THE VALUE RELEVANCE OF THE COMPONENTS OF RESTRUCTURING CHARGES: THE EFFECT OF EITF 94-3

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ABSTRACT

In response to the dramatic increase in corporate restructurings and to prevent companies from managing earnings through aggressive accrual costs, the Emerging Issues Task Force (EITF) of the Financial Accounting Standards Board (FASB) released new accounting guidelines in 1994. Issue 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*, addressed issues of timing, recognition and measurement of restructuring charges, and required companies to disclose major restructuring actions and material cost components, among others. This study is the first to examine the value relevance of restructuring charge components, disclosed in the notes to financial statements under the requirements of EITF 94-3. The results show that restructuring charge components are value relevant, i.e. associated with market values, and the pricing of individual components is affected by the profitability of the firm during the year of restructuring. In addition, I find that investors consider most restructuring charges as having valuation effects different from other ordinary operating expenses, and the valuation of a restructuring charge is affected by its content and composition.

Keywords: *restructuring charge components; value relevance; EITF 94-3*

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INTRODUCTION

There has been a notable increase in the frequency of reported restructuring charges in the past decade (e.g. Elliott and Hanna, 1996). However, the related accounting had been widely inconsistent in practice. Since the estimation of a restructuring charge and the timing of its recognition are somewhat subjective, it is possible for managers to manipulate a restructuring charge schedule to show an artificial overall earnings picture (e.g. Francis et al., 1996; Moehrle, 2002). Therefore, the timing, measurement and disclosure practices of such charges are emerging as important and sometimes controversial issues in accounting practices. This has drawn the attention of accounting standard-setting bodies, regulatory authorities, investment communities and academic researchers. Early in 1994, the Financial Accounting Standards Board (FASB) sent letters to three hundred companies reminding them that "restructuring charges should be legitimate rather than reflect expected costs" (Wall Street Journal, Nov. 2, 1994). In 1994, the Emerging Issues Task Force (EITF) of the FASB released the consensus Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*, to provide guidelines on the accounting for corporate restructuring. EITF 94-3 was nullified and superseded by SFAS No. 146 in June 2002[1]. EITF 94-3 required that if the amount of restructuring charge is substantial relative to an enterprise's revenue or operating results, the entity must disclose major actions of the restructuring plan, business activities that are being exited, the expected completion date, types and amounts of exit costs, how they are classified on both the balance sheet and income statement, and amounts charged against a

[1] The principal difference between SFAS No. 146 and Issue 94-3 relates to its requirements for recognition of a liability for a cost associated with an exit or disposal activity. Statement No. 146 requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. Under Issue 94-3, a liability for an exit cost was recognized at the date of an entity's commitment to an exit plan (Summary of Statement No. 146, FASB).

restructuring liability during the related periods. The release of EITF 94-3 was significant, because it was the first authoritative guidelines for the accounting of restructuring charge. Compared to the pre-EITF 94-3 era, the financial reporting and disclosure concerning a restructuring plan and its associated costs and liability have improved substantially after Issue 94-3 was released. Prior to the issuance of EITF 94-3, firms provided virtually no details of their restructuring programs other than a lump-sum amount of restructuring charge. Therefore, EITF 94-3 presents a unique opportunity to evaluate whether the mandated disclosures of restructuring charge components have provided additional value-relevant information.

In this study I examine whether disclosure of information on restructuring charge components mandated by EITF 94-3 will improve investors' assessment of the impact of restructuring on a firm's future operating performance. Specifically, I examine whether investors' assessments of restructuring change are affected by the disclosure of specific components, and whether such assessments are affected by a firm's profitability during the year of restructuring. This study is based on 393 firms that restructured over a period of four years from 1995 to 1998. I choose this sample period because it was immediately after EITF 94-3 was implemented. It is an important period to study the impact of EITF 94-3 since *for the first time*, firms that report restructuring charges were required to provide a discussion of the nature, amount and description for each material component of total restructuring charges, as mentioned earlier.[2] The results show that for profit firms, market values are

[2] Even though the data are eight-year-old, I do not expect that the results and conclusion will be significantly different between the data in my study and the more recent data. Recent data are governed under SFAS No. 146, which replaced EITF 94-3 in 2002. There was no significant difference between SFAS No. 146 and Issue 94-3. The primary difference relates to the timing of recognition of a liability for a cost associated with an exit or disposal activity. Moreover, I regard a test period that is immediately after the issue of EITF 94-3, i.e. 1995 to 1998, as more relevant and appropriate to study the impact of EITF 94-3, which is the primary objective of this study.

positively associated with the component of workforce-reduction, but negatively associated with the component of asset writeoffs/writedowns. By comparison, for loss firms, although workforce reduction is also shown as value increasing, the components of inventory write-downs and lease termination costs are found to have a negative impact on market values. These findings show that detailed disclosures on restructuring components mandated by *EITF 94-3* do provide value relevant information to investors and help them in assessing the impact of specific restructuring activities on a firm's future operating performance.

