

Operational Restructurings: Where's the Beef?

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ABSTRACT: This study provides new evidence on the performance consequences of operational restructurings. Although managers claim that restructurings increase the efficiency and profitability of companies, prior studies using accounting data have reached mixed conclusions regarding the post-restructuring operational effectiveness of these events. Our evidence is consistent with the following conclusions. First, restructuring firms appear to perform better in reporting earnings relative to analysts' forecasts after restructuring. Second, the ability of firms to meet or beat analysts' forecasts after restructuring appears to be related to the restructuring accrual (i.e., earnings management) in the near term and improved operating performance in the long term. Overall, our results are consistent with suggestions by regulators that restructurings are used to create "cookie jar reserves" to inflate future earnings in the short term. However, our results are more consistent with suggestions of management that restructurings are undertaken to improve operating efficiency over the long term.

JEL classification: G14; M40; M41

Keywords: analysts; earnings management; analysts' forecasts; market efficiency; restructuring charges; operating performance

1. Introduction

Although there is little disagreement regarding the stated intent of managers engaging in downsizing restructuring activity (improve operating efficiency), the few previous studies that examine the *ex post* operating effectiveness of restructuring firms reach mixed conclusions (e.g., Brickley and Van Drunen 1990; Blackwell et al. 1990; Carter 2000; Atiase et al. 2004; Holder-Webb et al. 2005). Similarly, researchers still have little understanding as to how market participants interpret the restructuring disclosure: studies examining stock price performance of firms announcing restructurings also reach mixed conclusions (Strong and Meyer 1987; Elliott and Shaw 1988; Brickley and Van Drunen 1990; Elliott and Hanna 1996; Francis et al 1996; and Carter 2000). Thus, there is little, if any, conclusive empirical evidence that restructuring firms, on average, benefit from the substantial costs associated with undertaking downsizing activities.¹

The purpose of this study is to further investigate the potential benefits of operational restructurings. In so doing, we extend prior research by focusing on three distinct, but related issues with respect to the effect of operational restructurings on an alternative measure of firm performance, reported earnings relative to analysts' earnings forecasts.² First, we investigate whether the accounting for the restructuring (i.e., accrual earnings management) contributes to the ability of restructuring firms to meet or beat analysts' earnings expectations. Second, we extend Moehrle (2002) by examining the extent to which restructurings charges that are not explicitly reversed on subsequent income statements affect the ability of firms to meet or beat analysts' forecasts in periods subsequent to the restructuring. Finally, we investigate the extent to which restructurings result in improved operating efficiency relative to earnings management.

¹ We define a restructuring charge as costs associated with downsizing (i.e., employee termination costs, plant closings, lease termination costs and other similar exit-related activities).

² Dechow (2004) in her discussion of Atiase et al. (2004) suggests another way to investigate the performance implications of restructurings is to examine whether restructurings had an effect on the ability of firms to meet or beat expectations subsequent to the restructuring. We address that specific question in our study.

Our study is motivated by managers' incentives to report non-negative unexpected earnings and concerns expressed by the SEC that companies frequently utilize restructuring charges to manage their earnings to meet or beat analysts' expectations. Consistent with this notion, Burgstahler et al. (2002) report that *negative special items* (a Compustat classification that includes restructuring charges) represents the current recognition of costs that would otherwise be recognized in subsequent periods. In other words, negative special items are an earnings management device that represents the inter-period transfer of future operating expenses. Further, anecdotal and empirical evidence suggests that managers are not mere passive observers in the process of meeting or beating analysts' forecasts.³ Rather, managers are active players in this process by altering reported earnings numbers (McGee 1997; Vickers 1999; Matsumoto 2002; Bartov et al. 2002; Stewart 2002; Koh et al. 2008).

Moehrle (2002) investigates whether the recognition of restructuring charge reversals that are separately reported on the face of the income statement are timed so as to allow these firms to meet or beat analysts' earnings forecasts.⁴ On the other hand, our analysis focuses on whether restructurings result in real operating performance improvements or, alternatively, whether post-restructuring performance is the result of a reporting strategy whereby ordinary expenses in future periods are offset against the restructuring accrual in order to inflate post-restructuring earnings.⁵ This type of earnings management, which we term "inconspicuous earnings management," is the

³Former SEC Commissioner Norman S. Johnson expressed concern over this issue citing "the pressure imposed on management to meet analysts' earnings estimates" as the single most important cause of earnings management (Utah State Bar Mid-Year Convention, March 6, 1999).

⁴Moehrle identifies 121 firms with a "restructuring reversal" in the 10 year period 1990 – 1999. Similarly, we identify 197 observations that report a restructuring charge reversal on the face of the income statement in any of the three years subsequent to the restructuring year. The form of reversal examined by Moehrle is exactly how a firm is required to treat a reversal. That is, the reversal, if material, is required to be placed on the income statement in manner consistent with the original restructuring charge except the amount is a reduction of operating expenses (income-increasing). For example, see the Apple Computer 1994 income statement where Apple recognizes a restructuring charge of \$320 million in 1993 and reported a reversal of \$127 million in 1994.

⁵ For example, a firm over-accrues for the charge and in subsequent periods offsets normal operating expenses (costs not associated with the restructuring) against the restructuring accrual in order to report artificially higher earnings.

form of earnings management that Arthur Levitt was most concerned with in his 1998 NYU speech. Further, it was this form of earnings management for which Borden was sanctioned by the SEC in 1994.⁶ More recently, the SEC brought civil charges against former officers of the Sunbeam Corporation, including its former president, Albert Dunlop, for this “inconspicuous earnings management.” In this instance the commission alleged that excessive restructuring charges resulted in year-to-year income overstatements.⁷

If managers utilize restructuring accruals in an inconspicuous manner to manipulate earnings, a premise consistent with the conclusion drawn in Burgstahler et al. (2002), we should observe an increase in the frequency with which these firms meet or beat analysts’ forecasts in periods subsequent to the restructuring charge. Likewise, if restructuring firms actually improve their operating performance, and the improvement is unexpected by analysts, we should also see an increase in the frequency with which these firms meet or beat analysts’ forecasts in periods subsequent to the restructuring charge. Our results are consistent with both of these potential scenarios.

We find that restructuring firms meet or beat analysts’ forecasts significantly more often in the three years after restructuring than they did prior to restructuring. Consistent with this conclusion, we find that the average meet/beat rate for restructuring firms in the three years prior to restructuring is approximately 59 percent while for the three years subsequent to restructuring the average meet/beat rate is 74 percent. In addition, we find that restructuring firms meet or beat analysts’ earnings forecasts more often than the average firm in their industry for each of the three years after restructuring; however, for the three years before restructuring we find that restructuring firms meet or beat analysts’ earnings forecasts significantly less often than the

⁶ The SEC concluded that in 1992 Borden classified \$192 million of marketing expenses as part of a restructuring charge when it should have been included in selling, general, and administrative expenses.

⁷ Securities and Exchange Commission v. Albert Dunlop et al., Civil Action No. 01-8437-CIV, Accounting and Auditing Enforcement Release No. 1707, January 27, 2003.

average firm in their industry. Importantly, our results hold even after controlling for firms that recognize restructuring charge reversals consistent with those identified by Moehrle (2002).⁸

Next, we examine whether improved operating efficiency or earnings management explains our result that restructuring firms meet or beat analysts' forecasts more frequently after restructuring. While the stated objective of managers in recognizing restructuring charges is to improve future performance, it does not eliminate the possibility that restructuring firms also transfer future costs to the current period. That is, restructuring firms may realize both economically induced earnings increases (improved operating efficiency) as well as artificially induced increases (earnings management). If firms realize real economic performance improvements after restructuring, then our result that restructuring firms meet or beat analysts' earnings forecasts more often after restructuring should be robust to adjusting earnings for the managed component of earnings, discretionary accruals.

We find that the increased frequency of restructuring firms meeting and beating analysts' forecasts is largely attributable to the discretionary accruals component of earnings for the first two years after the restructuring. Stated differently, earnings management, not improved operating efficiency, appears to explain the increase in meeting or beating analysts' earnings forecasts that we observe in the first two years after restructuring. However, we find that by year three restructuring firms meet or beat analysts' forecasts significantly more frequently than the other firms in their industry even after adjusting for the managed component of earnings. That is, by the third year subsequent to the restructuring it appears that the increase in meeting or beating forecasts for restructuring firms derives more from real performance improvements than accrual earnings management. Importantly, our results are robust to testing in a multivariate setting that includes controls for a number of determinants of meeting or beating analysts' earnings forecasts.

⁸Moehrle (2002) finds that the likelihood of meeting or beating analysts' expectations increases in the year of restructuring charge reversals. We find an increase in the propensity of restructuring firms to meet or beat analysts' forecasts subsequent to the restructuring even after we eliminate all firms that recognize an income increasing "restructuring reversal" on their income statement.

