF RESTATE	82	0.854	0.356	1.000	1.000	1.000	0.000	1.000
FCF RESTATE	82	0.463	0.502	0.000	0.000	1.000	0.000	1.000
CFO	77	0.364	0.484	0.000	0.000	1.000	0.000	1.000
TCF_Differ	82	0.756	0.432	1.000	1.000	1.000	0.000	1.000
DEBT	82	0.420	0.766	0.180	0.364	0.477	0.000	6.989
NSEG	82	2.720	1.597	1.000	2.500	4.000	1.000	7.000
DO	82	0.293	0.458	0.000	0.000	1.000	0.000	1.000
 \Delta E/\Delta CFO 	82	5.565	20.301	0.292	0.684	2.459	0.011	140.443
BTD	82	0.793	0.408	1.000	1.000	1.000	0.000	1.000
FCF	82	-0.029	0.173	-0.034	0.022	0.058	-0.638	0.362
ACC	82	-0.110	0.241	-0.122	-0.048	-0.015	-1.671	0.426
DIV	82	0.402	0.493	0.000	0.000	1.000	0.000	1.000
GROWTH	82	2.589	9.414	1.171	1.683	2.825	-37.266	56.731
LOSS	82	0.280	0.452	0.000	0.000	1.000	0.000	1.000
CFF	82	0.305	0.463	0.000	0.000	1.000	0.000	1.000
BIG N	82	0.817	0.389	1.000	1.000	1.000	0.000	1.000
SP500	82	0.146	0.356	0.000	0.000	0.000	0.000	1.000

OCF_RESTATE is a dummy variable equal to one if a firm restates operating cash flows and zero otherwise; ICF_RESTATE is a dummy variable equal to one if a firm restates investing cash flows and zero otherwise; and FCF_RESTATE is a dummy variable equal to one if a firm restates financing cash flows and zero otherwise. CFO OVERSTATATER is a dummy variable equal to one if a firm's restated CFO is greater than its originally reported CFO. TCF_Differ is a dummy variable equal to one if a firm's restated total cash flows differs from the originally reported total cash flows. DEBT is estimated as short-term plus long-term debt (item #9 and item#34). NSEG is the number of segments from the Compustat Segment file. DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66). $|\Delta E/\Delta CFO|$ is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308). BTD, temporary book-tax difference, is the sum of federal and foreign deferred tax expense (item #269 and item #270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise. FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item #128). ACC is equal to income before extraordinary items minus CFO (item #18 and item #308). DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21). GROWTH is the market to book ratio [(item #199 * item #25)/item #60]. LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise. CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. BIGN is an indicator variable equals to one if the firm is audited by a Big 4 auditor. SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

Panel B: Descriptive Statistics for Control Firms

Variable	N	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl	Min	Max
CFO OVERSTAT	27052	1.000	0.000	1.000	1.000	1.000	1.000	1.000
TCF_Differ	27052	1.000	0.000	1.000	1.000	1.000	1.000	1.000
DEBT	27052	0.378	0.867	0.017	0.189	0.400	0.000	6.989
NSEG	27052	1.991	1.421	1.000	1.000	3.000	1.000	15.000
DO	27052	0.155	0.362	0.000	0.000	0.000	0.000	1.000
 \DeltaE/\DeltaCFO 	26939	5.560	17.952	0.356	1.026	2.917	0.011	140.443
BTD	27052	0.651	0.477	0.000	1.000	1.000	0.000	1.000
FCF	27052	-0.206	0.850	-0.119	0.010	0.069	-6.343	0.362
ACC	27052	-0.357	1.501	-0.146	-0.062	-0.017	-12.521	0.426
DIV	27052	0.263	0.440	0.000	0.000	1.000	0.000	1.000
GROWTH	27052	2.504	8.922	0.844	1.718	3.225	-37.266	56.731
LOSS	27052	0.398	0.490	0.000	0.000	1.000	0.000	1.000
CFF	27052	0.201	0.401	0.000	0.000	0.000	0.000	1.000
BIG N	27052	0.659	0.474	0.000	1.000	1.000	0.000	1.000
SP500	27052	0.065	0.247	0.000	0.000	0.000	0.000	1.000

