Big Bath Earnings Management: The Case Of Goodwill Impairment Under SFAS No. 142

Charles E. Jordan (Email: Jordan@cba.usm.edu), University of Southern Mississippi
Stanley J. Clark (Email: Clark@cba.usm.edu), University of Southern Mississippi

Abstract

The big bath theory of earnings management suggests that firms experiencing low earnings in a given year may take discretionary write downs to reduce even further the current period's earnings. The notion is that the company and its management will not be punished proportionately more for the big hit it takes to its already depressed earnings. This "clearing of the decks" makes it easier to generate higher profits in later years. SFAS No. 142, with its new requirement to test goodwill annually for impairment, provided a unique opportunity to test this big bath theory. Examining Fortune 100 companies, this study presents compelling evidence that the big bath theory is more than just a theory but is instead a practiced method of managing earnings.

1. Introduction

Recent corporate scandals and accounting improprieties at major companies, such as Enron, WorldCom, Waste Management, Sunbeam and many others, have shaken investor confidence in the financial reporting process. This current demise in investor confidence was foreseen several years ago by former Securities and Exchange Commission (SEC) chairman Arthur Levitt. In a September 1998 speech, then chairman Levitt stated, "In the zeal to satisfy consensus earnings estimates and project a smooth earnings path, wishful thinking may be winning the day over faithful representation. As a result, I fear that we are witnessing an erosion in the quality of earnings and therefore the quality of financial reporting (Springsteel, 1998, p. 21)."

In his almost prophetic speech, Mr. Levitt was referring to the practice of earnings management, which embodies deliberate steps taken within generally accepted accounting principles (GAAP) to bring about a desired outcome. Earnings management can be accomplished because GAAP-based financial statements require the use of many estimates and judgments (e.g., estimating the useful lives of plant assets, determining whether assets have been impaired, or deciding upon amounts accrued for loss contingencies just to name a few). One subset of earnings management involves "big bath" charges, which represent significant non-recurring losses or expenses taken in the current period to clear the decks for improved future earnings performance (Sikora, 1999).

In June 2001, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 142, *Accounting for Goodwill and Other Intangible Assets*, and created the potential for big bath earnings management in relation to goodwill impairment. In particular, SFAS No. 142, which became effective in 2002, eliminates the periodic amortization of goodwill but instead requires that goodwill be evaluated each year for impairment. If impairment exists, an immediate charge to earnings must be recorded for the amount of the impairment. Testing goodwill for impairment under SFAS No. 142 involves significant use of estimates and, thus, opens the door for earnings management. For a sample of companies, the current study examines whether the recording of goodwill impairment in the year of adopting SFAS No. 142 appears to be related to the big bath theory of earnings management.

2. Literature Review

Dye (1986) notes that management has two primary reasons to manage or manipulate earnings. One is an external demand to meet earnings forecasts and increase share price; the other represents an internal demand relating to optimal contracting. In this latter case, earnings allow managers to communicate with their principals (e.g., board of directors) concerning the level of their performance. Regarding the external demand to meet earnings forecasts, Chenheiter and Melumad (2002) note that, *ceteris paribus*, investors infer a higher level of permanent cash flows from a higher level of reported earnings. Since increasing cash flows translate into higher share prices and earnings are perceived to be a surrogate of cash flows, higher earnings increase the value of the firm. Numerous studies have found positive evidence of earnings management being used either to meet earnings forecasts or to promote optimal contracting (e.g., see Healy, 1985; Moses, 1987; Trueman and Titman, 1988; Fudenberg and Tirole, 1995; Jordan et al., 1997/1998; Lu, 2000; Schrand and Wong, 2000).

However, managing earnings through big bath charges follows a different, yet simple, line of reasoning because earnings are made to look worse, at least in the current period. Henry and Schmitt (2001) note that a company will take a large non-recurring loss one year, typically when its profits are already depressed, so that future earnings are not burdened. The result is either increased future earnings or reduced variability of future earnings. The notion is that, when things are already bad (i.e., depressed earnings), making them worse by clearing out the rubbish does little harm to the company's or management's reputations. The market punishes a firm relatively the same whether it misses its earnings mark by a little or by a lot.