Overall, our evidence is consistent with the conclusion that restructuring firms use restructuring accruals in order to buy some time before real performance improvements are realized. More specifically, our evidence suggests managers increase post-restructuring earnings by manipulating accruals in the near term and by realizing efficiency gains in the long term. The evidence with respect to restructuring-related earnings management and performance improvements is consistent with findings and suggestions of the prior literature. Burgstahler et al. (2002) report that negative special items represent an inter-period expense transfer device that, on average, results in the recovery of over 50 percent of the negative special item in income in the four quarters subsequent to the recognition of the special item. On the other hand, prior studies suggest that the benefits of restructuring may not be realized in the near term subsequent to the restructuring (e.g., Atiase et al. 2004; Clement et al. 2007).⁹

The remainder of the paper is organized as follows. Section 2 addresses the prior related literature and background while section 3 discusses the sample selection and descriptive statistics. Section 4 presents the empirical results and section 5 contains a brief summary and conclusion.

2. Background and Prior Literature

2.1 Background

Restructuring charges typically arise when companies decide to reorganize their business. The most common reasons cited by managers for undertaking corporate restructurings are to reduce costs and increase efficiency (Brickley and Van Drunen 1990). Restructuring charges most commonly include costs to terminate employees, close plants, write down and dispose of assets (Moehrle 2002). The cost of implementing the plan is recorded as a charge against income

⁹ Firms incurring near-term economic exit costs as part of a restructuring, for example, are unlikely to realize any corresponding near-term efficiency gains. Organizational transitions might be hard to implement if employees resist the change. The cost associated with employee stress and declining morale might result in deteriorating employee performance until the restructuring plan is fully implemented. Because restructurings are generally implemented over a one to two year time period, efficiency improvements promised by management may not be realized until the plan is fully implemented, which may be several years subsequent to the restructuring announcement. Take for example the restructuring of Aetna (USA Today 10/11/96). Aetna announced a \$307 million restructuring charge that includes the elimination of 4,400 jobs. The job cuts were not expected to be complete until the end of 1998.

in the year of the restructuring decision even though restructuring plans are most often implemented over multiple years in subsequent periods (Clement et al. 2007).

Corporate restructuring activity remains frequent, which justifies the continuing debate among corporate decision-makers, politicians, academics and financial analysts about the stakeholder consequences of these transactions.¹⁰ The discretion allowed in the content and the timing of restructuring charge recognition has generated substantial discussion in the popular press and heightened the interest of the Securities and Exchange Commission (SEC).¹¹ Controversy over the desirability of corporate restructuring typically centers on the operational effectiveness of these events. Some argue that restructuring results in leaner, more efficient organizations, while others assert that the organizational disruption concurrent with and subsequent to restructurings exceeds any benefits from such transactions (Bowman and Singh 1993). Some critics further assert that restructurings distort a company's earnings history, either by packing losses into a single year in a way that makes future earnings manageable, or by relegating on-going charges to a single line item that is disregarded by many analysts in the calculation of various *pro forma* income numbers.^{12,13} The primary objective of this study is to provide new evidence on this debate.

¹⁰ From 1993 through 2000, the average annual number of restructurings reported by the 600 companies covered by *Accounting Trends & Techniques* (AICPA 1997, AICPA 2000) was 151.5, or slightly over 25% of the firms. The range in the number of firms reporting restructurings during those years varied between 100 and 197.

¹¹ Examples of the SEC's increased interest in restructurings date back several years (for example, see the speech by former SEC Chairman Arthur Levitt, New York University Law School September 28, 1998). In 1999, the Office of the Chief Accountant published SAB 100 that addressed issues related to accounting for restructuring charges.

¹² Moehrle (2002) provides evidence that firms record reversals of restructuring charge accruals to avoid earnings declines and beat analysts' forecasts. Both Chaney et al. (1999) and Clement et al. (2007) provide evidence consistent with the notion that restructurings increase uncertainty for analysts when forecasting future earnings.

¹³ After Motorola Inc. reported its fifteenth consecutive quarter with a non-recurring charge, Vivian Mamelak, a senior analyst at Arnhold & S. Bleichroeder Inc. stated, "If a company has taken 14 consecutive quarters of special charges, these charges aren't special, they're a normalized cost of Motorola doing business." (*Wall Street Journal*, "Motorola Profit: 'Special' Again?", October 15, 2002).

2.2 Prior Literature

Moehrle (2002) examines whether firms use restructuring charge reversals to manage earnings to meet analysts' forecasts. Reversals of restructuring charges occur when the firm overestimates the amount of the charge in the period of recognition and subsequently reports a reversal of the charge in a later period. The reversal shows up as income on the income statement (a decrease of operating expenses) and is generally reported on a separate line in a manner consistent with the initial reporting of the restructuring charge. Thus, reversals of restructuring charges are easily observable by users of the financial statements. Moehrle reports that managers are more likely to reverse restructuring charges when pre-reversal earnings fall short of analysts' forecasts. Moehrle (2002) concludes that firms use restructuring charge reversals to manage earnings.

The form of earnings management examined by Moehrle (2002) can be characterized as "conspicuous" earnings management. That is, the reversal of a restructuring charge generally appears on the face of the income statement (as it should according to accounting rules) and is obvious to users of the financial statements. It is these conspicuous restructuring charge reversals that are the focus of Moehrle's investigation. On the other hand, prior research suggests that managers may also use the unobservable reversal of restructuring accruals to manage earnings. Brickley and Van Drunen (1990) report that restructuring firms tend to report restructurings in years when pre-restructuring charge income is low. Since prior research and anecdotal evidence suggests that analysts and investors treat restructuring charges as transitory items (Bricker, Previts, Robinson and Young 1995; Lalli and Lim 1997; Stewart 2002), firms can take a "big bath" and accelerate future operating expenses as part of the restructuring accrual with little risk of an additional market penalty. Buffet (1999) argues that the market does not care about the size and timing of restructuring charges and whether earnings fall short in the current quarter "as long as this deficiency ensures that quarterly earnings in the future will consistently exceed expectations by five cents per share."

Burgstahler et al. (2002) document that negative special items (as identified by Compustat) are followed by “earnings of the *opposite sign* in subsequent quarters” (p. 587, *emphasis theirs*). They conjecture that negative special items, on average, represent “inter-period transfers” of future expenses to current period income. Moreover, the coefficient estimates in their Table 2 analysis (p. 596) suggests that this inter-period transfer aspect of negative special items is quite substantial, equaling at least 8% of the original charge for each of the first three quarters and over 27% of the original charge in the fourth quarter following the special item recognition. Cumulatively, they report evidence that over 50% of the original charge is recovered through increased earnings in the year subsequent to its disclosure. These numbers raise the distinct possibility that negative special items, and by inference restructuring charges, serve largely as a device to manipulate future income.

Articles in the business press as well as empirical research suggest that managers are placing greater emphasis on meeting or exceeding analysts’ expectations, and that firms manage both earnings and expectations in order to report earnings that meet or exceed analysts’ forecasts (e.g., Vickers 1999; McGee 1997; Burgstahler and Dichev 1997; Burgstahler and Eames 1998; ; Brown 2001; Matsumoto 2002; Koh et al. 2008). In a 1999 speech, SEC Commissioner Norman S. Johnson expressed concern over this issue citing “the pressure imposed on management to meet analysts’ earnings estimates” as the single most important cause of earnings management.¹⁴ In addition he stated, “*The severity with which the market punishes companies failing to meet analysts’ expectations is extraordinary*. This factor . . . has also placed greater pressure on management to achieve earnings expectations.” Similarly, Arthur Levitt, former Chairman of the SEC, made the following remarks in a speech given at New York University in 1998: “Increasingly, I have become concerned that the motivation to meet Wall Street earnings expectations may be overriding common sense business practices. While the problem of earnings management is not new, it has swelled in a market that is unforgiving of companies that miss

¹⁴ Utah State Bar Mid-Year Convention, March 6, 1999.

their estimates. I recently read of one major U.S. company that failed to meet its so-called ‘numbers’ by one penny, and lost more than six percent of its stock value in one day.”¹⁵

Consistent with the comments by Chairman Levitt and Commissioner Johnson, prior research finds that after controlling for the level of the earnings surprise, firms that beat analysts’ earnings forecasts are rewarded with higher stock returns (Bartov et al. 2002; Kasznik and McNichols 2002; Lopez and Rees 2002; Brown and Caylor 2005). This same literature reports that firms are disproportionately penalized with lower stock returns for failing to meet analysts’ forecasts. Thus, managers have substantial market incentives to over-accrue restructuring charges that can be used in later periods to boost earnings to meet analysts’ earnings forecasts. The purpose of this study is to ascertain whether the firms’ ability to meet or beat analysts’ expectations subsequent to restructuring is attributable to improvements in operational efficiency, earnings management or some combination of the two.