CFO OVERSTAT is a dummy variable equal to one if a firm's restated CFO is greater than its originally reported CFO. TCF_Differ is a dummy variable equal to one if a firm's restated total cash flows differs from the originally reported total cash flows. DEBT is estimated as short-term plus long-term debt (item #9 and item#34). NSEG is the number of segments from the Compustat Segment file. DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66). |\DeltaE/\DeltaCFO| is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308). BTD, temporary book-tax difference, is the sum of federal and foreign deferred tax expense (item #269 and item#270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise. FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item#128). ACC is equal to income before extraordinary items minus CFO (item #18 and item #308). DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21). GROWTH is the market to book ratio [(item #199 * item #25)/item #60]. LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise. CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. BIGN is an indicator variable equals to one if the firm is audited by a Big 4 auditor. SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

Panel C: Tests of Mean Differences: Control minus Sample Firms

Variables	Control Minus Sample	t-statistic	Significance
OCF RESTATE	-0.939	-645.420	<.0001
ICF RESTATE	-0.854	-397.230	<.0001
FCF RESTATE	-0.463	-152.840	<.0001
CFO	0.636	217.570	<.0001
TCF_Differ	0.244	93.410	<.0001
DEBT	-0.042	-0.440	0.662
NSEG	-0.728	-4.630	<.0001
DO	-0.138	-3.430	0.001
 $\Delta E/\Delta CFO$ 	-0.004	0.000	0.998
BTD	-0.142	-2.690	0.007
FCF	-0.178	-1.890	0.058
ACC	-0.247	-1.490	0.136
DIV	-0.140	-2.860	0.004
GROWTH	-0.086	-0.090	0.931
LOSS	0.118	2.180	0.030
CFE	-0.104	-2.340	0.019
BIG N	-0.158	-3.020	0.003
SP500	-0.081	-2.980	0.003

Table 2
Pearson Correlation Coefficients

Panel A: Sample Group (N=82)

	CFO_OVER	TCF_Differ	DEBT	NSEG	DO	\u0394E/\u0394CFO	BTD	FCF	ACC	DIV	GROWTH	LOSS	BIG N	CFF
TCF_Differ	-0.118	0.305												
DEBT	-0.036	0.033												
NSEG	-0.152	0.079	-0.049											
DO	-0.101	0.116	0.257	0.502										
 \u0394E/\u0394CFO 	-0.088	0.106	0.035	-0.006	0.066									
BTD	0.254	0.200	0.046	-0.052	0.197	-0.116								
FCF	0.137	-0.022	-0.317	0.139	0.155	-0.166	0.425							
ACC	0.012	-0.072	0.016	0.207	0.163	0.107	0.180	0.400						
DIV	-0.218	0.119	-0.109	0.349	0.347	0.012	0.297	0.293	0.268					
GROWTH	-0.146	0.029	-0.149	-0.090	-0.203	-0.266	-0.256	-0.338	-0.683	-0.075				
LOSS	-0.120	-0.278	0.120	-0.129	-0.223	-0.008	-0.417	-0.639	-0.342	-0.346	0.307			
BIG N	0.301	0.012	0.284	0.248	0.044	0.941	<.0001	<.0001	0.002	0.001	0.005			
CFF	0.215	-0.056	-0.059	0.167	0.156	-0.134	0.208	0.206	0.217	0.267	-0.072	-0.237	0.313	
SP500	-0.102	0.074	-0.033	0.312	0.340	-0.098	0.042	0.172	0.167	0.364	0.019	-0.259	0.196	0.400
	0.380	0.506	0.765	0.004	0.002	0.380	0.711	0.122	0.134	0.001	0.863	0.019	0.078	0.000

Table 2 (cont.)
Pearson Correlation Coefficients

Panel B: Control Group (N=27,052)

