Do Firms Use Restructuring Charge Reversals to Meet Earnings Targets?

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Abstract

Many firms that take restructuring charges reverse a portion of those restructuring charge accruals in a later quarter. These reversals increase net income, often substantially. In this study, I investigate whether restructuring charge reversals are associated with incentives to meet or exceed analysts’ forecasts, avoid earnings declines relative to prior-year levels, and avoid losses. I examine both the decision to record a reversal and the amount of the reversal, using a sample of 121 reversals recorded between 1990 and 1999. The results suggest that some firms record reversals to beat analysts’ forecasts and to avoid reporting net losses. There is also some evidence that firms record reversals to avoid earnings declines. Overall, the results are consistent with firms using restructuring accrual reversals to manage earnings.

Keywords: Accrual reversal; earnings management; earnings targets; restructuring charge.

Data Availability: The data used in this study are publicly available from the sources listed in the paper.

This paper can be downloaded from the Social Science Research Network Electronic Paper Collection: http://papers.ssrn.com/abstract=291492
I. INTRODUCTION

Dechow and Skinner (2000) argue that academics are “unwilling to believe that earnings management is practiced by most firms or that the earnings management that does exist should necessarily concern investors” (235). In contrast, practitioners and regulators “often see earnings management as pervasive and problematic – and in need of immediate remedial action” (Dechow and Skinner 2000, 235). For example, Securities and Exchange Commission (SEC) Chairman Arthur Levitt has expressed concern that earnings management is causing “an erosion in the quality of earnings, and therefore, the quality of financial reporting” (Levitt 1998).

Levitt cites restructuring charges as one means managers can use to manage earnings. Restructuring charges represent the current period recognition of the estimated amount of current and future costs associated with restructuring activities (e.g., work-force reductions, the redesign of unprofitable operations, etc.). These charges can be substantial. For example, Dechow et al. (1994) find that restructuring charges average 80 percent of net income before the charge. Walter Schuetz, the Chief Accountant in the SEC’s Division of Enforcement, indicated that his staff is observing an increasing propensity for firms to reverse portions of their earlier restructuring charges (Schuetz 1998). In contrast to the initial charges, these reversals increase net income. For example, Lucent Technologies reversed $409 million from restructuring reserves back to income from 1997 to 1999.

In this study, I investigate whether firms use restructuring charge reversals to manage earnings to meet earnings benchmarks. Reversals of these restructuring accruals are observable, explicit transactions that unambiguously increase net income. Examining restructuring charge reversals permits a direct test of potential earnings management based on an observable
transaction, rather than on noisy estimates of unobservable earnings management mechanisms such as discretionary accruals. I investigate a sample of 121 reversals recorded between 1990 and 1999 to test whether managers appear to use restructuring charge reversals to avoid missing analysts’ forecasts, to avoid earnings declines, and/or to avoid net losses.

I find that managers are more likely to reverse restructuring charges when pre-reversal earnings fall short of analysts’ forecasts or when pre-reversal net income is negative. Also, I find some evidence that managers are more likely to reverse restructuring accruals when pre-reversal net income declined from the previous year. Furthermore, the amount of the reversal increases in the magnitude of the pre-reversal shortfall from analysts' forecasts and the magnitude of pre-reversal losses.

These results are consistent with analysts’, auditors’, and regulatory authorities’ concerns that some firms use restructuring charge reversals to manage earnings. In particular, the results are consistent with recent evidence suggesting that firms manage earnings to avoid “bad news” earnings surprises and net losses (e.g., Burgstahler and Dichev 1997; Degeorge, et al. 1999; and Burgstahler and Eames 2001). Libby and Kinney (2000, 384) note that although past research suggests that firms manage earnings to meet targets such as forecasts, there is little evidence regarding firms’ use of particular methods to meet the benchmarks. This study provides evidence suggesting that managers use a specific accrual, reversals of restructuring charges, to achieve earnings benchmarks.

The remaining sections of this paper are organized as follows. Section II overviews restructuring charges and describes managers’ incentives and opportunities to use restructuring charges to manage earnings. Section III develops the hypotheses, Section IV describes the research design, and Section V presents the results. Section VI summarizes the study.
II. MANAGERS’ INCENTIVES TO USE RESTRUCTURING CHARGES AND REVERSALS TO MANAGE EARNINGS

Restructuring-related liabilities and expenses include costs incurred for: (1) employee benefits such as severance and termination benefits; (2) elimination and reduction of product lines; (3) consolidation or relocation of plant facilities; (4) new systems development or acquisition; and (5) retraining employees to use newly developed systems. The charge may also include losses from asset impairments and disposals of assets (Emerging Issues Task Force (EITF) 1994).

The decision to restructure is part of the firm’s overall investment strategy. However, managers can exercise discretion over the amount and timing of the restructuring charge (and of any subsequent reversal) despite additional guidance from the Financial Accounting Standards Board (FASB) and its EITF on accounting for restructuring activities. The types of costs included in restructuring charges are sometimes ambiguous, and restructuring charges usually include estimates of future costs. These uncertainties mean that managers can use their discretion to overstate the current-period charge to create a hidden balance sheet reserve that will increase future earnings.