3. Sample Selection and Descriptive Statistics

The data for this study are obtained from various sources. We obtain an initial sample of downsizing restructuring observations by searching the NAARS (National Automated Accounting Research System) database for the years 1992 to 1994 using the search strings “*restruct!*, *unusual*, and *special*.” For the years 1995 to 2000, the Lexis-Nexis Academic Universe Business News database is searched using the same search strings. With this preliminary sample, we then review the annual financial statements and footnotes of each firm to identify those that took a restructuring charge related to downsizing.

We collect analyst forecast data and actual earnings for each firm in the sample from the Institutional Broker Estimate System (I/B/E/S) Detail History file. Other financial data are taken from Compustat and CRSP for each year available from 1989 through 2003. We eliminate observations for firms not covered on I/B/E/S, Compustat, or CRSP and for missing data items on

¹⁵New York University Law School September 28, 1998.

these databases. To identify quarterly restructuring observations, we review the 10-Q reports of these firms for every quarter between the first quarter of 1992 and the fourth quarter of 2000. We then eliminate observations 1) that do not have a minimum of nine contiguous quarters of earnings surrounding the quarter of restructuring; and 2) where the absolute value of earnings exceeds the beginning market value of equity. From this search, we identify a final sample of 971 (1,172) annual (quarterly) restructuring observations taken by 394 firms.

In Table 1 we report descriptive statistics for the quarters in which sample firms report a restructuring charge. The mean (median) total assets and market value of equity are \$5.6 billion (\$1.5 billion) and \$5.6 billion (\$1.2 billion), respectively. The average restructuring charge of \$83 million has a significant effect on the firm, averaging 2.7 percent of total assets, and 3.6 percent of market value. Restructurings appear to have a significant effect on the value of the firm. Consistent with this, the mean quarterly market-adjusted stock return is -4.0 percent in restructuring quarters compared to -1.6 percent in non-restructuring quarters (not reported).

4. Research Design and Empirical Results

Our empirical analyses are divided into three separate sections. First, we examine the extent to which restructurings affect the ability of firms to meet or beat analysts' forecasts. Second, we examine how discretionary accruals contribute to the frequency of restructuring firms meeting or beating analysts' expectations after restructuring. Third, we examine the influence of restructurings on the ability of firms to meet or beat analysts' forecasts in a multivariate setting.

4.1 Meet or Beat Analysis Based on Reported Earnings

Table 2 reports the temporal distribution of mean and median unexpected earnings as well as meet/beat ratios for restructuring firms and their industries for the seven years relative to the year of restructuring. Unexpected earnings, UE, is defined as the difference between actual quarterly earnings for quarter t and the last forecast of earnings for quarter t made closest to but before the earnings announcement for quarter t scaled by the stock price at beginning of the quarter. The firm meet/beat ratio, MBE%, is defined as the number of quarterly observations in

a particular year that the firm reports non-negative unexpected earnings divided by the total number of quarterly observations in that year for which we have data to compute UE. The industry meet/beat ratio, IND_MBE%, represents the mean of the industry MBE% calculated on an annual basis in a manner consistent with the restructuring firm MBE%.¹⁶ The industry-adjusted MBE% is the difference between the firm MBE% and the IND_MBE%.

The mean UEs in the three years prior to the restructuring year are all significantly negative (two-tailed p-value < 0.01) and the medians are all insignificantly different from zero. However, for the three years following the restructuring, the mean UEs, though negative, are insignificantly different from zero. On the other hand, the median UE are positive and significant (two-tailed p-value < 0.01) in each of the three years subsequent to the restructuring year.

Turning to the meet/beat ratios, the evidence is consistent with the UE analysis. Figure 1 depicts the mean MBE% for restructuring firms and their industry.¹⁷ We report this same data in Table 2. Figure 1 clearly indicates that restructuring firms tend to meet or beat analysts' forecasts more frequently after restructuring than before restructuring. For the three years prior to restructuring, restructuring firms meet or beat analysts' expectations approximately 59 percent of the time, while in the three years after restructuring these same firms meet or beat expectations over 73 percent of the time. It is also clear from Table 2 and Figure 1 that there is a dramatic increase (12.7%) in the MBE% for restructuring firms in the years following the restructuring. In contrast, the industry MBE% shows only gradual increase across the same time period. In addition, in results not reported, we find that the increase in the restructuring firms MBE% from the three year pre- to the three year post-restructuring time period is significantly greater than zero (two-tailed p-value < 0.01).

¹⁶ We identify the firms' industry based on the 48 Fama French industry groupings.

¹⁷ Our empirical evidence in Table 2 indicates that industry meet/beat ratios increase monotonically from year $t-3$ through year $t+3$. All things being equal, the expectation would be that the meet/beat ratios remain relatively stable across time. However, a number of studies (e.g., Brown 2001; Lopez and Rees 2002; Matsumoto 2002; and Brown and Caylor 2005) report that the frequency of firms meeting and beating forecasts has increased monotonically in the years since the mid 1980s.

We also compare the restructuring firm MBE% to the meet/beat ratios for their industries. Figure 2 depicts the mean industry-adjusted MBE% for restructuring firms that we also report in Table 2. We find that the industry-adjusted meet/beat ratios are significantly less than zero in each of the three years before and in the year of the restructuring (two-tailed p -value <0.01). On the other hand, these same ratios are significantly greater than zero for each of the three years after the restructuring (two-tailed p -value < 0.05 or better). Similar to the evidence reported in Figure 1, we show in Figure 2 that there is a dramatic increase in the industry-adjusted MBE% in the year immediately following the restructuring. In the year prior to and the year of the restructuring, the industry-adjusted MBE% is -6.4 and -8.2 percent, respectively. However, for the year immediately after the restructuring, the industry-adjusted MBE% is 2.1 percent and by year $t+3$ the ratio is 3.6 percent. Further, in results not reported, we find that the average industry-adjusted MBE% for the three year post-restructuring period is significantly greater (two-tailed p -value <0.01) than for the three year pre-restructuring time period.

Moehrle (2002) reports that restructuring firms which reverse a part of the charge are more likely to meet or beat analysts' forecasts in the year of the reversal. Thus, it is possible that our meet/beat results are an artifact of these subsequent restructuring reversals. To assess the sensitivity of our results to restructuring reversals, we re-estimate our Table 2 analysis eliminating the 197 observations that had a restructuring charge reversal in any of the three years subsequent to the restructuring year. The results of this additional test, not tabulated, are quantitatively and qualitatively identical to the tabulated results in Table 2. Specifically, we find that restructuring firms, even after controlling for restructuring reversals, significantly increase the rate at which they meet or beat analysts' forecasts after restructuring.

4.2 Meet or Beat Analysis Based on Pre-Managed Earnings

Table 2 provides evidence that restructuring firms meet and beat analysts' expectations more frequently after restructuring than before restructuring. We next investigate whether the observed increase in the MBE% that we report in Table 2 is related to accrual earnings

management. In Table 3 we report the temporal distribution of meet/beat ratios for restructuring firms and their industries for the seven years relative to the year of restructuring based on pre-managed unexpected earnings. We define pre-managed unexpected earnings as unexpected earnings (UE) less the discretionary accrual component of earnings.

Prior research documents that discretionary accruals are correlated with firm performance (e.g., Kothari et al. 2005). Since restructuring charges are associated with prior year underperformance, it is particularly important that firm performance be used as a control in the estimation of discretionary accruals for our sample. Accordingly, we employ two measures of discretionary accruals (PADCA and REDCA) that control for firm performance based on the work of Ashbaugh et al. (2003). The first measure of discretionary accruals, PADCA, controls for firm performance through a portfolio technique. The second measure of discretionary accruals, REDCA, adjusts for firm performance by including lagged return on assets in the regression model used to estimate non-discretionary accruals. The specific procedures for estimating both measures are discussed in Ashbaugh et al. (2003, 621-622) and Appendix A.

Figure 3 depicts the mean pre-managed MBE% for restructuring firms and the corresponding measure for the industry.¹⁸ We report this same data in Table 3. Figure 3 demonstrates that restructuring firms tend to meet or beat analysts' forecasts more frequently after restructuring than prior to restructuring even when earnings are measured on a pre-managed basis. For the three years prior to restructuring, restructuring firms pre-managed MBE% is approximately 54 percent, while for the three years after restructuring these same firms pre-managed MBE% is approximately 63 percent. This is consistent with the industry pre-managed MBE% which reveals a similar pattern. The industry pre-managed MBE% is approximately 57 percent for the three years prior to restructuring, a rate that is greater than for restructuring firms.

¹⁸We rely on the PADCA measure of discretionary accruals for all of our tabulated tests, but our results are robust to using the REDCA measure of discretionary accruals.

However, for the three years following restructuring the industry pre-managed MBE% is approximately 63 percent and almost indistinguishable from the MBE% for restructuring firms.