Although the big bath theory has been espoused in the accounting literature for years, little empirical testing of its presence exists. A few studies examined big bath charges on the periphery or as an aside to their main topic of earnings management in general. For example, Cameron and Stephens (1991), in examining the impact of non-recurring items on the predictive ability or variability of earnings, found that these items are not used to smooth earnings but instead appear to be used more consistently with the big bath theory. Bauman et al. (2001) examined earnings management in relation to the discretionary adjustments associated with the valuation allowance for deferred tax assets and found virtually no evidence in support of earnings management. They did find that firms with negative earnings tended to book significant negative adjustments to the valuation allowances, which is consistent with the big bath theory. However, they warn that the big bath theory may not be driving this result as it could be nothing more than companies applying the rules of SFAS No. 109 the way they were intended. More specifically, a net loss in the current period is one of the signs the FASB states may indicate that sufficient future taxable income to realize the benefits of the deferred tax asset may not materialize. Thus, negative earnings in the current period represent a legitimate reason to increase the valuation allowance. Yoon and Miller (2002), in a study of Korean industrial firms, provide significant evidence that the level of operating performance affects the degree of earnings management. They also found evidence supporting the big bath theory in that, when operating performance was extremely poor, firms often took income-decreasing strategies rather than income-increasing ones.

Four studies examined big baths or large write downs as a primary point of investigation. Strong and Meyer (1987) performed a capital market study in relation to announcements of major asset write downs. They did not address write downs in relation to earnings management but instead concluded that the most important determinant of a write down decision is a change in senior management, especially if the new chief executive comes from outside the company. Elliott and Shaw (1988) arbitrarily defined a big bath as a write down exceeding 1 percent of the book value of a firm's assets. Their mainly descriptive results showed that companies taking these discretionary big baths tended to be larger than other firms in their respective industries and more highly leveraged as well; they also seemed to be underperformers in terms of earnings.

For a sample of Australian firms, Walsh et al. (1991) examined large losses and large gains reported as extraordinary items. Their results showed a strong correlation between the discretionary loss or gain reported as an extraordinary item and the level of current year earnings. Companies with unusually low current year earnings in relation to prior years were more prone to take large discretionary losses as extraordinary items, while firms with unusually high current year earnings tended to recognize large discretionary gains as extraordinary items. Chenheiter and Melumad (2002) provide additional evidence concerning earnings management and big baths. In their

model of financial reporting where investors infer the precision of earnings, they show that a firm with sufficiently "bad" news (i.e., low earnings) will under report earnings by the maximum amount possible. This is accomplished by taking a big bath in the current period to report higher earnings in the future. If the news (earnings) is not sufficiently bad (low) in the current period, the company does not take a big bath but rather takes action to smooth earnings.

The results from Walsh et al. (1991) and Chenheiter and Melumad (2002) provide perhaps the most compelling evidence to date that the big bath theory may be more than just a theory. Their findings suggest that further testing in this area is warranted, and SFAS No. 142 provides a unique opportunity for doing so.

3. Methodology

SFAS No. 142 presents managers a new means of managing earnings via big bath write downs. Under this new standard, goodwill is no longer amortized but must be evaluated at least annually for impairment. The impairment test is a two-step process with the first step representing a comparison between the carrying value and fair value of a reporting unit. If the fair value of the reporting unit has fallen below its carrying value, a second step is required whereby the carrying value of the unit's goodwill is compared to the fair value of the goodwill to determine the amount of the impairment. As Massoud and Raiborn (2003) note, the impairment test under SFAS No. 142 leaves significant room for management interpretation, judgment, and bias. For example, discretion is required in allocating assets among reporting units and certainly is needed in determining fair values for the assets in the reporting units. This discretion opens the door for earnings management and big bath charges.

SFAS No. 142 offered another enticing reason to take big baths in the initial year of adoption (i.e., 2002). Impairment losses recognized in 2002 were treated primarily as cumulative effects from changing an accounting principle. As such, they did not affect operating income. After 2002, all impairment losses from deteriorating goodwill values must be reported in operating income.