There are several reasons why managers might use the restructuring charge to manage earnings. First, firms can increase future earnings by recognizing the restructuring charge as part of a “big bath” (Elliott and Hanna 1996), and there is evidence that firms record restructuring charges in years when pre-charge accounting earnings are low (e.g., Brickley and Van Drunen 1990; John et al. 1992). Managers may accelerate future costs into restructuring charges (Gill et al. 1996) because analysts usually treat these charges as nonrecurring (Smith and Lipin 1996).
Firms can then use the reserve created by these accelerated costs to increase future earnings. Warren Buffett (1999, 15) argues that the size and timing of restructuring charges are “dictated by the cynical proposition that Wall Street will not mind if earnings fall short by $5 per share in a given quarter, just as long as this deficiency ensures that quarterly earnings in the future will consistently exceed expectations by five cents per share.”

Second, prior research suggests that capital markets react positively, on average, to restructuring activities. Brickley and Van Drunen (1990) and Kross et al. (1996) found that despite the large reduction in accounting earnings and book value from substantial restructuring charges, announcements of restructuring activities and related charges result, on average, in positive two-day abnormal returns of roughly 1 percent. Their evidence is consistent with the view of Robert S. Miller, Chairman of Waste Management, Inc., that “somebody woke up to the fact that if you take something as a restructuring charge, investors will forgive you immediately” (Byrnes and Melcher 1998, 134).

Third, prior research suggests that firms do not penalize managers for recording restructuring charges. Dechow et al. (1994) find that CEO compensation does not decrease in response to restructuring charges, on average. Gaver and Gaver (1998) also find that executive compensation is largely shielded from the effects of nonrecurring income-decreasing items. Furthermore, John et al. (1992) find no evidence that restructuring efforts lead to higher rates of involuntary top-management turnover.

This body of evidence suggests that managers are not necessarily penalized for recording restructuring charges. However, prior research suggests that failure to meet earnings benchmarks is associated with disproportionately lower stock prices (Kasznik and McNichols 2001; Kinney et al. 2001; Lopez and Rees 2001; Skinner and Sloan 2001) and managerial
compensation (Matsunaga and Park 2001). Thus, managers might overestimate restructuring charges to build reserves they can later reverse to boost income in order to meet earnings benchmarks. Even when the reversal is a relatively small percentage of the original charge, the reversal can be important if it increases reported earnings to approach or even exceed an earnings benchmark.

Although restructuring accruals provide managers an opportunity to create a hidden reserve, and anecdotal evidence reported in the financial press suggests that managers take advantage of this opportunity, academic research has provided little evidence that managers use restructurings to manage earnings. Jennings et al. (1998) find that restructuring adjustments actually enhance the usefulness of book values as a basis for valuation, suggesting that any post-restructuring distortions are not large. Bens (2000) finds little evidence of earnings management around restructuring activities, and concludes that the use of restructuring charges to manage earnings may not be as pervasive as the financial press suggests. Atiase et al. (2001) find that firms generate higher earnings and returns after restructurings, but they attribute the improvement primarily to increased operating efficiency rather than to earnings management.

In contrast to prior research on restructuring charges, this study focuses on the subsequent reversal of charges. Evidence on restructuring charge reversals provides a relatively direct test of managers’ use of restructuring charges to manage earnings. Reversals are observable, in contrast to noisy estimates of unobservable earnings management mechanisms such as discretionary accruals. Thus, these direct tests are more likely to identify earnings management, especially in cases in which managers need only small adjustments to reach earnings targets. In addition, these tests do not rely on noisy discretionary accrual estimates that can lead to spurious correlation that biases empirical tests in favor of finding earnings management.
III. HYPOTHESES DEVELOPMENT

Incentives to Meet Analysts’ Forecasts and to Avoid Earnings Decreases and Losses

Evidence in earlier studies suggests that managers manage earnings: (1) to meet or exceed analysts’ forecasts (DeGeorge et al. 1999; Libby and Kinney 2000; Brown 2001; Burgstahler and Eames 2001; Richardson et al. 2001); (2) to avoid reporting earnings decreases (Burgstahler 1997; Burgstahler and Dichev 1997; DeGeorge et al. 1999); and (3) to avoid reporting losses (Burgstahler 1997; Burgstahler and Dichev 1997; DeGeorge et al. 1999).

Brown (2001) finds that over the period 1984 to 1999, the median firm’s earnings went from barely missing analysts’ estimates per I/B/E/S, to meeting estimates, and then to beating estimates. Burgstahler and Dichev (1997, 101) estimate that “8-12% of firms with small pre-managed earnings declines manipulate earnings to achieve earnings increases, and 30-44% of firms with small pre-managed losses manage earnings to create positive earnings,” and conclude that avoiding earnings decreases and net losses is a “pervasive phenomenon.”

Recent research suggests that the market appears to reward firms that meet or beat earnings targets. Barth et al. (1999) find a price-earnings multiple premium for firms that report consistently increasing earnings and a disproportionately large stock price decrease when the increasing earnings pattern is broken. This is consistent with DeAngelo et al. (1996), who find negative abnormal stock returns averaging 14% in the year that an earnings growth pattern is broken.

Bartov et al. (2001) demonstrate that abnormal returns for a quarter are positively and significantly associated with the earnings surprise relative to analysts’ forecasts, even when earnings management and/or expectations management are likely to be present. Lopez and Rees
(2001) and Kasznik and McNichols (2001) demonstrate a market valuation premium for firms that meet or beat analysts’ forecasts and an extra valuation premium for firms that consistently beat forecasts. Skinner and Sloan (2001), Kasznik and McNichols (2001), and Lopez and Rees (2001) also demonstrate a disproportionate valuation penalty for firms that fail to meet forecasts even by a small amount. Skinner and Sloan (2001) attribute the disproportionate price drop following missed forecasts to investor correction of over-optimism about the earnings prospects of growth stocks.