	DEBT	NSEG	DO	 \u0394E/\u0394CFO 	BTD	FCF	ACC	DIV	GROWTH	LOSS	BIG N	CFF
NSEG	-0.076 <.0001											
DO	0.018 0.004	0.159 <.0001										
 \u0394E/\u0394CFO 	0.078 <.0001	-0.050 <.0001	-0.020 0.001									
BTD	-0.212 <.0001	0.284 <.0001	0.024 <.0001	-0.125 <.0001								
FCF	-0.596 <.0001	0.162 <.0001	0.025 <.0001	-0.097 <.0001	0.345 <.0001							
ACC	-0.570 <.0001	0.113 <.0001	0.024 <.0001	-0.138 <.0001	0.234 <.0001	0.661 <.0001						
DIV	-0.082 <.0001	0.312 <.0001	0.076 <.0001	-0.090 <.0001	0.300 <.0001	0.181 <.0001	0.122 <.0001					
GROWTH	-0.155 <.0001	-0.010 0.113	-0.022 0.000	-0.022 0.000	-0.003 0.606	0.114 <.0001	0.131 <.0001	0.010 0.090				
LOSS	0.170 <.0001	-0.250 <.0001	-0.050 <.0001	0.143 <.0001	-0.542 <.0001	-0.370 <.0001	-0.252 <.0001	-0.415 <.0001	-0.020 0.001			
BIG N	-0.212 <.0001	0.183 <.0001	0.057 <.0001	-0.086 <.0001	0.311 <.0001	0.269 <.0001	0.227 <.0001	0.256 <.0001	0.028 <.0001	-0.306 <.0001		
CFF	-0.072 <.0001	0.142 <.0001	0.058 <.0001	-0.046 <.0001	0.232 <.0001	0.132 <.0001	0.094 <.0001	0.221 <.0001	0.029 <.0001	-0.252 <.0001	0.281 <.0001	
SP500	-0.040 <.0001	0.209 <.0001	0.080 <.0001	-0.022 0.000	0.179 <.0001	0.083 <.0001	0.052 <.0001	0.276 <.0001	0.034 <.0001	-0.187 <.0001	0.165 <.0001	0.355 <.0001

Table 3
Logistic Regression for Determinants of Cash Flow Restatements

$$\text{RESTAT}_{it} = \beta_0 + \beta_1 \text{DEBT}_{it} + \beta_2 \text{NSEG}_{it} + \beta_3 \text{DO}_{it} + \beta_4 |\Delta E / \Delta \text{CFO}|_{it} + \beta_5 \text{BTD}_{it} + \beta_6 \text{FCF}_{it} + \beta_7 \text{ACC}_{it} + \beta_8 \text{DIV}_{it} + \beta_9 \text{GROWTH}_{it} + \beta_{10} \text{LOSS}_{it} + \beta_{11} \text{CFF}_{it} + \beta_{12} \text{BIG N}_{it} + \beta_{13} \text{SP500}_{it} + \varepsilon_{it}$$

Parameter	Coefficient	SE	Odds Ratio	Pr > ChiSq
Intercept	-7.222***	0.434		<.0001
DEBT	0.5369***	0.154	1.711	0.001
NSEG	0.1693**	0.067	1.184	0.012
DO	0.5626**	0.250	1.755	0.024
 \Delta E/\Delta CFO 	0.004	0.006	1.004	0.545
BTD	0.295	0.324	1.343	0.363
FCF	0.602	0.416	1.826	0.148
ACC	0.405	0.355	1.499	0.254
DIV	0.127	0.266	1.135	0.635
GROWTH	0.005	0.017	1.005	0.787
LOSS	0.234	0.311	1.264	0.451
CFF	0.110	0.273	1.117	0.686
BIG N	0.5355*	0.319	1.708	0.093
SP500	0.269	0.363	1.308	0.459

N= 27,021 (Sample=82, Control =26,939)