To determine whether goodwill impairment losses recognized under SFAS No. 142 appear to be the result of big bath earnings management, data were collected for the Fortune 100 companies for 2002 and 2001. 2002 was chosen as the year for investigation because, as just noted, firms had an extra incentive to report impairment losses in this initial year of adoption. Data were also collected for 2001 to allow a comparison of the financial results of the firms between the year of adoption and a prior period. Although not a random sample, the Fortune 100 companies were selected for two reasons. First, they represent the largest companies in the nation and, as such, would be more likely to have goodwill on their books than would a randomly selected sample of publicly traded companies. Second, the Fortune 100 companies represent a broad cross section of industries; thus, the results of the study would be somewhat generalizable. Data were collected on the sample of companies from their 10-k financial reports available on the SEC's EDGAR database.

A simple method was used to test for the presence of big bath earnings management in the year of adoption. Prior research (i.e., Walsh et al., 1991; Chenheiter and Melumad, 2002) showed that big bath charges are more likely to be taken in years with depressed earnings than in years with normal earnings. The sample of companies was divided into two groups, those that recorded goodwill impairments in 2002 and those that did not. The earnings levels for these two groups of companies were compared in both 2002 and 2001. If impairment losses were taken as a form of big bath earnings management, then the earnings of the impairment group should have been significantly lower than the earnings of the non-impairment group in the year of the write down (i.e., 2002). This is because big baths are supposedly taken in a year with already depressed earnings. Additional tests were performed for 2001 (i.e., the year prior to adoption). More specifically, there was no *a priori* reason to believe that the earnings levels of the groups would differ in 2001 as big bath theory suggests that the write downs are recorded primarily in years with low earnings. Since no write downs could occur in 2001, there should have been no difference in the earnings levels between the two groups in that year.

Earnings levels for the two groups of firms were evaluated using two measures, return on assets (ROA) and return on sales (ROS). ROA represents perhaps the most common measure of earnings for use in comparisons

among firms. However, it may be inappropriate for service firms, which have lower levels of total assets than either manufacturing or retail firms. Thus, ROS was also examined as it eliminates the bias that may be present in ROA computations. Medians were used as summary measures for the groups rather than means because means can be unduly influenced by a few extreme observations, especially for small sample sizes like those examined in the current study. Medians are much less affected by these extreme values.

4. Results

Of the Fortune 100 companies examined, 20 firms either did not report an amount for goodwill in 2001 or 2002 or had missing data. Of the 80 remaining companies that reported goodwill in their financial statements, 29 (36.3 percent) recorded a goodwill impairment loss in 2002 under SFAS No. 142 while 51 (63.7 percent) did not. For the 29 firms reporting an impairment loss, Table 1 provides information on the relative size or amount of the 2002 loss. Notice that the amount of the impairment loss appears significant. For example, the median loss to the amount of 2001 goodwill (i.e., goodwill before impairment) was 20.02 percent. The 75th percentile for this ratio is 72.45 percent, which indicates that one fourth of the firms wrote off the vast majority of their existing goodwill.

Table 1: Significance Of The 2002 Impairment Loss

Ratio	25th percentile	50th percentile (median)	75th percentile
Impairment loss to 2001 goodwill	6.64%	20.02%	72.45%
Impairment loss to 2002 operating income	4.54%	13.79%	95.00%
Impairment loss to 2002 total assets	0.15%	1.01%	4.60%
Impairment loss to 2002 sales	0.27%	1.51%	5.61%

In a survey of most of the empirical literature on materiality at the time, Holstrum and Messier (1982) concluded that an item's effect on income was the most important factor in determining the materiality of that item. They concluded that a general consensus existed among most parties (i.e., auditors, preparers, and users) that items producing income effects greater than 10 percent are considered material. Table 1 reveals that the median impairment loss to 2002 pre-tax operating income (i.e., income before the impairment loss or other special components such as extraordinary items, changes in accounting principle, or discontinued operations) was 13.79 percent. According to Holstrum and Messier (1982), this suggests that the amount of the impairment loss for the group as a whole was material.