Figure 4 depicts the mean industry-adjusted MBE% (also reported in Figure 2 and Table 2) as well as the mean pre-managed industry-adjusted MBE%. Figure 4 shows a stark difference in the industry-adjusted MBE% based on reported earnings versus pre-managed earnings. When the MBE% is based on reported earnings, restructuring firms improve relative to the industry after restructuring for each of the three years after restructuring. However, when the MBE% is based on pre-managed earnings we see very different results. We also report the mean pre-managed industry-adjusted MBE% in Table 3. We find that the industry-adjusted pre-managed MBE% is significantly negative (two-tailed p-value < 0.01) for the first year after restructuring, insignificantly different than zero in year +2, and significantly positive (two-tailed p-value < 0.01) in the third year following the restructuring.¹⁹ Our results suggest that the increase in the MBE% based on reported earnings we document in Table 2 for years +1 and +2 is largely attributable to the managed component of earnings. However, our results in Table 3 suggest that by year +3 there appears to be evidence of real improvement in performance which leads to the higher MBE% in that year for restructuring firms relative to their industry peers.

4.3 Multivariate and Logistic Meet/Beat Analysis

In addition to the univariate analyses reported in Tables 2 and 3, we also perform a multivariate analysis to determine whether restructuring firms' ability to meet or beat analysts' expectations more frequently is attributed to earnings managements or improved operational efficiency. With our multivariate analysis we control for firm size, unexpected earnings and market returns. Specifically, we estimate the following regressions for the 25 quarters surrounding the quarter in which a restructuring charge is recognized:

$$IA_MBE\% = \beta_0 + \beta_1POST_1_t + \beta_2POST_2_t + \beta_3POST_3_t + \beta_4UE_t$$

¹⁹ Consistent with our Table 2 analysis, our Table 3 results are robust to the elimination of restructuring charge reversals as defined by Moehrl (2002).

$$+ \beta_5 MVE_t + \beta_6 RETN_t + \varepsilon \quad (1)$$

and

$$PM_IA_MBE\% = \beta_0 + \beta_1 POST_1_t + \beta_2 POST_2_t + \beta_3 POST_3_t + \beta_4 UE_t + \beta_5 MVE_t + \beta_6 RETN_t + \varepsilon \quad (2)$$

where

UE	=	is defined as $(EPS_t - LF_t) / P_{t-1}$; where EPS_t is actual realized earnings during quarter t , LF_t is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date, and P_{t-1} is stock price as of the end of quarter $t-1$;
MBE	=	1 if UE in quarter t is non-negative; otherwise zero.
IND_MBE%	=	the mean industry percentage of quarterly observations in quarter t with a non-negative UE;
IA_MBE%	=	MBE less IND_MBE%;
DA	=	income per share from discretionary accruals for quarter t divided by P_{t-1} , where discretionary accruals measure is adjusted for firm performance;
PM_UE	=	pre-managed unexpected earnings defined as UE-DA;
PM_MBE	=	1 if PM_UE in quarter t is non-negative; otherwise zero.
PM_IND_MBE%	=	the mean industry percentage of quarterly observations in quarter t with a non-negative pre-managed UE (PM_UE);
PM_IA_MBE%	=	PM_MBE less PM_IND_MBE%;
POST_1	=	1 if quarter t is a quarter $t+1$ through $t+4$ subsequent to the restructuring event quarter; otherwise zero;
POST_2	=	1 if quarter t is a quarter $t+5$ through $t+8$ subsequent to the restructuring event quarter; otherwise zero;
POST_3	=	1 if quarter t is a quarter $t+9$ through $t+12$ subsequent to the restructuring event quarter; otherwise zero;
MVE	=	log of the market value of equity in quarter t ;
RETN	=	market-adjusted compounded abnormal returns extending from the date when the first forecast for the quarter is made to one day following the earnings announcement date.

We estimate equations (1) and (2) cross-sectionally for the 25 quarter surrounding the restructuring quarter using all quarterly observations with data available to estimate the model. The dependent variables, IA_MBE% and PM_IA_MBE%, range between 1 (restructuring firm beats and the average meet/beat rate for the industry is 0%) and -1 (restructuring firm misses and the average meet/beat rate for the industry is 100%), These measures represent the extent to which restructuring firms meet/beat rate for an individual quarter deviates from the industry average. Specifically, the further the dependent measure deviates from zero in a positive (negative) direction indicates the better (worse) the firm is relative to their industries in meeting/beating analysts'.

The results from the estimation of equation (1) are reported in Table 4 column 2. The estimation of equation (1) replicates our Table 2 tests in a multivariate setting. We find that the industry-adjusted MBE% (IA_MBE%) is positively related to unexpected earnings (UE), firm size (MVE) and market returns (RETN). We also find that the intercept is negative (-0.043) and significant (two-tailed p-value < 0.01) suggesting that for the 13 quarters prior to and including the restructuring the quarter, restructuring firms, on average, meet or beat analysts forecast significantly less frequently than the other firms in their industries. However, when we examine post-restructuring years, we find that restructuring firms were no different than the other firms in their industry in the first year after restructuring and significantly better (two-tailed p-value < 0.01) than the other firms in their industries in the second and third year following the restructuring. Consistent with this conclusion, we find that POST_1 plus the intercept (the average IA_MBE% in year +1) is insignificantly different from zero, POST_2 plus the intercept (the average IA_MBE% in year +2) is significantly greater than zero (two-tailed p-value < 0.01) and POST_3 plus the intercept (the average IA_MBE% in year +3) is significantly greater than zero (two-tailed p-value < 0.01).

The results from the estimation of equation (2) are reported in Table 4 column 3. The estimation of equation (2) replicates our Table 3 tests in a multivariate setting. We find that the pre-managed industry-adjusted MBE% (PM_IA_MBE%) is positively related to unexpected earnings (UE), firm size (MVE) and market returns (RETN). We also find that the intercept is negative (-0.031) and significant (two-tailed p-value < 0.05) suggesting that for the 13 quarters prior to and including the restructuring quarter, restructuring firms, on average, meet or beat analysts forecast significantly less frequently than the other firms in their industries after controlling for the level of managed earnings. However, when we examine post-restructuring years, we find that the pre-managed earnings results are very different than the actual reported earnings results we report in column 2. We find that based on pre-managed earnings the industry-adjusted MBE% for restructuring firms in the first year after restructuring is

significantly negative (two-tailed p-value < 0.01). That is, after adjusting for managed earnings, restructuring firms meet and beat analysts' forecasts less frequently than the other firms in their industries in the first year after restructuring. In the second year after restructuring we find that there is no significant difference between restructuring firms and the other firms in their industries. This suggests that the significantly positive IA_MBE% we find in year +2 (column 2 results) is attributable to the managed component of earnings. In year +3 we find that PM_IA_MBE% is positive (0.032) and significant (two-tailed p-value < 0.01).²⁰ This is almost identical to the results we report in column 2 and suggests that the increase in the MBE% we document in the third year following the restructuring appears to be related to improved operating efficiency as opposed to accrual earnings management.²¹

The analysis in Table 4 compares a zero or one value for a restructuring firm (missed = 0 and met/beat =1) to the average meet/beat rate for all other firms in the same industry as the restructuring firm. Thus, the value of the dependent variable in Table 4 ranges between 1 (restructuring firm beats and the average meet/beat rate for the industry is 0%) and -1 (restructuring firm misses and the average meet/beat rate for the industry is 100%). In our next analysis, we estimate a logistic regression where the dependent variable, MBE (PM_MBE) takes on a value of zero or one depending on whether the quarterly earnings (pre-managed quarterly earnings) of the firm missed or met/beat analysts' earnings forecasts to determine whether the likelihood of meeting or beating analysts' expectations changes for restructuring firms relative to non-restructuring firms. To perform this analysis we include non-restructuring control firms that are matched on pre-restructuring size (total assets) and industry. In addition, we include determinants of meeting or beating analysts' earnings forecasts documented in the

²⁰ Specifically, we find that POST_1 plus the intercept (the average PM_IA_MBE% in year +1) is significantly negative (two-tailed p-value < 0.01), POST_2 plus the intercept (the average PM_IA_MBE% in year +2) is insignificantly different from zero and POST_3 plus the intercept (the average IA_MBE% in year +3) is significantly greater than zero (two-tailed p-value < 0.01).