This study makes the following contributions to the literature: First, this is the first study to examine the value relevance of restructuring charge components. It provides evidence that the disaggregation of restructuring charges into individual components does provide additional useful information to investors. Second, it shows that investors' assessment of restructuring charge components are affected by whether the operating profits of the restructuring year are positive or negative, and sheds light on how the components are priced differently in profit firms as distinct from loss firms.

The remainder of the paper is organized as follows. Section II provides a brief literature review. Research methodology is presented in section III, which includes discussion on regression models and sample selection. Section IV presents the results and Section V is a conclusion.

LITERATURE REVIEW

Lopez (2002) examines the usefulness of EITF 94-3 financial reporting requirements from the perspective of financial analysts. He presents evidence that restructuring charge components provide greater incremental information than aggregate restructuring charges, when analyzing both short- and long-term analysts' earnings forecast revisions.

The economic effects of restructurings include workforce reduction, asset sales, closure and consolidation of facilities,

business relocations, refinements of processes, or elimination of unprofitable operations. According to EITF 94-3, restructuring charges usually include several broad categories of costs, such as costs of liability for employee termination benefits, costs of asset impairment (i.e. asset write-downs or write-offs), costs of asset disposal, costs of plant closing, plant consolidation or relocation, costs of lease cancellation, and other exit costs. Each component reflects a different economic event, each of which has its own distinct impact on future cash flows. Following Lopez (2002), no hypothesis is offered with respect to the valuation effect of each individual component, because it depends on whether the benefit brought by the corresponding event outweighs the cost incurred. Nevertheless, the value implication of each primary component is discussed below.

Employee termination benefits

Restructuring charges for workforce reduction involve employee-associated costs. Because employee termination may be undertaken to achieve a variety of objectives, investors' assessment of what effect this restructuring component has on a firm's future operating performance is important for their valuation of this component. Whether or not a workforce reduction will improve a firm's future operating performance will depend on the context and motivation for restructuring. If workforce reduction is triggered by a shutdown, or consolidation of certain production facilities, or changes in product lines, or improvement in productivity as a result of technology advances etc., this restructuring component may have both an immediate and a long-term impact on a firm's earnings as well as on cash flow. On the one hand, severance payments associated with workforce reductions usually require large cash outlays in the short term, and this is likely to have a negative impact on the firm's cash flows. Moreover, the workforce reduction may also result in lower employee morale, and may have a negative impact on the firm's productivity and future operating performance. On the other hand, the long-term effect of this restructuring component may be positive as a result of lower personnel and

personnel-related costs.

Lopez (2002) explains that investors will react positively to workforce reduction if the positive effects of reduced payroll and benefit obligations are shown to outweigh the negative effects of lost productive capacity associated with lay-offs. Following Lopez's (2002) arguments and similar arguments by Worrell et al. (1991), I conjecture that the valuation effect of workforce reduction may be positive if future benefits exceed future costs. Thus, restructuring-related layoffs can be priced positively when they are expected to improve a firm's future operating performance, but the layoffs triggered by a firm's intrinsic financial weaknesses will not be valued positively.

Asset write-downs

Asset write-downs are another frequently reported component of restructuring charges. Asset write-down is caused when an asset is considered to be impaired and its economic value falls materially below its carrying value[3]. The impairment of an asset can be caused by a firm's poor performance, or declining industry trends. It is also associated with either the decision to close under-performing divisions, or through a change in a firm's strategic focus. Francis et al. (1996) and Bartov et al. (1998) find that investors react more favorably to assets write-off announcements that are related to restructuring or changes in operation, than towards those that are purely resulting from impairment. However, Bartov et al. (1998) further find that those firms that initially received positive market reactions experience poor stock performance during the two years following the write-offs, suggesting that the write-off announcements do not allow market agents to make an unbiased forecast of a firm's future operating performance. Therefore, the

[3] SFAS No. 121 ("Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed of") details the requirements and procedures for asset writedowns and became effective for fiscal years beginning after December 15, 1995.

implication of asset write-downs upon long-term value is, empirically, an open question.

Plant closings, consolidations, and relocations

Plant consolidations, such as closure of facilities or relocations, are often done in an effort to curb the costs of rightsizing. Lopez (2002) presents evidence that financial analysts interpret plant closings as a positive indicator of a firm's earnings in the long term. Some previous studies, however, suggest that plant-closing announcements may convey a negative impression of a firm's overall operations (Gombola and Tsetsekos 1992). Blackwell et al. (1990) argue that plant closings may indicate that a firm is having difficulty in generating enough demand for its products, staying cost-competitive in the market, and/or maintaining its profitability. Plant closings due to unprofitable operations may thus signify shrinking investment opportunities that will have a negative impact on a firm's future cash flows. It should be noted that plant closings, consolidations or relocations often involve workforce reduction as well as asset write-downs. Therefore, in many cases this cost component may be further divided into costs of employee termination benefits, and asset write-downs.