Matsunaga and Park (2001) find that managers also have compensation-based incentives to meet analysts’ forecasts and to avoid earnings declines. Specifically, they find that CEO compensation drops beyond the normal penalty for poor performance when the firm misses analysts’ forecasts and/or reports earnings decreases in more than one quarter during the year.

This study tests the prediction that managers are more likely to record reversals of restructuring charges when earnings would otherwise fall short of an earnings target:

Hypothesis 1a: *Ceteris paribus*, reversals will occur more frequently in quarters in which pre-reversal earnings are below analysts’ earnings forecasts.

Hypothesis 1b: *Ceteris paribus*, reversals will occur more frequently in quarters in which pre-reversal earnings are below actual earnings reported in the same quarter of the prior year.

Hypothesis 1c: *Ceteris paribus*, reversals will occur more frequently in quarters in which the firm experiences a pre-reversal net loss.

In addition, I expect the magnitude of the reversal to increase proportional to the amount of the shortfall in pre-reversal earnings:

Hypothesis 2a: *Ceteris paribus*, the greater the pre-reversal earnings shortfall relative to analysts’ earnings forecasts, the greater the amount of the reversal.
Hypothesis 2b: *Ceteris paribus*, the greater the pre-reversal earnings shortfall relative to earnings in the same quarter of the prior year, the greater the amount of the reversal.

Hypothesis 2c: *Ceteris paribus*, the greater the pre-reversal net loss, the greater the amount of the reversal.

**Political Cost and Contract-Based Incentives**

Political costs and debt and compensation contracts based on accounting numbers also provide incentives for earnings management (see Watts and Zimmerman 1986, 1990). The political cost argument suggests that politically visible firms use accounting discretion to decrease reported earnings to avoid wealth outflows arising from allegations of excessive profitability. Because the firms in this study make income-*increasing* accounting adjustments, political costs cannot explain these reversals.

Contracts based on accounting numbers can provide managers with incentives to manage earnings. First, firms have incentives to avoid violating restrictive debt covenants (i.e., technical default). As the firm nears debt covenant constraints, managers likely use accounting discretion to create debt covenant slack (Daley and Vigeland 1983; DeFond and Jiambalvo 1994; Sweeney 1994; Dichev and Skinner 2001). Second, compensation contracts can provide managers with incentives to manage earnings. For example, Gaver and Gaver (1998) find some evidence that nonrecurring income-increasing transactions are associated with higher managerial compensation.

Sensitivity analyses reported later suggest that the study’s inferences continue to hold after controlling for debt contracting and executive bonus-based incentives for earnings management.
IV. Research Design

Sample Selection

I used the “Company/Allnews” files in the Lexis/Nexis database to identify firms that recorded reversals and the amounts of the reversals. This search identified 147 reversals recorded by 114 different firms between 1990 and 1999. Analyses of reversals to avoid missing analysts’ forecasts required median consensus analysts’ forecasts and actual earnings per share (EPS) amounts from The Institutional Brokers’ Estimate System (I/B/E/S). Analyses of reversals to meet prior-year earnings or to avoid net losses required net income and EPS data from Compustat. Of the 4,560 possible firm-quarters over the ten-year period, I eliminated 890 firm-quarters that could not have had reversals because the quarters preceded the restructuring charges. I also excluded firm-quarter observations if earnings were so far below the benchmarks that reversals would likely be insufficient to raise earnings to meet the benchmarks. As a result, I excluded six non-reversal firm-quarter observations from the analyst forecast analysis because EPS was more than $5 below analyst’s forecasts, and I excluded ten non-reversal quarters from the prior-year earnings and loss benchmark analyses because earnings were more than $5 below prior-year EPS or the firm reported a loss per share of more than $5. Table 1 summarizes the sample selection, and shows that the final reversal and non-reversal samples for the analysts' forecast error analyses and prior-year earnings/net loss analyses include 83 and 121 reversal quarters, and 1,748 and 2,434 non-reversal quarters, respectively.

[INSERT TABLE 1 HERE]
Empirical Models

I use a Chi-square test of frequency to determine whether firms are more likely to record reversals when pre-reversal earnings fall short of analysts' forecasts (Hypothesis 1a), or same-quarter-prior-year earnings (Hypothesis 1b), or when pre-reversal net losses occur (Hypothesis 1c). I estimate the following ordinary least squares (OLS) regressions to examine the relation between the magnitude of the reversal and the amount of shortfall from analysts’ forecasts (Hypothesis 2a), the amount of shortfall from same-quarter-prior-year earnings (Hypothesis 2b), and the amount of pre-reversal net losses (Hypothesis 2c). I adjust all amounts to year 2000 price levels to control for inflation.7

\[
REVPS_{i,j} = \alpha_1 + \beta_1 \text{SHORTFALLAF}_{i,j} + \epsilon
\]

where:

REVPS_{i,j} (reversal per share) = The amount of the reversal firm i recorded in quarter j, divided by the number of common shares outstanding at the end of quarter j.