²¹ Consistent with our Tables 2 and 3 analyses, our Table 4 results are robust to the elimination of restructuring charge reversals as defined by Moehrl (2002).

prior literature. Specifically, we estimate the following logistic regressions for the 25 quarters surrounding the quarter in which a restructuring charge is recognized:

$$\text{MBE} = \alpha_0 + \alpha_1 \text{Size}_t + \alpha_2 \text{Growth}_t + \alpha_3 \text{Rev_Growth}_t + \alpha_4 \text{NOA}_t + \alpha_5 \text{Shares}_t + \alpha_6 \text{Litigation}_t + \alpha_7 \text{ImplicitClaim}_t + \alpha_8 \text{Leverage}_t + \alpha_9 \text{Down_Rev}_t + \psi_1 \text{POST}_t + \psi_2 \text{RCD}_t + \psi_3 \text{RCD_Post}_t + \varepsilon \quad (3)$$

$$\text{PM_MBE} = \alpha_0 + \alpha_1 \text{Size}_t + \alpha_2 \text{Growth}_t + \alpha_3 \text{Rev_Growth}_t + \alpha_4 \text{NOA}_t + \alpha_5 \text{Shares}_t + \alpha_6 \text{Litigation}_t + \alpha_7 \text{ImplicitClaim}_t + \alpha_8 \text{Leverage}_t + \alpha_9 \text{Down_Rev}_t + \psi_1 \text{POST}_t + \psi_2 \text{RCD}_t + \psi_3 \text{RCD_Post}_t + \varepsilon \quad (4)$$

where

MBE	=	1 if $UE \geq 0$; otherwise zero;
PM_MBE	=	1 if UE less discretionary accruals ≥ 0 , otherwise zero;
Size	=	natural log of the market value of equity at the end of quarter $t-1$;
Growth	=	market-to-book ratio at the end of quarter t ;
Rev_Growth	=	the seasonal growth in sales revenue from quarter $t-4$ to quarter t , defined as sales revenue for quarter t divided by sales revenue for quarter $t-4$;
NOA	=	net operating assets (i.e., stockholder's equity – cash – marketable securities + total debt) at the end of year $t-1$ scaled by sales revenue for $t-1$;
Shares	=	natural log of common shares outstanding at the end of quarter t ;
Litigation	=	1 if the firm is in one of the following industries: pharmaceutical/biotechnology (SIC codes 2833-2836, 8731-8734), computer (3570-3577, 7370-7374), electronics (3600-3674), or retail (5200-5961); otherwise zero;
ImplicitClaim	=	proxied by labor intensity, calculated as 1 minus the ratio of gross PPE to total assets at the end of quarter t ;
Leverage	=	total liabilities divided by total assets at the end of quarter t ;
Down_Rev	=	1 if $LF - FF < 0$ where LF is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date and FF is the first quarter t earnings forecast made subsequent to the earnings announcement date for quarter $t-1$;
Post	=	1 if quarter t is a quarter subsequent to the restructuring event quarter, otherwise zero;
RCD	=	1 if firm i is a restructuring firm, otherwise zero.
RCD_Post	=	Post * RCD.

All other variables are as previously defined.

Following prior research, we include several control variables found to be determinants of meeting or beating analysts' expectations (Cheng and Warfield 2005; McAnally et al. 2008). High growth firms (smaller firms) might be more likely to beat analysts' forecasts to avoid the negative effect to firm value documented in Skinner and Sloan (2002). Thus, we include firm size (natural log of total assets), growth (market-to-book ratio) and sales growth (seasonal

percentage increase in quarterly sales) as controls. We include the beginning of the period net operating assets based on Barton and Simko's (2002) finding that firms with high net operating assets have less flexibility in their accrual portfolios making them less able to meet or beat analysts' expectations. The natural log of the number of common shares outstanding is included as a control because firms with more shares have lower EPS and thus are assumed more likely to meet or beat expectations (Barton and Simko 2002). We include an industry-based indicator variable and an implicit claim variable (labor intensity) to capture the likelihood of litigation liability because firms facing potential litigation have greater incentives to meet or beat expectations (Francis et al. 1994; Bowen et al. 1995; Ali and Kallapur 2001; Cheng and Warfield 2005). Prior research suggests that it is easier to meet or beat expectations if analysts' forecasts have been guided downward (Matsumoto 2002; Koh et al. 2008). To control for this relationship, we include an indicator variable for whether the last forecast of the quarter of the quarter is less than the first forecast of the quarter. Finally, we include a variable to control for the leverage of the firm (McAnally et al. 2008).

To identify control firms for this analysis, we first collect all data necessary from Compustat to estimate equations (3) and (4). We then rank these firms by year into deciles by total assets. We then match firms on Compustat to our restructuring firms based on industry (48 Fama French industry groupings). We then eliminate any firm from consideration as a control firm that reports a negative special item in any of the 25 quarters surrounding the restructuring event quarter. From this sample we identify as the matched control firm the non-restructuring firm that is closest in size (in the same sized decile of total assets in year -1) to our restructuring firm. If no match is available in the industry and size decile, we eliminate the restructuring firm from our analysis. Our selection criteria results in a test sample of 264 restructuring and control firms.

In equations (3) and (4) we estimate whether the likelihood of meeting or beating analysts' earnings forecasts changes for restructuring firms relative to our control sample of

non-restructuring firms. Equation (3) examines the likelihood of meeting or beating with actual reported earnings while equation (4) examines the likelihood based on pre-managed earnings. We include a restructuring firm indicator (RCD), a post-restructuring indicator (Post) and an interaction term for restructuring firms in the post-restructuring quarters (RCD_Post). Our primary interest in equations (3) and (4) is the coefficient on the RCD_Post interaction term.

We report the results of estimating equations (3) and (4) in Table 5. We report the estimation of equation (3) in column 2 and equation (4) in column 3. Focusing on the equation (3) results, the control variables are generally consistent with those reported in the prior literature. Large firms and growth firms are more likely to meet or beat expectations (Cheng and Warfield 2005). Consistent with Barton and Simko (2002), firms with higher net operating assets are less likely to meet or beat expectations. We also find that firms with greater litigation risk (Litigation and ImplicitClaim) are more likely to meet or beat expectations consistent with the work of Cheng and Warfield (2005). The coefficient on downward forecast revisions (Down_Rev) is negative and significant suggesting firms that have negative forecast revisions are less likely to meet or beat analysts' earnings forecasts.²² The other control variables (Shares and Leverage) are not significant in our model.

We find that the coefficient on RCD is negative and significant (p-value < 0.01) suggesting the restructuring firms are less likely to meet or beat analysts' expectations in the pre-restructuring period than non-restructuring control firms. However, we also find that the RCD_Post interaction term is positive and significant (p-value < 0.01) suggesting that this relationship reverses after restructuring. Said another way, our evidence suggests that

²² Prior research suggests that firms with negative forecast revisions most often report a negative earnings surprise in that same quarter. Although it is true that a negative revision makes it more likely that firms with bad news for the quarter will be able to report a positive earnings surprise, the fact is these same firms most often end up reporting a negative earnings surprise (e.g., Caylor, Lopez and Rees 2007). Thus, our finding of a negative coefficient on Down_Rev is not totally unexpected.

restructuring firms are more likely to meet or beat analysts' forecasts after restructuring than a control sample of non-restructuring firms.

Focusing on the equation (4) results in column 3, the control variable results are generally consistent with those reported in the estimation of equation (3). The exceptions are the coefficients on *ImplicitClaim*, *Leverage* and *Down_Rev*. In equation (3) the coefficient on *ImplicitClaim* (labor intensity) is positive and significant; however in equation (4) the coefficient is negative and significant ($p\text{-value} < 0.01$) suggesting that the higher the labor intensity the less likely the firm will meet or beat pre-managed earnings. In equation (3) the coefficient on leverage is insignificant; however in equation (4) it is negative and significant suggesting that the greater the leverage the less likely a firm will meet or beat expectations. Finally, in equation (3) *Down_Rev* was negative and significant; however, in equation (4) the coefficient is insignificant.

In equation (4), we find that the coefficient on *RCD* is negative and significant ($p\text{-value} < 0.01$) consistent with our equation (3) results. That is, restructuring firms are less likely to meet or beat analysts' expectations in the pre-restructuring period with pre-managed earnings than non-restructuring control firms. However, like the equation (3) results, we find that the *RCD_Post* interaction term is positive and significant ($p\text{-value} < 0.05$) suggesting restructuring firms are more likely to meet or beat analysts' earnings forecasts with pre-managed earnings after restructuring than are non-restructuring control firms.

Overall our evidence in Tables 2 through 5 reveals an interesting story with respect to the impact of restructurings on patterns of meeting/beating analyst forecasts. Restructuring firms report higher earnings relative to analysts' forecasts after restructuring. Similarly, restructuring firms meet or beat analysts' earnings forecasts more often after restructuring. We also find that the rate at which restructuring firms meet or beat analysts' forecasts, which is significantly below the industry prior to restructuring, is significantly better after

restructuring.²³ We find that part of the increase in meeting or beating forecasts is attributable to accruals earnings management. Finally, our evidence suggests that there appears to be real performance improvements that result from restructurings. However, these recognizable improvements do not manifest themselves until the third year after the event. Taken together, our evidence suggests that restructuring firms strategically use restructuring accruals to improve reported earnings performance relative to analysts' forecast in the near term. In this way, they borrow time until the restructuring improvements to operating efficiency are fully manifested in reported earnings²⁴

5. Conclusion

This study examines the post-restructuring performance of firms undertaking operational restructurings. Prior research has found little evidence that restructurings result in improved earnings performance. The question still unanswered from prior research is, "why do firms restructure?" Because prior studies reach mixed conclusions regarding the effectiveness of restructurings to generate earnings improvements, this study investigates that question by examining an alternative measure of performance, earnings relative to analysts' forecasts. Using this alternative measure, our evidence suggests that restructurings lead to improved performance.