Other components

The incurred cost of lease termination is another component usually associated with plant closings. Lease termination costs typically include a lease cancellation penalty, or the lease payments on a remaining noncancelable term, each of which requires cash payments. However, this adverse effect may be mitigated if the lease being terminated is related to an underperforming project. Finally, restructuring charges may occasionally include the cost of inventory write-downs[4]. Inventory write-downs are often caused by obsolete

[4] The EITF 96-9 issue discusses whether inventory markdowns associated with an exit plan or a restructuring activity should be classified in the income statement as a cost of goods sold, or as an exit or restructuring cost. The Task Force members agreed that, regardless of how the inventory markdowns are classified,

or slow-moving inventory, or price-level changes. Francis et al. (1996) find that investors react negatively to inventory write-downs because these are an impairment of assets.

RESEARCH DESIGN

Several studies find that firms with losses during the restructuring year are fundamentally different from those with gains. Atiase et al. (2004) find that firms with losses are more likely to improve their earnings and cash flows in the post-restructuring period as compared to profitable firms, because they may face more adverse conditions and so are more likely to use restructuring to address operating weaknesses. Chaney et al. (2000) and Khurana and Lippincott (2000) present evidence that restructuring charges have different valuation implications for the loss and profit firms. In other words, the information reflected by restructuring charges, if any, is likely to be different because the economic environment faced by such firms is also different. Therefore, a separate analysis is conducted for the subsamples of profit and loss Firms.

Value Relevance Models for Restructuring Charge Components

In testing the value relevance of restructuring charges as well as their components, the valuation model based on the Ohlson (1995) model, i.e. the price-levels model, is utilized. The Ohlson model is shown to be equivalent to the discounted dividends model under clean surplus accounting, when abnormal earnings follow an autoregressive process. The basic price-levels regression is expressed as:

$$MVE_{i,t} = \alpha_0 + \alpha_1 NI_{i,t} + \alpha_2 BVE_{i,t} + e_{i,t} \qquad (1)$$

Where *MVE* is the market value of equity at the end of three months after fiscal year end *t* for firm *i, NI* is earnings before extraordinary

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it may be appropriate to disclose the amount of inventory markdowns associated with an exit plan or a restructuring activity. The SEC staff also believed that inventory markdowns should be classified in the income statement as a component of cost of goods sold.

items and discontinued operations for year *t*, and *BVE* denotes book value of equity at the end of year *t*. The subscripts *i,t* will be omitted from the equations hereafter.

Next, net income is separated into two components: operating income before restructuring charges (*NI**) and restructuring charges (*RC*). *NI** is obtained by adding back the absolute amount of restructuring charge to income from continuing operations. In this way, the regression model is expanded to include restructuring charges (*RC*) to examine its association with MVE, as expressed below:

$$MVE = \beta_0 + \beta_1 NI^* + \beta_2 BVE + \beta_3 RC + e \qquad (2)$$

An implicit assumption in equation (2) is that each individual restructuring charge component has the same valuation effect. In order to determine whether individual components have differential pricing effects, restructuring charges are decomposed into eight major components, according to the guidelines provided by the EITF 94-3, including the costs of employee termination benefits, asset impairments, asset disposals, inventory write-downs, plant consolidation, closures and relocation, lease termination penalty, other exit costs, and other non-exit costs[5,6]. By decomposing the restructuring charges into major components, Equation (2) is expanded as:

$$MVE = \alpha_0 + \alpha_1 BV + \alpha_2 NI^* + \alpha_3 TERM + \alpha_4 AWO + \alpha_5 IWO + \alpha_6 DIVEST + \alpha_7 PLANT + \alpha_8 LEASE + \alpha_9 EXIT + \alpha_{10} OTHER + u \qquad (3)$$

where:

TERM	=	costs of employee termination benefits
AWO	=	costs of asset write-offs/write-downs

[5] The Task Force members also considered that the following costs qualified as restructuring costs: costs for new systems development or acquisition, job retraining for terminated employees, moving expenses for terminated employees, the incremental cost of subcontracting future warranty work on products sold before and after the commitment date, and so on.

[6] Lopez (2002) used the same disaggregation to examine whether the component information of restructuring charges provides incremental information content in financial analysts' earnings forecast.

IWO	=	costs of inventory write-downs
PLANT	=	costs of plant closing, consolidation, or relocation
DIVEST	=	costs of asset divesture and disposal
LEASE	=	costs of lease and contract termination
EXIT	=	other exit related costs
OTHER	=	other non-exit related costs

Other variables have been defined before.

Control Variable

Relevant literature has documented that restructuring is affected by changes in management. Berger and Ofek (1999) and Lopez (2002) present evidence that about a quarter of their sample firms had top management changes in the year leading up to the restructuring. Since the change in top management is likely to have an effect on the level of share price, I include it as a control variable in the regression analysis. The dummy variable, $D_{MC,}$ is coded 1 when firms experienced changes in the top management (CEO or President) during the year of restructuring, otherwise 0.