SHORTFALLAF_{i,j} (earnings shortfall relative to analysts’ forecasts) = The last median consensus I/B/E/S analysts’ EPS forecast for firm i in quarter j minus pre-reversal actual EPS. I define pre-reversal actual earnings as (post-reversal actual earnings reported by I/B/E/S – reversal per share net of 40 percent tax). If the analyst forecast exceeds pre-reversal EPS, SHORTFALLAF is positive.8

\[
REVPS_{i,j} = \alpha_2 + \beta_2 \text{DECLINE}_{i,j} + \epsilon'
\]

where:

DECLINE_{i,j} (earnings decline from prior-year earnings) = Actual EPS for firm i in quarter j of the prior year (excluding restructuring charges if any)9 minus actual pre-reversal EPS for firm i
in quarter j. If the prior-year earnings exceed the current year pre-reversal earnings, DECLINE is positive.

\[
REVPS_{i,j} = \alpha + \beta_1 (LOSSQTR_{i,j} \times |LOSSBR_{i,j}|) + \epsilon
\]  

(3)

where:

LOSSQTR_{i,j} (loss quarter) = 1 if firm i has a pre-reversal net loss in quarter j and zero otherwise.

LOSSBR_{i,j} (loss per common share before reversal) = The absolute value of the actual pre-reversal loss per share for firm i in quarter j.

If the magnitude of the restructuring charge reversal is increasing in the amount of the earnings shortfall relative to a specific earnings benchmark, then \(\beta_1\) should be significantly positive.

V. RESULTS

Descriptive Statistics

Table 2 reports descriptive statistics for the sample firms in reversal and non-reversal quarters. Non-reversal quarters are slightly larger in terms of median assets, liabilities, and revenues. The pre-reversal median net income is $1.35 million in reversal quarters, and considerably lower than the median net income of $2.27 million in non-reversal quarters. The lower median revenue and net income in reversal quarters is consistent with a need to manage earnings upward. Sample reversals range from $60 thousand to $163.23 million with a median of $2.86 million ($0.12 per share). Per-share restructuring charge reversals range from $0.01 to $2.40.
Panel C of Table 2 shows that firms recorded reversals less frequently in the early 1990s, but that the frequency increased in the middle of the decade and remained high throughout the rest of the sample period. In addition, firms recorded nearly half (48.8 percent) of the sample reversals in the fourth quarter. This result is similar to Elliott and Shaw’s (1988) result that 63 percent of potentially discretionary write-offs occur in the fourth quarter. As Elliott and Shaw (1988, 97) point out, the clustering of potentially discretionary charges and reversals in the fourth quarter is consistent with either: (1) earnings management or (2) “characteristics of U.S. management practices, such as the auditing of annual results but not quarterly results or an institutionalized planning process which formalizes plans (such as restructurings) on an annual cycle.” In this study, I investigate whether the timing and magnitude of reversals are associated with earnings benchmarks, in an effort to ascertain whether these potentially discretionary reversals reflect earnings management.

[INSERT TABLE 2 HERE]

Table 3 reports descriptive statistics associated with earnings and earnings benchmarks. Median pre-reversal EPS (per Compustat) were $0.06 and $0.12 for reversal and non-reversal quarters, respectively. This evidence is consistent with lower pre-reversal earnings in reversal quarters (p<0.02, one-tailed test). There is no significant difference in analysts’ forecasts in reversal and non-reversal quarters. This suggests that earnings are lower in reversal quarters than in non-reversal quarters relative to analysts’ expectations. Specifically, the median pre-reversal EPS was $0.02 less than analysts’ forecasts in reversal quarters, but median EPS was equal to analysts’ forecasts in non-reversal quarters. This difference is significant at p<0.01 (one-tailed), and suggests that firms use reversals to increase earnings that would otherwise fall below analysts’ forecasts. Median pre-reversal EPS is $0.02 less than median same-quarter-of-
the-prior-year EPS in reversal quarters, and equal to same-quarter-of-the-prior-year EPS in non-reversal quarters, but this difference is only marginally significant (p=0.08 one-tailed test).

[INSERT TABLE 3 HERE]

**Frequency Analysis: Incidence of Reversals in Relation to Missed (Pre-reversal) Analysts’ Forecasts, Earnings Declines, and Losses**

Table 4 provides evidence that managers are likely to record reversals in quarters when pre-reversal earnings fell short of analysts’ forecasts, or same-quarter-prior-year earnings, or when pre-reversal earnings would be a net loss. Panel A of Table 4 shows that pre-reversal earnings fall short of analysts’ forecasts in 71.1 percent of the 83 reversal quarters and only 37.8 percent of the 1,748 non-reversal quarters. Thus, managers are more likely to record reversals when pre-reversal earnings fall short of analysts’ forecasts (p=0.001, one-tailed test), supporting Hypothesis 1a. In 49.2 percent of the 59 reversal quarters in which pre-reversal earnings fell short of analysts’ forecasts, the reversal was large enough to increase earnings to equal or exceed analysts’ forecasts. As a result, shortfalls are observed in 36.1 percent of reversal quarters, which is not significantly different from the shortfalls in 37.8 percent of non-reversal quarters.

Panel B of Table 4 shows that pre-reversal earnings declines relative to the same quarter of the prior year occur in 55.4 percent of the 121 reversal quarters and in 49.1 percent of the 2,434 non-reversal quarters. These frequencies are marginally different (p<0.09, one-tailed test), so the results marginally support Hypothesis 1b. The reversal was large enough to increase earnings to meet or exceed prior-year levels in 26.9 percent of the 67 pre-reversal decline quarters. Post-reversal declines are observed in 40.5 percent of reversal quarters, which is
marginally significantly less (p<0.07) than the 49.1 percent of non-reversal quarters that experience a decline.