Likelihood Ratio: 41.33 Percent Concordant: 52.6

Pseudo R-square: 0.0015 Max-rescaled R-Square: 0.0378

RESTAT_{it} equals one if the firm has a cash flow restatement, zero otherwise. DEBT is estimated as short-term plus long-term debt (item #9 and item#34). NSEG is the number of segments from the Compustat Segment file. DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66). $|\Delta E/\Delta \text{CFO}|$ is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308). BTD, temporary book-tax difference, is the sum of federal and foreign deferred tax expense (item #269 and item #270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise. FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item #128). ACC is equal to income before extraordinary items minus CFO (item #18 and item #308). DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21). GROWTH is the market to book ratio [(item #199 * item #25)/item #60]. LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise. CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. BIG N is an indicator variable equals to one if the firm is audited by a Big 4 auditor. SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

Table 4
Logistic Regression for Determinants of Cash Flow Overstatements

$$\text{CFO OVER}_{it} = \beta_0 + \beta_1 \text{DEBT}_{it} + \beta_2 \text{NSEG}_{it} + \beta_3 \text{DO}_{it} + \beta_4 |\Delta E / \Delta \text{CFO}|_{it} + \beta_5 \text{BTD}_{it} + \beta_6 \text{FCF}_{it} + \beta_7 \text{ACC}_{it} + \beta_8 \text{DIV}_{it} + \beta_9 \text{GROWTH}_{it} + \beta_{10} \text{LOSS}_{it} + \beta_{11} \text{CFF}_{it} + \varepsilon_{it}$$

Parameter	Coefficient	SE	Odds Ratio	Pr > ChiSq
Intercept	-1.678	1.321		0.204
DEBT	-0.355	0.513	0.701	0.489
NSEG	0.064	0.226	1.066	0.776
DO	-1.042	0.881	0.353	0.237
 \Delta E/\Delta CFO 	-0.037	0.037	0.964	0.316
BTD	2.6501**	1.205	14.156	0.028
FCF	-2.562	3.602	0.077	0.477
ACC	-0.712	1.963	0.491	0.717
DIV	-2.3051***	0.823	0.100	0.005
GROWTH	-0.121	0.098	0.886	0.219
LOSS	-0.967	0.992	0.380	0.330
CFF	2.4311***	0.881	11.372	0.006
SP500	-1.400	1.052	0.247	0.183

N= 77

Likelihood Ratio: 27.52

Percent Concordant: 82.1

Pseudo R-square: 0.3005

Max-rescaled R-Square: 0.4114

CFO OVER equals one if the firm has a cash flow overstatement, zero if cash flow understatement. DEBT is estimated as short-term plus long-term debt (item #9 and item#34). NSEG is the number of segments from the Compustat Segment file. DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66). $|\Delta E/\Delta \text{CFO}|$ is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308). BTD, temporary book-tax difference, is the sum of federal and foreign deferred tax expense (item #269 and item #270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise. FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item #128). ACC is equal to income before extraordinary items minus CFO (item #18 and item #308). DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21). GROWTH is the market to book ratio [(item #199 * item #25)/item #60]. LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise. CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

Table 5
Logistic Regression for Determinants of Total Cash Flow Changes

$$TCF_Differ_{it} = \beta_0 + \beta_1 DEBT_{it} + \beta_2 NSEG_{it} + \beta_3 DO_{it} + \beta_4 |\Delta E/\Delta CFO|_{it} + \beta_5 BTD_{it} + \beta_6 FCF_{it} + \beta_7 ACC_{it} + \beta_8 DIV_{it} + \beta_9 GROWTH_{it} + \beta_{10} LOSS_{it} + \beta_{11} CFF_{it} + \varepsilon_{it}$$

Parameter	Coefficient	SE	Odds Ratio	Pr > ChiSq
Intercept	-0.311	1.126		0.782
DEBT	-0.034	0.469	0.967	0.942
NSEG	0.216	0.229	1.241	0.345
DO	0.229	0.918	1.257	0.803
 \Delta E/\Delta CFO 	0.118	0.109	1.125	0.279
BTD	1.5455*	0.873	4.690	0.077
FCF	-4.047	2.784	0.017	0.146
ACC	-2.143	2.667	0.117	0.422
DIV	0.019	0.758	1.019	0.980
GROWTH	0.040	0.059	1.041	0.494
LOSS	-2.4916**	0.911	0.083	0.006
CFF	-0.765	0.712	0.465	0.283
SP500	0.272	1.038	1.313	0.793