Sample Selection and Distribution Characteristics

I began the sample selection process by identifying all firms from the *Compustat* that reported negative special charges[7] from 1995 to 1998, a time period immediately after the release of *EITF 94-3* in 1994. Special charges reported in the *Compustat,* however, may or may not relate to restructuring. Therefore, I retrieved another sample of firms that may possibly restructure from the

[7] Prior to 2001, the restructuring charge was not identified separately from special charges in Compustat, and the collection of the restructuring charge and its components must be done manually. In order to obtain a smaller initial sample with which to start, I restricted the initial sample to firms reporting negative special charges. This restriction is reasonable because most restructuring firms have a negative special charge. However, under this method, firms with positive special charges, but also having a restructuring charge, were not identifiable. Lopez (2002) also imposed this restriction in his data selection process.

Compact Disclosure database, using keyword searches.[8] The two samples of firms retrieved from the two databases were then merged to obtain the firms that report negative special charges and meet the search criteria. This selection process resulted in a preliminary sample of 1742 firm-year observations for a four-year period (1995-1998).

The notes to financial statements of the preliminary sample firms were then evaluated to exclude firms with the following two characteristics: (1) restructuring related to financial restructuring, mergers and acquisitions, etc. (2) restructuring related to prior years. Excluding firms with the first characteristic allows me to focus on operational restructuring activities, and eliminating firms with second characteristic excludes the observations of restructuring activities not related to the study period. Additionally, firms with missing data or negative equity were dropped from the sample.[9] Finally, firms that do not provide a complete disaggregation of the restructuring charge were eliminated. As a result of this selection process, the final sample consists of 393 firm-year observations. Elimination of firm year observations at different stages of the sample selection process is provided in Table 1.

Table 2 reports the distribution characteristics of the sample by year, management changes, and by type of restructuring charge components. Panel A shows that across the time period examined there was an increase in observations in 1997 and 1998. Panel B

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[8] I used the keyword command "restruct? (10N)charge?" to identify firms that had such keyword in the text information in the notes on financial statements covered in the *Compact Disclosures*. Such a command would return any sentences or paragraphs that contained both the words "restruct?" and "charge?" if they were within the distance of 10 words in any order. "Restruct?" stands for any words that contain the letters "restruct" (e.g. restructure, restructuring, restructured, etc.). Similarly, "charge?" would retrieve words like "charges" or "charge".

[9] The extreme values are defined as stock prices less than $1.00 as of the beginning of the fiscal year, and those whose earnings per share from continuing operations scaled by P_{t-1} are among the bottom and top three percentile of the sample.

shows that about 30% of the sample experienced top management changes during the year of restructuring, a percentage similar to those of Lopez (2002) and Berger and Ofek (1999). The most frequently reported components are employee termination benefits (TERM) and asset write-offs/write-downs (AWO), representing 88% and 62% of the sample respectively. The component of plant closing and integration ranks as a distant third. However, as mentioned earlier, most firms decompose their PLANT costs into TERM and AWO costs, and other cost components, thereby making it difficult to isolate the cost component of PLANT. In terms of magnitude, TERM and AWO account for the greater portion of total restructuring charges (not tabulated).

RESULTS

Descriptive Statistics

Descriptive statistics on different variables used in the analyses are provided in Table 3 for the total sample, and separately for the sub-samples of profit and loss firms. The descriptive statistics for the full sample show that the mean (median) market value of common equity is $2,648 million ($202 million). The mean (median) restructuring charge is $83.8 million ($10 million), which is approximately 6% (3%) of market value of equity. A comparison of profit and loss subsamples shows that on average loss firms are much smaller than profit firms in terms of market capitalization. However, the magnitude of restructuring is larger for loss firms after scaling by market value of equity. The median of income before discontinued operations (inclusive of restructuring charges) is -$2.4 million, suggesting that over 50% of the observations are in a loss position after reporting these charges. The median operating income becomes positive when restructuring charges are excluded.

Regression Results

Results of estimating equation (2) are presented separately for the subsamples of profit and loss Firms in Panel B of Table 4. Equation (2) examines the association between *MVE* and the aggregate restructuring charge, *RC*. The result on the profit

subsample shows that there is a positive but insignificant association between *RC* and *MVE*. This seems to suggest that restructuring charge of profit firms is a transitory item at the aggregate level and does not provide incremental value relevant information. In contrast, for loss firms, the coefficient on *RC* is positive and significant. These results are consistent with the finding of Khurana and Lippincott (2000) that restructurings by loss firms are considered as value enhancing. Lin and Yang (2006) also find that analysts are more likely to make upward forecast revisions for loss firms than for profit firms subsequent to restructuring charge announcements.