I find pre-reversal net losses in 36.4 percent of the 121 reversal quarters, but only 28.2 percent of the 2,434 non-reversal quarters. Pre-reversal losses are significantly more common in reversal quarters than in non-reversal quarters, supporting Hypothesis 1c (p<0.03). Furthermore, the reversal lifted earnings to zero or positive in 36.4 percent of the 44 pre-reversal loss quarters. As a result, losses are observed in 23.1 percent of reversal quarters, which is not significantly different from the 28.2 percent observed in non-reversal quarters.

Pre-reversal earnings fall short of the three benchmarks in reversal quarters more frequently than in non-reversal quarters. The reversals are sufficient that the proportion of reversal quarters with post-reversal shortfalls is less than (Panel B) or not significantly different from (Panels A and C) the proportion of non-reversal quarters with such shortfalls. Overall, 51 (42.1 percent) of the 121 reversals moved earnings from below to equal or above at least one of the three benchmarks. In sum, the evidence presented in Table 4 suggests that reversals are more likely when pre-reversal earnings fall short of analysts’ forecasts and when pre-reversal earnings are a net loss, supporting Hypotheses 1a and 1c. The results marginally support Hypothesis 1b, that reversals are more likely when pre-reversal earnings fall short of same-quarter-of-the-prior-year earnings.

[INSERT TABLE 4 HERE]

**OLS Regression Analysis: Magnitude of Reversals in Relation to Magnitude of Pre-Reversal Shortfalls from Analysts’ Forecasts, Prior-Year Earnings, and Positive Net Income**
The results from the OLS regression analysis of the magnitude of the restructuring charge reversal on the magnitude of pre-reversal shortfall from earnings benchmarks appear in Table 5. The significant positive analysts’ forecast error coefficient (column 1) \((p=0.0008\), one-tailed test\) suggests that the amount of restructuring charge reversals that managers record increases with the magnitude of the pre-reversal earnings shortfall relative to analysts’ forecasts. This evidence supports Hypothesis 2a. However, the magnitude of the earnings shortfall explains only a small proportion of the cross-sectional variation in the magnitude of the reversals.

The coefficient estimate associated with the amount by which prior-year earnings exceed pre-reversal earnings (column 2) is not significant. This evidence does not support Hypothesis 2b. However, the pre-reversal net loss coefficient (column 3) is significantly positive \((p<0.03\), one-tailed test\). This suggests that, on average, the larger the pre-reversal net loss, the larger the reversal, supporting Hypothesis 2c. Again however, the overall explanatory power of the magnitude of the loss is low.

The results in Tables 4 and 5 indicate that the incidence and magnitude of restructuring charge reversals increase as pre-reversal earnings fall short of earnings target benchmarks. In fact, 51 of the 121 reversals lifted earnings from below to equal or above at least one of the three earnings targets. However, 70 of the 121 reversals did not lift earnings to any of the three targets and the regressions explaining the magnitude of reversals have low explanatory power. There are at least two likely explanations. First, many reversals likely reflect updates of earlier best-guess estimates, rather than earnings management, \textit{per se}. Second, even to the extent that managers record reversals to manage earnings, this study examines only management toward three specific earnings benchmarks. Managers may face other incentives to manage earnings, such as those stemming from debt contracts. Detecting earnings management for contracting
reasons requires contractual details, such as specific debt constraints, that are not publicly available. Future research might jointly model the earnings targets examined in this study and contract-based incentives, if the researcher can identify necessary contractual details.

**Sensitivity Analyses**

The regression inferences reported above hold after including a proxy for debt contracting incentives - the difference between the sample firm’s debt-to-assets ratio and the weighted-average debt-to-assets ratio in the sample firm's (4-digit SIC code) industry. I found this factor to be insignificant and including it in the analysis did not affect the study’s inferences.

The primary analyses exclude firm-quarter observations that were at least $5 below the benchmark, because a reversal would likely not be sufficient to cover this shortfall. Similar inferences arose after winsorizing these observations to $5 shortfalls, using $2 or $1 shortfall thresholds, and without omitting these extreme observations. Regressions based on the ranks of dependent and independent variables also yielded similar inferences and overall explanatory power.

The models reported above use values scaled by the number of shares. As a sensitivity check, I estimated the models using total sales as an alternative scalar and using unscaled values. I also estimated models controlling for firm effects and time effects. Each of these analyses yield inferences consistent with those drawn above. The regression inferences also hold after I include shortfalls from all three benchmarks as separate independent variables in the same regression. Specifically, the coefficients on the pre-reversal shortfall relative to analysts’ forecasts, and on the amount of the loss are significantly positive (p<0.03), but the coefficient on the shortfall relative to same-quarter-of-the-prior-year earnings is not significant.
VI. SUMMARY

Managers have incentives to use accounting discretion to manage earnings to meet or beat several targets, including analysts’ forecasts, prior earnings levels, and avoiding losses. One source of accounting discretion available to managers is the accounting estimates associated with the financial reporting of restructuring activities. Regulators have expressed concern that firms use restructuring charge accruals to manage earnings. During the 1990s, increasing numbers of firms reversed portions of earlier restructuring charges.

In this study, I find evidence consistent with managers using restructuring charge reversals to manage earnings. Managers are more likely to record reversals when pre-reversal earnings are below analysts’ forecasts or when the firm experiences a pre-reversal loss, and they are marginally more likely to record reversals in quarters when pre-reversal earnings are below prior-year levels. The amount of reversals increases with the amount by which earnings fall short of analysts’ forecasts and the amount of pre-reversal net losses, although these shortfalls explain only a modest portion of the cross-sectional variation in the magnitude of restructuring charge reversals. Consistent with regulators’ and analysts’ concerns, these findings suggest that firms, in some instances, use restructuring charge reversals to manage earnings to meet or beat earnings benchmarks. Moreover, the increasing incidence of restructuring charge reversals, and the evidence that managers are more likely to record reversals when pre-reversal earnings miss benchmarks, suggest that initial restructuring charges may include some hidden reserves.