²³At least two studies that we are aware of, Bartov and Cohen (2009) and Koh et al. (2008), report evidence consistent with the conclusion that the frequency of meeting and beating analysts' forecasts decreased after the passage of Sarbanes-Oxley (SOX). The findings of these two studies seem to bias against our finding an increase in restructuring firm meet/beat frequencies in the post-SOX period relative to the pre-SOX period. We did two things to address the possibility that our results are sensitive to the time period (pre- vs post-SOX). First, our primary conclusions are based on industry-adjusted measures. Because both our sample restructuring firms and non-restructuring firms are subject to the requirements of SOX, it is not important whether restructuring firms actually increased the frequency of meeting or beating forecasts after restructuring. Rather, it is more important how frequently they meet or beat expectations relative to non-restructuring firms in their same industry. We believe our method of differencing controls for any SOX-related effect. Second, in results not reported, we eliminated restructuring observations prior to 1999 and reran all of our tests. This subsample has at least one post-restructuring year in the post-SOX time period. Our results for this subsample are quantitatively and qualitatively similar to our tabulated results.

²⁴Bens and Johnson (2009) examine a sample of restructuring firms for the years 1989-1992 (pre-EITF 94-3) and 1995-1996 (post-EITF 94-3). They report that restructuring firms decreased the level of earnings management subsequent to the release of EITF 94-3. However, Bens and Johnson also report evidence which suggests the change in behavior was only temporary. Their evidence seems to bias against us finding evidence of significant earnings management, but has no relation to our examination of real performance improvements.

Overall, our evidence is consistent with the following conclusions. First, restructuring firms appear to perform better in reporting earnings relative to analysts' forecasts after restructuring. Second, our results suggest that the accounting for the restructuring contributes to the ability of restructuring firms to meet or beat analysts' earnings forecasts in the near term subsequent to the restructuring. In other words, our evidence is more consistent with earnings management explaining the observed performance improvement (meeting and beating analysts' expectations more frequently after restructuring) than any real economic improvement in performance in the first two years after the restructuring. However, our evidence also suggests that by the third year following the restructuring the increase in the ability of restructuring firms to meet or beat analysts' forecasts derives more from improved operating efficiency than accrual earnings management.

Our study extends the prior literature in at least three important ways. First, we contribute to the research on the effectiveness of operational restructurings in generating performance improvements. Prior research has reported little, if any, evidence consistent with restructurings being associated with an improvement in earnings performance or firm value. Our study extends this literature by examining an alternative measure of post-restructuring performance: earnings relative to analysts' forecasts. Second, we provide evidence on the use of restructuring accruals to manage earnings. Although a number of observers suggest that restructurings are a vehicle used by management to manipulate earnings (Levitt 1998; Smith and Lipin 1996), the only study we are aware of that directly addresses this issue is Moehrl (2002) and his study focuses on the observable reversal of the charge. This study focuses on the unobservable earnings management associated with the over-accrual of restructuring charges. Third, our evidence suggests that although restructurings are associated with accrual earnings management, these events also lead to improvement in operating efficiency in the long run.

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Appendix A Discretionary Accrual Models

We use two different measures of performance adjusted discretionary accruals. The first, REDCA, follows Ashbaugh et al. (2003) and Kothari et al. (2005) by including lagged ROA in the accruals regression to control for firm performance. The quarterly calculation of REDCA begins by estimating the following cross-sectional regression by two-digit SIC code:

$$ACC_{i,t} = \alpha_1(1/ASSETS_{i,t-1}) + \alpha_2(\Delta REV_{i,t}) + \alpha_3(\Delta ROA_{i,t-1}) + \epsilon_{i,t} \quad (1)$$

where accruals (ACC) is net income before extraordinary items (Compustat data item 8) plus depreciation and amortization (Compustat data item 77) minus operating cash flows (Compustat data item 108). $ASSETS_{i,t-1}$ (Compustat data item 44) is total assets at the beginning of the current quarter. ΔREV is equal to net sales (Compustat data item 2) in quarter t less net sales in quarter $t-1$ scaled beginning of the quarter total assets. The parameters from equation (1) are used to calculate expected accruals (EACC) as follows:

$$EACC = \hat{\alpha}_1(1/ASSETS_{i,t-1}) + \hat{\alpha}_2(\Delta REV - \Delta AR_{i,t}) + \hat{\alpha}_3(\Delta ROA_{i,t-1}) + \epsilon_{i,t} \quad (2)$$

REDCA is equal to ACC minus EACC.

The second measure of discretionary, PADCA, is calculated as follows. We partition our sample firms by two-digit SIC codes. We then estimate the parameters of the following regression for each two-digit SIC code partition

$$ACC_{i,t} = \alpha_1(1/ASSETS_{i,t-1}) + \alpha_2(\Delta REV_{i,t}) + \epsilon_{i,t} \quad (3)$$

The parameters from equation (3) are used to calculate expected accruals (EACC) as follows:

$$EACC = \hat{\alpha}_1(1/ASSETS_{i,t-1}) + \hat{\alpha}_2(\Delta REV - \Delta AR_{i,t}) + \epsilon_{i,t} \quad (4)$$

A firm's discretionary accruals (DA) are then measured as ACC less EACC. Finally, we partition firms within each two-digit SIC code into deciles based on their prior year's ROA. PADCA is the difference between a sample firm's discretionary accrual (DA) and the median value of DA for each ROA portfolio, where the median value excludes restructuring firms.

Figure 1

**Restructuring Firm and Industry MBE Ratios
for the Seven Years Relative to the Year of Restructuring**

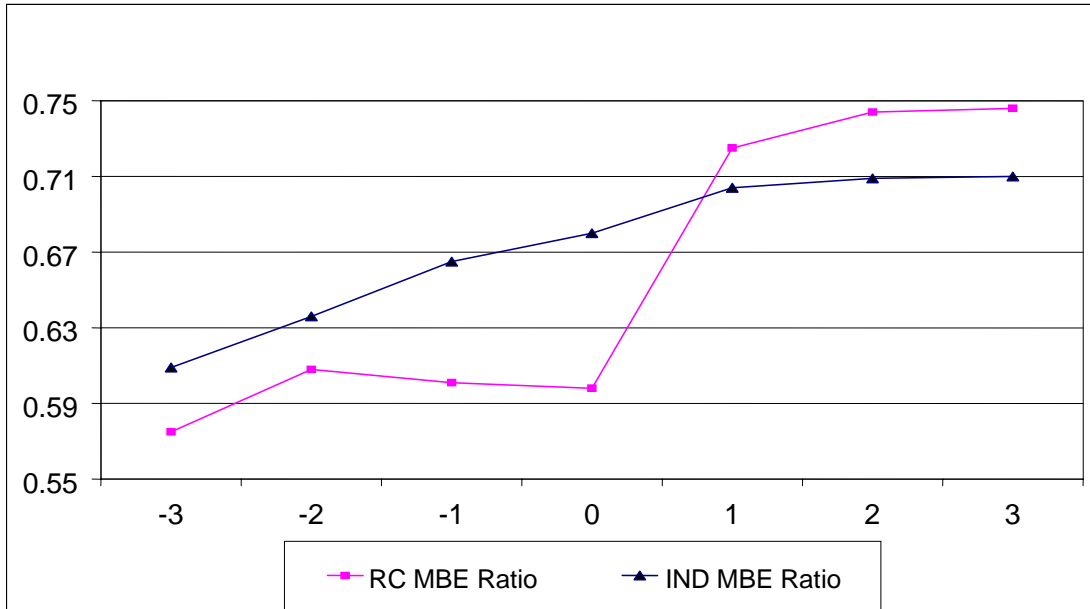


Figure 2

**Industry-Adjusted MBE Ratio for the
Seven Years Relative to the Year of Restructuring**

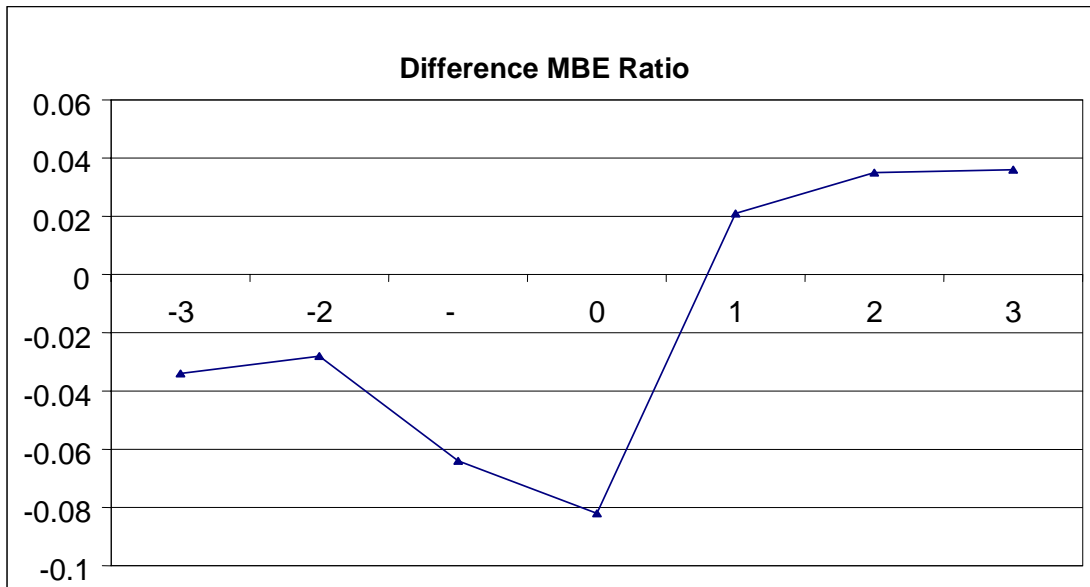


Figure 3
Restructuring Firm and Industry MBE Ratios Based on
Pre-Managed Earnings for the Seven Years Relative to the Year of Restructuring