However, restructurings are multidimensional events consisting of various activities. So the impact on future cash flows is multifarious. The disclosure of each major restructuring action and their associated costs required by *EITF 94-3* provides an opportunity to evaluate whether the individual components provide more value-relevant information to investors than does the aggregate restructuring charge. Regression results for estimating the value relevance of individual components (equation (3)) are also presented in Table 4. The results show that the coefficient on termination benefits, *TERM*, is significantly positive for both profit and loss subsamples. This suggests that investors expect the long-term cost savings from workforce reduction to exceed the negative impacts of layoff, such as near-term severance pay or declining employee morale. This finding is consistent with the findings of Worrell et al. (1991) that capital markets react positively to corporate layoffs when they are part of a restructuring scheme. The coefficient on the asset write-off component, *AWO*, is negative and significant for profit firms, but statistically insignificant for loss firms. Asset write-offs are non-cash charges that do not affect current or future cash outlays, but convey a negative message about a decline in the market value of an asset, or projected continuing losses associated with an asset. The results show that *AWO* affects profit firms only, probably because a decline in the future revenue-generating ability of the impaired asset is regarded as especially negative for a firm with gains, whereas for unprofitable firms such write-downs may have been anticipated and so are already priced.

In addition, the coefficient on *IWO* is negative and significant for loss firms. This is consistent with the findings of Francis et al. (1996) and Lopez (2002) that the markets interpret inventory write-downs as declines in economic values based on costs related to noncompetitiveness, obsolescence, or declines in demand. This would be especially devastating for a firm with losses, because cost cutting alone cannot save that firm. Cost cutting must be accompanied by strong product sales growth. Similarly, the coefficient on lease termination costs, *KLEASE*, is significantly negative for loss firms, due to the cash outflow required within the near-term. This could impose an extra burden on firms that are already in a dire situation.

The coefficient on *OTHERS* is significantly positive for profit firms, but its valuation implication is difficult to interpret. None of the other component coefficients are significantly different from zero. Lopez (2002) provides a reasonable explanation for the insignificance of those component coefficients from his examination of the association between analysts' forecast revisions and restructuring charge components.

> "The multidimensional nature of restructurings may result in a different response to these particular components depending on what other components are included in the restructuring and the relative proportion of the components with the charge. Thus, these individual components may, in fact, be incrementally informative to analysts, but empirically they may not appear to be (as manifested by the individual coefficients)." (pp. 639)

Additional Analysis

The sample distribution statistics presented in Table 2 show the most frequently reported components are employee termination benefits and asset write-offs and write-downs, similar to those reported by Chaney et al. (2000) and Lopez (2002). Their amounts relative to total restructuring charges also rank among the highest. Given this fact, I classify restructuring charges into three categories based on the predominance of a particular component: layoff-

related, asset write-down related, and mixed. To test whether the nature of a restructuring charge has an effect on firm value, Equation (2) is adapted as follows:

$$MVE = \theta_0 + \theta_1 NI^* + \theta_2 BVE + \theta_3 LOFF\_RC + \theta_4 AWD\_RC + \theta_5 MIX\_RC + \theta_6 D_{MC} + e \quad (4)$$

where

$LOFF\_RC$	=	*RC*, if the costs of employee termination benefits account for over 50% of the total restructuring charge, otherwise 0.
AWD_RC	=	*RC*, if the costs of asset writedowns or writeoffs account for over 50% of the total restructuring charge, otherwise 0.
MIX_RC	=	*RC*, if the component composition does not fall into the aforementioned two categories, otherwise 0.

Other variables have been defined earlier, above.

Regression results for equation (4) are presented in Table 5. The coefficient on *LOFF_RC* is positive and statistically significant only for loss firms, but not for profit firms, suggesting that investors view downsizing by loss firms as value enhancing. In contrast, the coefficient on *AWD_RC* is negative and significant only for profit firms, indicating that investors view restructuring charges of profit firms with a large portion of asset impairment costs as having negative effect on the value of a firm. The coefficients on *MIX_RC* are not significant for either group of firms.

Since restructuring charges are reported as an expense item from continuing operations, it is of interest to know if restructuring charges are priced differently from other ordinary operating expenses. Because the coefficient on ordinary operating expenses are constrained to be the negative of the coefficient on *NI**, θ_1, if restructuring charges are perceived the same way as other operating expenses, the coefficients on *LOFF_RC*, AWD_*RC* and *MIX_RC* are expected not to differ significantly from the negative of θ_1. To test the difference for θ_1, θ_3, θ_4 and θ_5, I conduct a comparative

analysis and the results of these tests are presented in Panel B of Table 5.

The Chi-square tests for differences between the coefficients on ordinary operating expenses and different categories of restructuring charges are significant in all cases, except for *AWD_RC* for the profit firms. Combined with the finding that the coefficient on *AWD_RC* is significantly negative, the results show that even though *AWD_RC* is viewed as having a detrimental effect on the value of a firm, investors consider *AWD_RC* taken by profit firms as part of the ordinary operating expenses. I further test if the valuation effects of restructuring charges are different among different categories. For profit firms, tests for differences between the coefficients on *AWD_RC* and the other two types of charges are significant, whereas the difference between the coefficients on *LOFF_RC* and *MIX_RC* is not significant. For loss firms, the coefficient on *LOFF_RC* is found to be significantly different from those on *AWD_RC* and *MIX_RC*. There is no significant difference between the coefficients on *AWD_RC* and *MIX_RC*. These results suggest that the increased disclosure of restructuring charges mandated by EITF 94-3 provide incremental value relevant information to investors.