Table 2 provides the median ROA, ROS, and goodwill to total assets for 2001 and 2002 for both groups of firms (i.e., those recording an impairment loss in 2002 and those not recording an impairment loss in 2002). Notice that goodwill represented a sizable portion of total assets for both groups of firms in 2001 (i.e., before impairment) with median amounts of 4.81 percent and 6.48 percent for the impairment and non-impairment groups, respectively. The medians for the goodwill to assets ratio did not differ between these two groups in 2001 at a statistically significant level (i.e., $\alpha = .10$). However, in 2002, subsequent to implementation of SFAS No. 142, not surprisingly the median goodwill to assets ratio for the impairment group declined while the same ratio for the non-impairment group increased; the medians differed significantly between the two groups in 2002.

The most important result in Table 2 lies in a comparison of the earnings levels for the two groups of firms. In 2001, prior to implementation of SFAS No. 142, the median ROAs for both groups were quite similar as were the median ROSs. Statistical tests of the differences between the medians for 2001 revealed no significant difference. However, in the year when the impairment write downs were recorded by the 29 firms (i.e., 2002), the impairment group reported median ROAs and median ROSs that were significantly lower than the respective medians for the 51 firms in the non-impairment group. Note that these profitability measures are pre-tax and based on operating income before the effect of any impairment loss.

Table 2: Profitability Of The Impairment And Non-Impairment Groups Of Firms

	2001			2002		
Median:	**Impairment Group**	**Non-Impairment Group**	**α level**	**Impairment Group**	**Non-Impairment Group**	**α level**
Goodwill to total assets	4.81%	6.48%	.2786	3.42%	9.11%	.0047
Return on assets	3.56%	2.93%	.2291	2.16%	3.80%	.0680
Return on sales	6.40%	6.35%	.5747	4.32%	7.09%	.0436

Note: α level is the significance level for a test of differences between the impairment group median and the non-impairment group median within the same year.

This represents an important finding and strongly suggests the presence of big bath earnings management in 2002. More specifically, big bath theory holds that firms with depressed earnings are more likely to engage in discretionary write downs. The data in Table 2 reveal that the impairment group experienced significant reductions in earnings between 2001 and 2002 (i.e., the median ROA and ROS for this group declined precipitously between the years). The non-impairment group, however, enjoyed improved earnings levels between the years. As discussed in the previous paragraph, in the year of the impairment loss (i.e., 2002), the impairment group experienced earnings levels significantly lower than those of the non-impairment group. Thus, all the evidence indicates that the impairment group suffered from depressed earnings in 2002, and this could be a primary reason the managers decided to take the write downs in 2002.

Henry and Schmitt (2001) note that companies with negative earnings may be more prone to take big hits than companies with positive earnings. This is simply a special case of stating that firms with extremely poor earnings are more likely to take big baths. However, it also provides another test for the presence of big bath earnings management in the two groups of firms studied. In particular, if big bath earnings management exists, one would expect the impairment group to experience a higher incidence of negative earnings firms in 2002 when compared to the non-impairment group. Table 3 presents the number of firms with positive earnings and negative earnings for both groups of firms in 2001 and 2002.

Table 3: Negative Vs. Positive Earnings Firms For The Impairment And Non-Impairment Groups

	2001		2002	
	Impairment Group	**Non-Impairment Group**	**Impairment Group**	**Non-Impairment Group**
Number of firms with negative earnings	6 (20.7%)	6 (11.8%)	9 (31.0%)	4 (7.8%)
Number of firms with positive earnings	23 (79.3%)	45 (88.2%	20 (69.0%)	47 (92.2%)
Total	29 (100%)	51 (100%)	29 (100%)	51 (100%)
Z value	1.075		2.703	
α level	.2825		.0069	

Note: Z values and α levels are for two-tailed proportions tests to determine if the proportion of negative earnings firms differed between the impairment group and non-impairment group. One test was performed for 2001, and another test was performed for 2002.