The study is limited in that it examines only those reversals that firms disclose. Firms likely record but do not separately disclose smaller magnitude reversals. Also, the modest explanatory power of the models of the magnitude of the reversals suggests that management
toward these earnings targets is just one of many possible reasons for reversals. Future research into the role of contracting incentives on the reversal amount could provide additional information about the timing and amount of restructuring charge reversals.
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### TABLE 1
Sample Selection for Restructuring Charge Reversal and Non-Reversal Firm-Quarters, 1990-1999

<table>
<thead>
<tr>
<th></th>
<th>Analysts’ Forecast Benchmark</th>
<th>Prior-Year Earnings and Loss Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Number of Quarters:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reversal Firms</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>Firm-Quarters (114 firms × 10 years × 4 quarters)</td>
<td>4,560</td>
<td>4,560</td>
</tr>
<tr>
<td><strong>Reversal quarters:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarters with restructuring charge reversals</td>
<td>147</td>
<td>147</td>
</tr>
<tr>
<td>Less: Reversal quarters with insufficient I/B/E/S or Compustat data for determining earnings benchmarks</td>
<td>(64)</td>
<td>(26)</td>
</tr>
<tr>
<td>Usable reversal firm-quarter observations</td>
<td>83</td>
<td>121</td>
</tr>
<tr>
<td><strong>Non-reversal quarters:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarters without restructuring charge reversals</td>
<td>4,413</td>
<td>4,413</td>
</tr>
<tr>
<td>Less: Quarters preceding restructuring charges</td>
<td>(890)</td>
<td>(890)</td>
</tr>
<tr>
<td>Less: Non-reversal quarters with insufficient I/B/E/S or Compustat data for determining earnings benchmarks</td>
<td>(1,769)</td>
<td>(1,079)</td>
</tr>
<tr>
<td>Less: Extreme observations</td>
<td>(6)</td>
<td>(10)</td>
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<tr>
<td>Usable non-reversal quarters in final sample</td>
<td>1,748</td>
<td>2,434</td>
</tr>
<tr>
<td><strong>Total firm-quarter observations</strong></td>
<td>1,831</td>
<td>2,555</td>
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</tbody>
</table>

*a I excluded firm-quarter observations from the analysts’ forecast analysis if analysts’ forecasts or earnings per share data were missing from I/B/E/S. I excluded firm-quarter observations from the prior-year earnings analysis if net income in the current quarter or four quarters prior was missing from Compustat. I excluded firm-quarter observations from the loss avoidance analysis if net income in the current quarter was missing from Compustat.

*b I excluded six firm-quarter observations from the analysts’ forecast benchmark analysis because EPS was more than $5 below analysts’ forecasts and I excluded ten firm-quarter observations from the prior-year earnings and loss benchmark analyses because EPS was more than $5 below prior-year EPS or because EPS was a loss per share of more than $5.
TABLE 2
Descriptive Statistics for Restructuring Charge Reversal Quarters and Non-reversal Quarters, 1990-1999

Panel A: Reversal Quarters
(In millions of dollars except per share amounts)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>3,049.72</td>
<td>411.40</td>
<td>42,407.35</td>
<td>9.42</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>2,144.20</td>
<td>210.50</td>
<td>27,668.47</td>
<td>4.11</td>
</tr>
<tr>
<td>Total revenues</td>
<td>790.90</td>
<td>106.24</td>
<td>11,652.48</td>
<td>3.39</td>
</tr>
<tr>
<td>Net income before reversal</td>
<td>19.81</td>
<td>1.35</td>
<td>838.42</td>
<td>-652.91</td>
</tr>
<tr>
<td>Reversal amount</td>
<td>10.61</td>
<td>2.86</td>
<td>163.23</td>
<td>0.06</td>
</tr>
<tr>
<td>Reversal amount per share</td>
<td>0.30</td>
<td>0.12</td>
<td>2.40</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Panel B: Non-reversal Quarters
(In millions of dollars)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>2,598.86</td>
<td>437.29</td>
<td>49,843.22</td>
<td>0.37</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>1,706.39</td>
<td>259.33</td>
<td>36,907.14</td>
<td>3.42</td>
</tr>
<tr>
<td>Total revenues</td>
<td>628.29</td>
<td>136.74</td>
<td>12,469.85</td>
<td>0.54</td>
</tr>
<tr>
<td>Net income</td>
<td>21.13</td>
<td>2.27</td>
<td>1,466.56</td>
<td>-805.05</td>
</tr>
</tbody>
</table>

Panel C: Sample Reversals by Year
Sample reversals by year 1990 – 1999:
1990: 3
1991: 5
1992: 5
1993: 3
1994: 19
1995: 16
1996: 7
1997: 16
1998: 24
1999: 23