Robustness Check

Previous research finds evidence that the coefficients on *BVE* and *NI* vary as functions of earnings persistence and volatility, riskiness, and growth (e.g. Barth, Beaver, and Landsman 1998; Ghosh and Moon 2005; Warfield et al. 1995; Dhaliwal and Reynolds 1994; Collins and Kothari 1989). I therefore include variables used as proxies for these factors to check the robustness of the results for both the profit sub-sample and loss sub-sample. The variables of *persistence* and *volatility* of earnings are the first-order autocorrelation and standard deviation of income before extraordinary items per share for the past twenty quarters respectively. Variables of riskiness include *size* and *leverage*. *Size* is the logarithmic transformation of the fiscal year-end market value

of equity, and *leverage* is the ratio of total debt to total assets. *Growth* is the sum of market value of equity and the book value of debt scaled by the book value of total assets. I create a dummy variable partitioning the sample firms into two groups based on *persistence,* and reestimate Equation (3) and (4) allowing the intercept and coefficients on *BVE* and *NI* to differ for the two groups. I similarly reestimate Equation (3) and (4) with dummy variables for each of the other factors interacted with *BVE* and *NI*. I also estimate a model with dummies for all the control variables described above, and their interactions with *BVE* and *NI*, jointly included in each of the regression equations. In each of these cases, the results on profit firms and loss firms remain similar.

CONCLUSIONS

This study is the first to examine the value relevance of restructuring charge components, which are required to be disclosed in the notes to financial statements according to EITF 94-3. The results show that the components of restructuring charges provide value relevant information to users of financial statements. Furthermore, the valuation effects of individual components are affected by the profitability of the firm in the year of restructuring. The results show that the component of workforce reduction has a positive effect on market values for both the profit and loss firms. On the other hand, asset write-downs are negatively associated with market values for profitable firms, whereas in the case of firms with losses, inventory write-downs and lease termination costs are found to have negative valuation effects. In addition, even though restructuring charges are reported as part of income from operations, this study shows that investors generally view restructuring charges differently from other ordinary operating expenses. Overall, the results of this study show that EITF94-3 enhanced the financial reporting of restructuring charges, and increased disclosure has provided users of financial statements with incremental value relevant information.

EITF 94-3 addressed issues on what costs should be classified as restructuring costs and when these costs should be recognized. It was aimed at increasing the transparency of financial statements that report restructuring charges, thereby reducing the inconsistent and perceived abusive accounting practices of corporate restructurings. Future research may examine whether the FASB and the SEC have been able to deter companies from using a restructuring reserve as a device to manage their earnings through EITF 94-3. In addition, the passage of the Sarbanes-Oxley Act of 2002 will no doubt enhance the level of disclosure and representational faithfulness of reported financial information, which may improve financial statement users' ability to access the impact of any restructuring activities on future operating performance and cash flows. Another direction is to examine the effect of the Sarbanes-Oxley Act on the usefulness of reported restructuring charge information.

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Table 1
Summary of Sample Selection Process

	Number of Observations
1. Initial sample firms identified from Compact Disclosure using keyword "restruct?(10N)charge?"	
2. Initial sample firms identified from *Compustat* with a negative special charge	
3. The number of observations after merging samples 1 & 2	1742
4. Eliminating:	
a) Firm-year observations with a charge that is not related to operational restructuring (i.e. debt restructuring, merger, etc)	(861)
b) Firms-year observations without a restructuring charge in the reporting period, but note disclosures referring to such charges taken in prior years	(391)
c) Firm-year observations with missing Compustat data or with negative equity and extreme values	(42)
e) Firm-year observations that do not provide information on restructuring charge components	(55)
5. Final sample	393

Table 2
Sample Distribution

Panel A: Sample Distribution by Year and Firm Profitability

	Number of Observations		
Year	**Full Sample**	**Profit Firms**	**Loss Firms**
1995	78	43	35
1996	86	60	26
1997	120	63	57
1998	109	68	41
Total	393	234	159

Panel B: Sample Distribution by Management Changes

Management Changes	**Number of Firms**	**Percentage**
Yes	117	29.6
No	278	70.4
Total	393	100.0

Panel C: Sample Distribution by the type, number and percentage of restructuring charge components

Component Description	Number of Firms Reporting Component	Percentage of Firms Reporting Component
Termination benefit (TERM)	344	0.88
Asset write-downs and write-offs (AWO)	242	0.62
Plant closing and integrations (PLANT)	137	0.35
Inventory write-downs (IWO)	110	0.28
Lease termination (LEASE)	127	0.32
Asset dispositions (DIVEST)	75	0.19
Other exit costs (EXIT)	60	0.15
Other non-exit costs (OTHER)	55	0.14