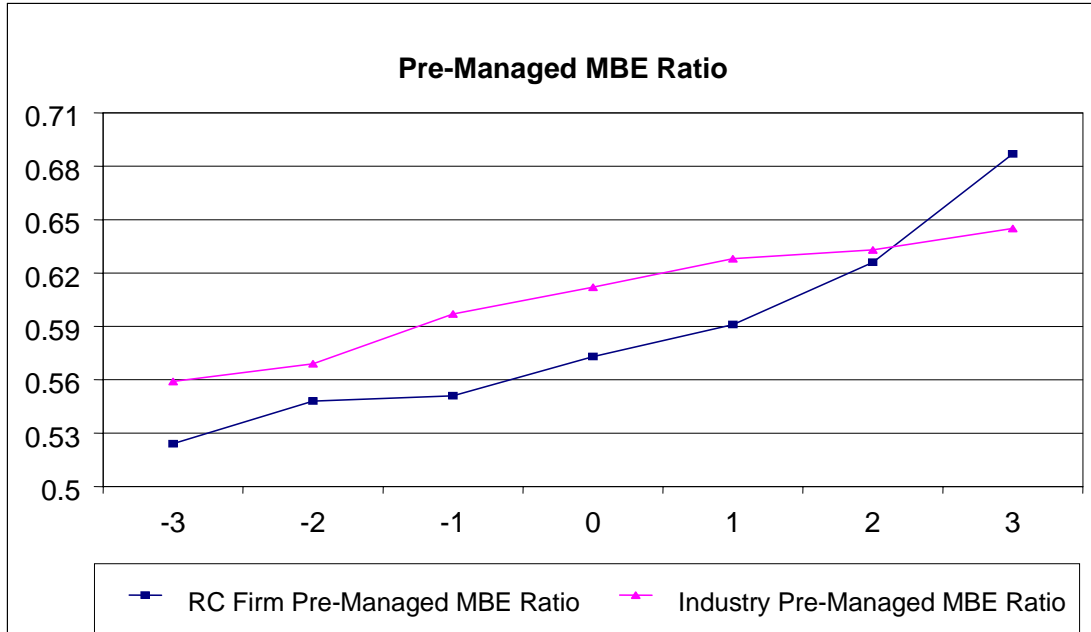


Figure 4
Industry-Adjusted Actual and Pre-Managed MBE Ratios
for the Seven Years Relative to the Year of Restructuring

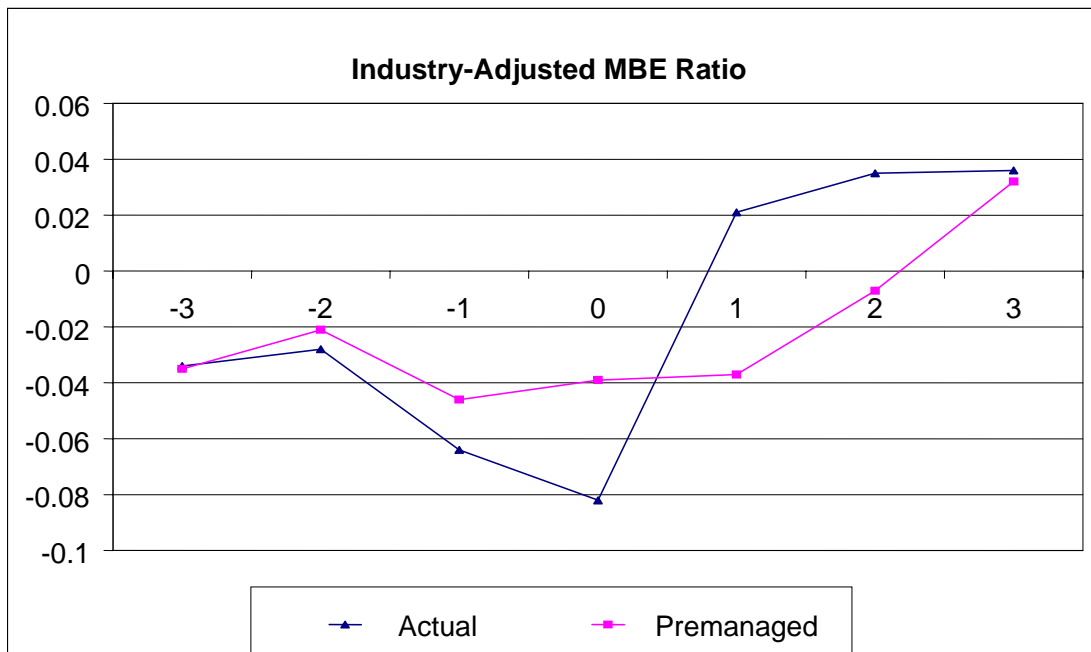


Table 1
Descriptive Statistics on 1,172^a Quarterly Restructuring Charges
Reported Between 1992 and 2000

	MEAN	STANDARD DEVIATION	LOWER QUARTILE	MEDIAN	UPPER QUARTILE
RET	-0.040	0.174	-0.147	-0.043	0.061
ASSETS (\$MILLION)	5,599	17,001	293	1,539	4,510
MARKET VALUE (\$MILLION)	5,596	14,403	202	1,232	4,029
RCHARGE (\$MILLION)	-83	316	-57	-13	-3
INCOME (\$MILLION)	4	316	-13	-0	20
ADJ_INC (\$MILLION)	87	301	1	13	78
RCHARGE /ASSETS	-0.027	0.042	-0.032	-0.013	-0.005
RCHARGE / MARKET VALUE	-0.036	0.055	-0.042	-0.016	-0.005

^aThe 1,172 quarterly restructuring observations in the test sample are taken by 394 firms.

RET = restructuring quarter market-adjusted abnormal return using the CRSP value-weighted market portfolio return accumulated from one trading day after the earnings announcement date for $t-1$ to the earnings announcement date for the current quarter (t);

ASSETS = total assets in quarter t ;

MARKET VALUE = market value of equity in quarter t ;

RCHARGE = the restructuring charge in quarter t ;

INCOME = earnings before tax, extraordinary items, and the results of discontinued operations in quarter t ;

ADJ_INC = INCOME - RCHARGE.

Table 2
Temporal Distribution of Mean and Median Unexpected Earnings
and Meet/Beat Percentages Relative to the Year of Restructuring

Year Relative to Restructuring Year	n	Mean UE ^b	Median UE ^b	MBE %	IND_MBE%	IND-ADJ
-3	924	-0.13***	0.00	57.5	60.9	-3.4***
-2	943	-0.14***	0.00	60.8	63.6	-2.8***
-1	965	-0.16***	0.00	60.1	66.5	-6.4***
0	971	-0.22***	0.00	59.8	68.0	-8.2***
1	968	-0.05	0.03***	72.5	70.4	2.1**
2	950	-0.01	0.04***	74.4	70.9	3.5***
3	937	-0.00	0.04***	74.6	71.0	3.6***

*** two-tailed p-value <0.01.

** two-tailed p-value <0.05.

* two-tailed p-value <0.10.

^a "n" is the number of firm-year observations.

^bThe earnings announcement surprise, UE, is defined as follows :

$$UE = (E_t - LF_t) / P_{t-1} \text{ times } 100.$$

where E_t is actual realized earnings during quarter t, LF_t is quarter t earnings forecast made closest to but before quarter t's earnings announcement date, and P_{t-1} is stock price as of the end of quarter t-1.

MBE % = the percentage of quarterly observations with UE greater than or equal to zero;

IND_MBE% = the mean industry percentage of quarterly observations with UE greater than or equal to zero;

IND-ADJ Mean = MBE% less IND_MBE%

Table 3
Temporal Distribution of Pre-Managed
Meet/Beat Percentages Relative to the Year of Restructuring

Year Relative to Restructuring Year	n	Pre-Managed MBE%	Pre-Managed IND MBE %	Pre-Managed IND-ADJ
-3	924	52.4	55.9	-3.5***
-2	943	54.8	56.9	-2.1**
-1	965	55.1	59.7	-4.6***
0	971	57.3	61.2	-3.9***
1	968	59.1	62.8	-3.7***
2	950	62.6	63.3	-0.7
3	937	68.7	64.5	3.2***

*** two-tailed p-value <0.01.

** two-tailed p-value <0.05.

* two-tailed p-value <0.10.