Panel D: Sample Reversals by Quarter
Sample reversals by quarter:
First quarter: 21 (17.4%)
Second quarter: 17 (14.0%)
Third quarter: 24 (19.8%)
Fourth quarter: 59 (48.8%)
<table>
<thead>
<tr>
<th>Actual earnings per share before reversal (from Compustat)</th>
<th>Reversal Quarters</th>
<th>Non-reversal Quarters</th>
<th>P-value&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Median</td>
<td>Mean</td>
</tr>
<tr>
<td>Actual earnings per share before reversal (from Compustat)</td>
<td>0.03</td>
<td>0.06</td>
<td>0.20</td>
</tr>
<tr>
<td>I/B/E/S earnings per share estimate&lt;sup&gt;a&lt;/sup&gt; (median forecast of all analysts for each firm-quarter)</td>
<td>0.20</td>
<td>0.16</td>
<td>0.21</td>
</tr>
<tr>
<td>Shortfall of pre-reversal I/B/E/S earnings per share relative to I/B/E/S analysts forecasts&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.09</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Pre-reversal earnings per share decline from the same quarter of the prior year&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.03</td>
<td>0.02</td>
<td>(0.07)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Sample size for analysts’ forecast comparisons: n=1,831 (83 reversal quarters and 1,748 non-reversal quarters).

<sup>b</sup> This line represents the mean and median differences between the I/B/E/S median analysts’ forecast for each firm-quarter observation and the I/B/E/S actual pre-reversal earnings for each firm-quarter observation.

<sup>c</sup> P-values are one-tailed non-parametric analysis of variance tests.

<sup>d</sup> Sample size for comparison to same quarter of prior year: n=2,555 (121 reversal quarters and 2,434 non-reversal quarters).
<table>
<thead>
<tr>
<th>Panel A: Reversals to avoid earnings shortfall relative to analysts’ forecasts (n=1,831):</th>
<th>Reversal Quarters</th>
<th>Non-reversal Quarters</th>
<th>Chi-square</th>
<th>P-value&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firm-quarters examined</td>
<td>83</td>
<td>1,748</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Number and percentage with pre-reversal earnings shortfall</td>
<td>59</td>
<td>661</td>
<td>0.380</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of pre-reversal shortfalls overcome by reversal</td>
<td>29</td>
<td>NA</td>
<td>0.889</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of quarters with post-reversal shortfall</td>
<td>30</td>
<td>661</td>
<td>0.065</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: Reversals to avoid earnings decline from same quarter of prior year (n=2,555):</th>
<th>Reversal Quarters</th>
<th>Non-reversal Quarters</th>
<th>Chi-square</th>
<th>P-value&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firm-quarters examined</td>
<td>121</td>
<td>2,434</td>
<td>0.089</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of quarters in which a pre-reversal earnings decline occurs</td>
<td>67</td>
<td>1,195</td>
<td>0.065</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of pre-reversal earnings declines that were overcome by reversal</td>
<td>18</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and percentage of quarters with post-reversal earnings decline</td>
<td>49</td>
<td>1,195</td>
<td>0.065</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel C: Reversals to avoid reporting a net loss (n=2,555):</th>
<th>Reversal Quarters</th>
<th>Non-reversal Quarters</th>
<th>Chi-square</th>
<th>P-value&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firm-quarters examined</td>
<td>121</td>
<td>2,434</td>
<td>0.027</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of quarters with a pre-reversal net loss</td>
<td>44</td>
<td>687</td>
<td>0.027</td>
<td></td>
</tr>
<tr>
<td>Number and percentage of pre-reversal net losses negated by reversal</td>
<td>16</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and percentage of quarters with a post-reversal net loss</td>
<td>28</td>
<td>687</td>
<td>0.224</td>
<td></td>
</tr>
</tbody>
</table>

NA = Not applicable

<sup>a</sup> One-tailed test.
**TABLE 5**
OLS Regression Analysis: Magnitude of Restructuring Charge Reversals
In Relation to Magnitude of Pre-Reversal Shortfalls from Analysts’ Forecasts, Prior-Year
Earnings, and Positive Net Income

Analysts’ Forecasts: Relation between the magnitude of the reversal and pre-reversal
earnings shortfalls relative to analysts’ forecasts

\[ REVPS_{i,j} = \alpha + \beta \times \text{SHORTFALLAFF}_{i,j} + \epsilon \]

Same Quarter of the Prior Year: Relation between the magnitude of the reversal and pre-
reversal earnings declines from earnings in the same quarter of the prior year

\[ REVPS_{i,j} = \alpha_{2} + \beta \times \text{DECLINE}_{i,j} + \epsilon' \]

Net Loss: Relation between the magnitude of the reversal and pre-reversal net losses

\[ REVPS_{i,j} = \alpha_{3} + \beta \times (\text{LOSSQTR} \times \text{LOSSBR})_{i,j} + \epsilon'' \]