N= 82

Likelihood Ratio: 19.83 Percent Concordant: 79.2

Pseudo R-square: 0.2148 Max-rescaled R-Square: 0.3202

TCF_Differ equals one if the firm's restated total cash flow change is not equal to its original total cash flow change, zero otherwise. DEBT is estimated as short-term plus long-term debt (item #9 and item#34). NSEG is the number of segments from the Compustat Segment file. DO is a dummy variable equal to one if a firm reports discontinued operations, zero otherwise (item #66). $|\Delta E/\Delta CFO|$ is the ratio of the absolute value of earnings change to CFO change (item #18 and item #308). BTD, temporary book-tax difference, is the sum of federal and foreign deferred tax expense (item #269 and item #270, respectively), and where missing we use total deferred taxes (item #50), grossed up by the statutory tax rate during the sample period (35 percent). BTD is a dummy variable equal to one if there is a BTD and zero otherwise. FCF is free cash flow and is equal to CFO minus capital expenditures (item #308 and item #128). ACC is equal to income before extraordinary items minus CFO (item #18 and item #308). DIV is a dummy variable equal to one if the firm paid common dividends, zero otherwise (item #21). GROWTH is the market to book ratio [(item #199 * item #25)/item #60]. LOSS is a dummy variable obtaining one if earnings for the quarter are negative and zero otherwise. CFF is a dummy variable equal to one if an analyst issues a cash flow forecast during the fiscal year and zero otherwise. SP500 is a dummy variable equal to one if the firm is listed in the S&P 500 Index.

Table 6
Cumulative Abnormal Returns (CARs) for Event Windows
Surrounding Cash Flow Restatement Announcements

Panel A: Full sample of all cash flow only restatements

	Event windows surrounding announcement on day 0 (N=41 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-0.44%	-0.78%	-0.30%
(t-statistics)^b	-0.947 .3443	-1.606 .1093*	-1.123 .2622

Panel B: Overstated CFO sample of all cash flow only restatements

	Event windows surrounding announcement on day 0 (N=23 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-0.86%	-1.38%	-0.20%
(t-statistics)^b	-0.304 .7612	-1.236 .2174	-0.638 .5237

Panel C: Understated CFO sample of all cash flow only restatements

	Event windows surrounding announcement on day 0 (N=25 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-1.17%	-1.55%	-0.90%
(t-statistics)^b	-2.093 .0371**	-2.749 .0063***	-2.400 .0170***

Table 6 (cont'd)
Cumulative Abnormal Returns (CARs) for Event Windows
Surrounding Cash Flow Restatement Announcements

Panel D: Negative change from original to restated total cash flows sample

	Event windows surrounding announcement on day 0 (N=33 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-0.42%	-1.07%	-0.92%
(t-statistics)^b	-0.978 .3287	-2.333 .0203**	-2.132 .0338**

Panel E: Positive change from original to restated total cash flows sample

	Event windows surrounding announcement on day 0 (N=24 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-0.27%	-0.56%	0.16%
(t-statistics)^b	-0.747 .4557	-0.915 .3611	0.164 .8698

Panel F: No change from original to restated total cash flows sample

	Event windows surrounding announcement on day 0 (N=23 obs)		
	(-2, 2)	(-1, 1)	(0, 0)
Market-adjusted CARs^a Mean (%)	-0.15%	-0.87%	-0.52%
(t-statistics)^b	-0.397 .6919	-1.215 .2252	-1.507 .1328

* , ** , and *** are significant at 0.10, 0.05, or 0.0, respectively (all p-values are based on two-tailed tests).

^a Market-adjusted CARs using a valued weighted index.

^b t-statistics test whether mean = 0, and Z-statistics are based on rank tests