Table 3
Descriptive Statistics for the Total Sample and Profit/Loss Sub-Samples

VARIABLE	*All Firms Mean (Median)*	*Profit Firms Mean (Median)*	*Loss Firms Mean (Median)*
Market Value ($Million)	2,648.2 (202.4)	4,367.5 (800.0)	201.2 (62.5)
Restructuring Charges ($Million)	83.8 (10.0)	129.6 (23.9)	17.9 (4.4)
Restructuring Charges/ Market Value	0.062 (0.032)	0.046 (0.025)	0.086 (0.048)
Operating Income ($Million)	49.3 (-2.4)	107.6 (15.2)	-33.8 (-15.6)
Adjusted Income ($Million)	171.9 (5.5)	308.3 (67.3)	-24.7 (-10.2)
Book value of equity	767.0 (132.4)	1,230.5 (408.2)	107.1 (40.6)
No. of Observations	393	234	159

Market Value	=	market value of equity at the end of 3 months after fiscal year *t*
Restructuring Charge	=	absolute amount of after-tax restructuring charge in year *t*
Operating income	=	income before discontinued operations and extraordinary items
Adjusted Income	=	operating income excluding restructuring charges

Book value of equity	=	book value of equity at the end of year *t*

Table 4
Value Relevance of Individual Components of Restructuring Charges

Panel A: Correlations among variables used in regressions for profit firms

	*NI**	*BVE*	*LOFF*	*AWO*	*IWO*	*DIVEST*
MVE	0.97***	0.93***	0.64***	0.44***	0.08	0.10
*NI**		0.94***	0.67***	0.48***	0.08	0.07
BVE			0.50***	0.37***	0.07	0.14**
LOFF				0.63***	0.06	0.003
AWO					0.09	0.22***
IWO						0.04
DIVEST						
PLANT						
KLEASE						
EXIT						
OTHER						

Correlations among variables used in regressions for profit firms (continued)

	PLANT	*KLEASE*	*EXIT*	*OTHER*	D_{MC}
MVE	0.07	0.66***	0.10	0.17***	0.02
*NI**	0.07	0.68***	0.10	0.07	0.04
BVE	0.08	0.73***	0.08	0.05	0.06
LOFF	0.03	0.18***	0.00	-0.02	-0.04
AWO	0.13*	0.17***	0.19***	0.01	-0.01
IWO	0.16**	0.23***	0.43***	0.07	-0.03
DIVEST	-0.04	0.001	0.24***	-0.01	-0.02
PLANT		-0.02	0.10	0.01	-0.11
KLEASE			-0.03	-0.01	0.11
EXIT				0.02	0.02
OTHER					0.01

Correlations among variables used in regressions for loss firms

	*NI**	*BVE*	*LOFF*	*AWO*	*IWO*	*DIVEST*
MVE	-0.51***	0.90***	0.26***	0.13*	0.01	0.08
*NI**		-0.31***	-0.18**	-0.21***	0.01	0.05
BVE			0.15*	0.17**	0.10	0.04
LOFF				0.07	0.06	0.00
AWO					0.36***	-0.06
IWO						-0.02
DIVEST						
PLANT						
KLEASE						
EXIT						
OTHER						

Correlations among variables used in regressions for loss firms (continued)

	PLANT	*KLEASE*	*EXIT*	*OTHER*	D_{MC}
MVE	0.24***	0.02	0.19**	0.10	-0.05
*NI**	-0.11	-0.11	-0.10	0.00	0.05
BVE	0.16**	0.09	0.10	0.04	-0.02
LOFF	-0.01	0.00	0.96***	-0.02	-0.08
AWO	-0.02	0.17**	0.05	0.03	-0.08
IWO	0.03	-0.02	0.17**	-0.01	-0.10
DIVEST		-0.03	-0.02	0.02	-0.002
PLANT		-0.02	0.95***	-0.02	-0.08
KLEASE			-0.02	0.09	-0.07
EXIT				-0.02	-0.07
OTHER					-0.02

Panel B: Regression coefficient Values and White t-statistics

	Profit Firms		Loss Firms	
Variables	Coeff. (*t*-stat)	Coeff. (*t*-stat)	Coeff. (*t*-stat)	Coeff. (*t*-stat)
Intercept	66.54	-4.51	-9.76	-8.05
	(0.37)	(-0.02)	(-0.64)	(-1.16)
*NI**	10.68***	9.87***	-1.96**	-1.91**
	(6.29)	(5.52)	(-2.16)	(-2.31)
BVE	0.83**	0.85	1.36***	1.40***
	(1.92)	(1.58)	(12.42)	(10.77)
RC	0.92		0.68***	
	(1.21)		(5.22)	
LOFF		3.16**		1.74***
		(2.44)		(2.09)
AWO		-6.01**		-0.69
		(-2.59)		(-0.40)
IWO		-23.52		-9.82**
		(-1.28)		(-2.58)
DIVEST		18.48		13.44
		(1.37)		(1.50)
PLANT		2.34		-0.34
		(0.47)		(-0.74)
KLEASE		17.86		-5.91**
		(0.56)		(-2.55)