Table 3 shows that the proportion of negative earnings firms for 2001 did not differ between the impairment and non-impairment groups at a statistically significant level. However, for 2002 when the impairment write downs were actually recorded, the impairment group had a significantly ($\alpha = .0069$) higher rate of negative earnings firms than did the non-impairment group. Again, note that the earnings examined here are before any impairment losses. These results provide additional evidence suggesting that big bath earnings management occurred in 2002.

Absent this earnings management, there would have been no expectation for one group to have a significantly higher negative earnings rate than the other group. This was indeed the case in 2001 when no big bath (i.e., goodwill impairment) was available. However, in 2002 when the big bath was available, it appears that the firms with poor earnings took advantage of it.

It could be argued that companies writing down goodwill would be expected to have depressed earnings. The depressed earnings could be viewed as a signal that the company no longer enjoys the operational advantages that once gave rise to its goodwill. That is, the lower-than-usual earnings could be a trigger causing management to question the validity of the company's recorded goodwill. However, it is unlikely that depressed earnings in one period alone would cause management to doubt the value of its goodwill. It seems that this doubt would arise only after multiple periods of low earnings. The results above show that the companies taking the goodwill write downs in 2002 experienced earnings problems in 2002 but not in the prior year. This suggests that the impairment losses were likely recorded because managers for the these companies viewed 2002 as an opportune time to take big baths and further reduce their already depressed earnings.

5. Summary and Conclusion

The big bath theory holds that companies with unusually low earnings in the current year will take large write downs to lower earnings even further. There seems to be little additional penalty for missing the earnings mark by a lot rather than by a little. The large write downs taken in the current year should improve future earnings performance as the burden has already been removed. Although the accounting literature is replete with studies on earnings management in general, there exists a paucity of empirical research specifically testing the big bath theory. However, Walsh et al. (1991) and Chenheiter and Melumad (2002) do provide evidence of its existence. The current study expands the empirical literature on big bath theory and presents additional proof that this method of earnings management is alive and well.

In 2002, SFAS No. 142 ended the decades long practice of amortizing goodwill. Instead, firms must now test goodwill annually for impairment and write down this intangible asset if necessary. Applying the impairment test requires the use of significant discretion on the part of management and presents a unique opportunity to manage earnings through big bath charges. SFAS No. 142 provided additional incentive to take big baths in 2002, the year of adoption, by stating that initial write downs taken that year would be reported as a change in accounting principle and, thus, would not affect operating results. Write downs in subsequent years must be reported as operating expenses.

For the Fortune 100 companies reporting goodwill, this study showed that firms taking goodwill impairment charges in 2002 possessed significantly lower earnings in 2002 than did their counterparts not recording the write downs. In 2001 before the opportunity to take these discretionary impairment losses existed, the two groups of companies reported similar earnings levels. In addition to having lower earnings overall in 2002, the group of firms taking the write downs also experienced a significantly higher rate of negative earnings in 2002 than did the non-impairment group. In 2001 when no impairments existed, however, both groups demonstrated similar rates of firms with negative earnings. These results provide compelling evidence that firms practiced big bath earnings management in the year SFAS No. 142 was adopted.

6. Suggestions For Future Research

The current study tested for and found evidence of big bath earnings management in the initial year of adopting SFAS No. 142 for the Fortune 100 companies. Elliott and Shaw (1988) suggest that larger firms may be more likely to take big baths than smaller firms. Future research could test this notion in relation to SFAS No. 142 by replicating the present study with a random sample of publicly traded companies of varying sizes. The sample could be segregated into two groups based on company size to determine whether size impacts the likelihood that big baths will be taken in relation to goodwill impairment.

The current project examined big baths in 2002 partly because it was the year of adoption for SFAS No. 142 and also because it was the most recent year for which data were available. As time passes, however, later years can be examined to determine if companies with depressed earnings take big baths even though some of the incentive for doing so in relation to goodwill impairment no longer applies. More specifically, impairment losses subsequent to 2002 must flow through operating income and, thus, may carry a steeper penalty for firms than existed in the initial year of adopting SFAS No. 142. This may discourage big baths via goodwill impairment after 2002. 🕮

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Notes