<table>
<thead>
<tr>
<th>Variable Definitions and Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>All amounts are adjusted to year-2000 dollars to control for inflation. Adjustment factors are based on the consumer price index.</td>
</tr>
<tr>
<td>REVPS (reversal amount per share) = The amount of the reversal firm i recorded in quarter j, divided by the number of common shares outstanding at the end of quarter j.</td>
</tr>
<tr>
<td>SHORTFALLAFF (earnings shortfall relative to analysts’ forecasts) = The last median consensus I/B/E/S analysts’ EPS forecast for firm i in quarter j minus pre-reversal actual EPS. I define pre-reversal actual earnings as (post-reversal actual earnings reported by I/B/E/S – reversal net of 40 percent tax). If the analyst forecast exceeds pre-reversal EPS, SHORTFALLAFF is positive.</td>
</tr>
<tr>
<td>DECLINE (earnings decline from prior-year earnings) = Actual EPS for firm i in quarter j of the prior year (excluding restructuring charges if any) minus actual pre-reversal EPS for firm i in quarter j. If the prior-year earnings exceed the current year pre-reversal earnings, DECLINE is positive.</td>
</tr>
<tr>
<td>LOSSQTR (loss quarter) = 1 if firm i has a pre-reversal net loss in quarter j and zero otherwise.</td>
</tr>
<tr>
<td>LOSSBR (loss per common share before reversal) = The absolute value of the actual pre-reversal loss per share for firm i in quarter j.</td>
</tr>
<tr>
<td>a P-values for estimated regression coefficients are based on t-statistics determined using heteroskedasticity-consistent standard error estimates (White 1980).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Analysts’ Forecasts</th>
<th>Same Quarter of the Prior Year</th>
<th>Net Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.0071</td>
<td>0.0129</td>
<td>0.0115</td>
</tr>
<tr>
<td>t-statistic</td>
<td>[4.765]</td>
<td>[5.958]</td>
<td>[5.064]</td>
</tr>
<tr>
<td>Significance (p-value) a</td>
<td>(0.0001)</td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Parameter estimate</td>
<td>0.0179</td>
<td>0.00001</td>
<td>0.0065</td>
</tr>
<tr>
<td>t-statistic</td>
<td>[3.164]</td>
<td>[0.133]</td>
<td>[1.955]</td>
</tr>
<tr>
<td>Significance (p-value) a</td>
<td>(0.0008)</td>
<td>(0.5528)</td>
<td>(0.0254)</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.5%</td>
<td>0.04%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Number of firm-quarters</td>
<td>1,831</td>
<td>2,555</td>
<td>2,555</td>
</tr>
</tbody>
</table>
Endnotes:

1 Dechow et al. (1995) and Holthausen et al. (1995) point out that current techniques for estimating discretionary accruals are crude, leading to significant measurement error in the discretionary accrual estimates. Gaver, Gaver, and Austin (1995) and Elgers et al. (2001) demonstrate that when estimates of unmanaged earnings are obtained by “backing-out” discretionary accrual estimates from reported earnings, measurement error in discretionary accrual estimates can lead to spurious correlation that biases empirical tests in favor of finding earnings management.

2 In January 1995 the EITF issued EITF 94-3, “Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring),” and the FASB released Statement of Financial Accounting Standards (SFAS) 121, “Accounting for the Impairment of Long-lived Assets and for Long-lived Assets to be Disposed of.” EITF 94-3 requires firms that are taking substantial restructuring charges to disclose detailed restructuring plans. It requires an approved and detailed severance plan, including disclosure of the number and type of employees to be terminated and the severance package to be provided. Regarding the exit of a business activity, EITF 94-3 requires that the firm record the charge after disclosing details of the timing and scope of the activity. SFAS 121, as it relates to restructuring, requires that firms record an asset impairment loss on discontinued activities if the expected future cash flows from the use and disposition of the assets are less than the current carrying value. The SEC Staff Accounting Bulletin (SAB) No. 100, issued in 1999, codified earlier guidance and provided disclosure examples. Because it is difficult to estimate the amount of severance costs or activity exit costs that the firm will actually incur, managers can still exercise ample discretion despite this authoritative guidance.

3 Firms also reverse other types of accruals, such as those associated with other post-retirement employee benefits (Ip 1996).

4 Skinner and Sloan (2001) show that missing an earnings benchmark can lead to precipitous stock price declines. Libby and Kinney (2000) provide experimental evidence that an earnings overstatement identified by auditors is less likely to be corrected if the correction would cause reported earnings to fall below the consensus analyst forecast. Instead, auditors in the experiment predict that managers would successfully argue that the error is immaterial in amount. This finding is evidence of managers’ desire to meet forecasts and auditors’ propensity to accept the opportunistic behavior.

5 Beneish and Press (1993) discuss the costs of technical default.
The Company/Allnews file contains press releases issued by publicly traded firms. The search term was “restruct and revers!”.

Inflation adjustments are based on the ratio of the Consumer Price Index (CPI) in the year to which the data pertain and the CPI in the year 2000.

To conduct the analysts’ forecast tests, I used I/B/E/S actual and forecasted earnings to align the definition of the reported earnings measure and the forecast, as Abarbanell and Lehavy (2000) suggest. In some instances, I/B/E/S excludes unusual items from reported earnings (e.g., nonrecurring gains and losses). Abarbanell and Lehavy (2000) discuss this practice. I examined I/B/E/S actual EPS for each reversal firm-quarter to determine if the restructuring charge reversal was excluded. If it was excluded, I added the reversal back to I/B/E/S EPS before performing the empirical tests.

When a firm recorded a restructuring charge in the same quarter of the prior year, I compared the current quarter pre-reversal EPS to the pre-restructuring charge EPS in the prior-year quarter. The inferences are unchanged when I omit these observations.

In Table 3, the shortfall of pre-reversal I/B/E/S earnings per share relative to I/B/E/S analysts’ forecasts is less than the difference between Compustat EPS and I/B/E/S forecasts. This difference is due to adjustments that I/B/E/S makes to reported (“actual”) earnings. See footnote 8 for additional details.

In addition, eleven of these reversals caused earnings to move from below to above two or more earnings benchmarks.

I also controlled for the existence of bonus-based incentive compensation contracts using an indicator variable equal to 1 if the CEO has a bonus plan based on accounting earnings, or zero otherwise. Including this contracting incentive proxy does not affect the inferences from the regression.