EXIT		47.59		-0.99
		(1.11)		(-0.33)
OTHERS		42.31***		27.61
		(3.77)		(1.24)
D_{MC}	-554.1	-592.77*	0.11	-11.96
	(-1.46)	(-1.72)	(0.01)	(-0.46)
Adj. R^2	0.945	0.958	0.740	0.772
No. of obs.	234		159	

*Note: *p <0.10, ** p<0.05, *** P<0.01. All t-statistics are White heteroskedasticity-adjusted.*

MVE	=	Market value of equity at the end of three months after fiscal year end *t*;
*NI**	=	income before discontinued operations and extraordinary items, exclusive of restructuring charges;
BVE	=	Book value of equity;
RC	=	The absolute amount of pretax restructuring charge;
LOFF	=	Costs of employee termination benefits;
AWO	=	Costs of fixed asset and intangible asset writedowns;
IWO	=	Costs of inventory write-offs;
DIVEST	=	asset divesture and disposal costs;
PLANT	=	facility and plant closing and integration and consolidation costs;
KLEASE	=	lease and contract termination costs;
EXIT	=	Other exit costs;
OTHERS	=	Other non-exit costs;
D_{MC}	=	Dummy variable, which is equal to 1 if there are top management changes during the restructuring year.

Table 5
Value Relevance of Restructuring Charges: Conditioned on Types of Restructuring Charges

Panel A: Profit and loss sub-samples

$$MVE = \theta_0 + \theta_1 NI^* + \theta_2 BVE + \theta_3 LOFF\_RC + \theta_4 AWD\_RC + \theta_5 MIX\_RC + \theta_6 D_{MC} + e$$

Correlations among regression variables for profit firms

	*NI**	*BVE*	*LOFF_RC*	*AWD_RC*	*MIX_RC*	D_{MC}
MVE	0.97***	0.93***	0.68***	0.14**	-0.03	0.03
*NI**		0.94***	0.71***	0.13*	-0.01	0.04
BVE			0.55***	0.13*	0.02	0.06
LOFF_RC				0.09	-0.02	-0.03
AWD_RC						0.01
MIX_RC						-0.06

Correlations among regression variables for loss firms

	*NI**	*BVE*	*LOFF_RC*	*AWD_RC*	*MIX_RC*	D_{MC}
MVE	-0.51***	0.90***	0.39***	0.08	-0.10	-0.05
*NI**		-0.31***	-0.20**	-0.12	0.04	0.05
BVE			0.30***	-0.02	-0.08	-0.02
LOFF_RC				0.11	-0.02	-0.11
AWD_RC						-0.03
MIX_RC						-0.03

Regression coefficients and White t-statistics

	Profit Firms	**Loss Firms**
Variables	Coeff. (*t*-stat)	Coeff. (*t*-stat)
Intercept	82.06	1.05
	(0.56)	(0.07)
*NI**	10.41***	-2.03**
	(6.41)	(-2.27)
BVE	0.92**	1.48***
	(2.24)	(15.55)
LOFF_RC	0.95	0.82***
	(1.15)	(4.45)
AWD_RC	-7.20**	-1.36
	(-2.19)	(-1.49)
MIX_RC	2.50	-1.30
	(0.98)	(-1.22)
D_{MC}	-509.72	-7.06
	(-1.51)	(-0.33)
Adj. R^2	0.947	0.754
No. of obs.	234	159

Panel B: Tests of Coefficient Differences from Panel A

Profit Firms	Chi-Square	Loss Firms	Chi-Square
LOFF_RC – (-NI)*	155.42***	*LOFF_RC – NI**	4.25**
AWD_RC - (-NI)*	0.70	*AWD_RC - NI**	3.92**
MIX_RC - (-NI)*	15.29***	*MIX_RC - NI**	5.80**
LOFF_RC – AWD_RC	5.48**	*LOFF_RC – AWD_RC*	5.55**
LOFF_RC – MIX_RC	0.29	*LOFF_RC – MIX_RC*	3.91**
AWD_RC – MIX_RC	5.66**	*AWD_RC – MIX_RC*	0.00

*Note: *p <0.10, ** p<0.05, *** P<0.01. All t-statistics are White heteroskedasticity-adjusted.*

MVE	=	Market value of equity at the end of three months after fiscal year end *t*
*NI**	=	Income before discontinued operations and extraordinary items, exclusive of restructuring charges;
BVE	=	Book value of equity.
LOFF_RC	=	*RC*, if the costs of employee termination benefits account for over 50% of the total restructuring charge, otherwise 0.
AWD_RC	=	*RC*, if the costs of asset writedowns or writeoffs account for over 50% of the total restructuring charge, otherwise 0.
MIX_RC	=	*RC*, if the component composition does not fall into the aforementioned two categories, otherwise 0.
D_{MC}	=	Dummy variable, which is equal to 1 if there are top management changes during the restructuring year.