^a "n" is the number of firm-year observations.

^bThe earnings announcement surprise, UE, is defined as follows :

$$UE = (E_t - LF_t) / P_{t-1} \text{ times } 100.$$

where E_t is actual realized earnings during quarter t , LF_t is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date, and P_{t-1} is stock price as of the end of quarter $t-1$.

Pre-Managed UE = UE less discretionary accruals.

Pre-Managed MBE % = the percentage of quarterly observations with Pre-Managed UE greater than or equal to zero;

Pre-Managed IND_MBE% = the mean industry percentage of quarterly observations with Pre-Managed UE greater than or equal to zero;

Pre-Managed IND-ADJ Mean = Pre-Managed MBE% less Pre-Managed IND_MBE%.

Table 4
Cross-sectional Regressions of Industry-Adjusted MBE% and Pre-Managed Industry-Adjusted MBE% on Pre and Post Restructuring Year Indicator Variables and Control Variables (n = 16,875)

EQ (1): IA_MBE% = $\beta_0 + \beta_1 \text{POST}_1 + \beta_2 \text{POST}_2 + \beta_3 \text{POST}_3 + \beta_4 \text{UE}_t + \beta_5 \text{MVE}_t + \beta_6 \text{RETN}_t + \varepsilon$

EQ (2): PM IA_MBE% = $\beta_0 + \beta_1 \text{POST}_1 + \beta_2 \text{POST}_2 + \beta_3 \text{POST}_3 + \beta_4 \text{UE}_t + \beta_5 \text{MVE}_t + \beta_6 \text{RETN}_t + \varepsilon$

Variable	EQ (1) Coefficient [p-value]	EQ(2) Coefficient [p-value]
Intercept	-0.0430 [0.0024]	-0.0308 [0.0111]
POST_1	0.0515 [0.0021]	-0.0005 [0.9954]
POST_2	0.0843 [0.0001]	0.0266 [0.0882]
POST_3	0.0791 [0.0001]	0.0631 [0.0073]
UE	30.5937 [0.0001]	29.6218 [0.0001]
MVE	0.0062 [0.0887]	0.0072 [0.0525]
RETN	0.3013 [0.0001]	0.3220 [0.0001]
Adjusted-R ²	0.3009	0.2936
Ho: $\beta_0 + \beta_1 > 0$	0.0085 [0.6664]	-0.0313 [0.0099]
Ho: $\beta_0 + \beta_2 > 0$	0.0413 [0.0016]	-0.0042 [0.7528]
Ho: $\beta_0 + \beta_3 > 0$	0.0361 [0.0007]	0.0323 [0.0084]

Table 4 (cont'd)

UE	=	is defined as $(EPS_t - LF_t) / P_{t-1}$; where EPS_t is actual realized earnings during quarter t , LF_t is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date, and P_{t-1} is stock price as of the end of quarter $t-1$;
MBE	=	1 if UE in quarter t is non-negative; otherwise zero.
IND_MBE%	=	the mean industry percentage of quarterly observations in quarter t with a non-negative UE;
IA_MBE%	=	MBE less IND_MBE%;
DA	=	income per share from discretionary accruals for quarter t divided by P_{t-1} , where discretionary accruals measure is adjusted for firm performance;
PM_UE	=	pre-managed unexpected earnings defined as UE-DA;
PM_MBE	=	1 if PM_UE in quarter t is non-negative; otherwise zero.
PM_IND_MBE%	=	the mean industry percentage of quarterly observations in quarter t with a non-negative pre-managed UE (PM_UE);
PM_IA_MBE%	=	PM_MBE less PM_IND_MBE%;
POST_1	=	1 if quarter t is a quarter $t+1$ through $t+4$ subsequent to the restructuring event quarter; otherwise zero;
POST_2	=	1 if quarter t is a quarter $t+5$ through $t+8$ subsequent to the restructuring event quarter; otherwise zero;
POST_3	=	1 if quarter t is a quarter $t+9$ through $t+12$ subsequent to the restructuring event quarter; otherwise zero;
MVE	=	log of the market value of equity in quarter t ;
RETN	=	market-adjusted compounded abnormal returns extending from the date when the first forecast for the quarter is made to one day following the earnings announcement date.

Table 5
Cross-sectional Logistic Regressions of Meeting or Beating Analysts' Earnings Forecasts for Restructuring and Non-Restructuring Control Firms on Restructuring Firm Indicator Variable, Post-Restructuring Indicator Variable and Firm-Level Controls

EQ (3): MBE = $\alpha_0 + \alpha_1 \text{Size}_t + \alpha_2 \text{Growth}_t + \alpha_3 \text{Rev_Growth}_t + \alpha_4 \text{NOA}_t + \alpha_5 \text{Shares}_t + \alpha_6 \text{Litigation}_t + \alpha_7 \text{ImplicitClaim}_t + \alpha_8 \text{Leverage}_t + \alpha_9 \text{Down_Rev}_t + \psi_1 \text{POST}_t + \psi_2 \text{RCD}_t + \psi_3 \text{RCD_Post}_t + \varepsilon$

EQ (4): PM_MBE = $\alpha_0 + \alpha_1 \text{Size}_t + \alpha_2 \text{Growth}_t + \alpha_3 \text{Rev_Growth}_t + \alpha_4 \text{NOA}_t + \alpha_5 \text{Shares}_t + \alpha_6 \text{Litigation}_t + \alpha_7 \text{ImplicitClaim}_t + \alpha_8 \text{Leverage}_t + \alpha_9 \text{Down_Rev}_t + \psi_1 \text{POST}_t + \psi_2 \text{RCD}_t + \psi_3 \text{RCD_Post}_t + \varepsilon$

Variable	EQ (3) Coefficient [p-value]	EQ (4) Coefficient [p-value]
Intercept	-0.8543 [0.0001]	-0.5496 [0.0001]
Size	0.1948 [0.0001]	0.1637 [0.0001]
Growth	-0.0001 [0.4763]	-0.0009 [0.3380]
Rev_Growth	0.4697 [0.0001]	0.0500 [0.6567]
NOA	-0.0729 [0.0001]	-0.1355 [0.0001]
Shares	-0.0001 [0.5445]	-0.0003 [0.1030]
Litigation	0.1403 [0.0146]	0.1443 [0.0092]
ImplicitClaim	0.2892 [0.0002]	-0.2449 [0.0019]
Leverage	-0.1084 [0.3460]	-0.3637 [0.0023]
Down_Rev	-0.1482 [0.0038]	0.0398 [0.4259]
Post	0.0927 [0.3761]	0.1156 [0.2913]
RCD	-0.6381 [0.0001]	-0.5583 [0.0001]
RCD_Post	0.6348 [0.0001]	0.2925 [0.0320]
N	7,865	6,622

Table 5 (cont'd)

UE	=	is defined as $(EPS_t - LF_t) / P_{t-1}$; where EPS_t is actual realized earnings during quarter t , LF_t is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date, and P_{t-1} is stock price as of the end of quarter $t-1$;
MBE	=	1 if $UE \geq 0$; otherwise zero;
PM_MBE	=	1 if UE less discretionary accruals ≥ 0 ; otherwise zero;
Size	=	natural log of the market value of equity at the end of quarter $t-1$;
Growth	=	market-to-book ratio at the end of quarter t ;
Rev_Growth	=	the seasonal growth in sales revenue from quarter $t-4$ to quarter t , defined as sales revenue for quarter t divided by sales revenue for quarter $t-4$;
NOA	=	net operating assets (i.e., stockholder's equity – cash – marketable securities + total debt) at the end of year $t-1$ scaled by sales revenue for $t-1$;
Shares	=	natural log of common shares outstanding at the end of quarter t ;
Litigation	=	1 if the firm is in one of the following industries: pharmaceutical/biotechnology (SIC codes 2833-2836, 8731-8734), computer (3570-3577, 7370-7374), electronics (3600-3674), or retail (5200-5961); otherwise zero;
ImplicitClaim	=	proxied by labor intensity, calculated as 1 minus the ratio of gross PPE to total assets at the end of quarter t ;
Leverage	=	total liabilities divided by total assets at the end of quarter t ;
Down_Rev	=	1 if $LF - FF < 0$ where LF is quarter t earnings forecast made closest to but before quarter t 's earnings announcement date and FF is the first quarter t earnings forecast made subsequent to the earnings announcement date for quarter $t-1$;
Post	=	1 if quarter t is a quarter subsequent to the restructuring event quarter, otherwise zero;
RCD	=	1 if firm i is a restructuring firm, otherwise zero.
RCD_Post	=	Post*RCD.