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# The Market Reaction to Disclosures Related to Goodwill after SFAS No. 142

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# The Market Reaction to Disclosures Related to Goodwill after SFAS No. 142

A Dissertation

Approved for the
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# Table of Contents


1. Introduction 1
2. Information Content of Amortization and Impairment of Goodwill 4
   - 2.1 Goodwill Amortization and Market Values 4
     - 2.1.1 Previous Research 4
     - 2.1.2 Hypothesis of Goodwill Amortization and Market Values 8
   - 2.2 Goodwill Impairment and Market Values 13
     - 2.2.1 Previous Research 13
     - 2.2.2 Hypothesis of Goodwill Impairments and Market Values 15
3. Impact of Disclosure Choice 18
   - 3.1 Previous Literature 18
   - 3.2 Disclosure Strategy Hypotheis 20
4. Sample & Data 21
5. Results & Analysis 23
   - 5.1 Amortization Hypothesis 23
   - 5.2 Impairment Hypotheses 24
   - 5.3 Disclosure Strategy 28
6. Summary 29

References 31
Table 1 – Descriptive Statistics 34
Table 2 – Market Reaction to Future Amortization Savings 35
Table 3 – Market Reaction to Impairment News 36
Table 4 – Market Reaction to Impairment News – Larger Sample 37
Table 5 – Market Reaction to Impairment News – Non-IBES firms 38
Table 6 – Market Reaction to Impairment – Winsorized Sample 39
Table 7 – Market Reaction to Impairment – Winsorized Sample 40
Table 8 – Anticipation of Impairment News 41
Table 9 – Anticipation of Impairment News – Long-window Tests 42
Table 10 – Tests of Returns of Warning and No Warning Firms 43
Figure 1 – Timeline of Events and Types of Possible Disclosures 44
Figure 2 – Example of 10-Q Disclosure 45
Appendix – Discussion of SFAS No. 142 46

# 1. INTRODUCTION

The Financial Accounting Standards Board's (FASB) SFAS No. 142 "*Goodwill and Other Intangible Assets*" replaces the amortization of goodwill with an annual test for impairment (see Appendix). The FASB now contends that goodwill is not a wasting asset, and therefore periodically testing for impairment is more representationally faithful than amortization over an arbitrary useful life. The FASB also notes that intangible assets are increasing in proportion and importance for many entities, and many financial statement users do not incorporate goodwill amortization into their analysis. In addition to changing the accounting for goodwill, the new pronouncement also requires entities to disclose information about the changes in the carrying value of goodwill both in the aggregate and by reportable segment. The FASB expects the new accounting and disclosure rules to improve the usefulness of the overall financial reporting of goodwill and intangibles.

The implementation of SFAS No. 142 provides a unique setting for examining the information content of the amortization and impairment of goodwill. It also allows an examination of the market effects of voluntary disclosure choices. Figure 1 shows a timeline of events associated with adopting SFAS No. 142. These events provide the disclosure data for my tests. The new standard provides a much larger sample of goodwill impairments in a relatively short time frame than prior accounting standards. Also, the initial goodwill impairments under SFAS No. 142 are freer from

other one-time charges, such as restructuring charges, which better isolates the effects of the goodwill impairments. Finally, SFAS No. 142 provides a setting where it should be less likely that the impairments are anticipated more than a few months in advance, unlike goodwill impairments before SFAS No. 142 where negative returns in prior years appear to lead to the impairment charge.

Until SFAS No. 142, GAAP required the costs of most non-current assets to be systematically and rationally allocated to the periods in which those assets enhance the company's revenues. Prior capital markets research shows that this allocation of costs appears to be valuable in regard to tangible assets, but the market appears to ignore the amortization of intangibles when setting stock prices. If so, then the press release announcing an expected increase in earnings due to the change from amortization to impairment testing basically adds back an ignored expense. If prior results are robust and the market is reasonably sophisticated, then there should be no market reaction to this event. Many firms such as AOL-Time Warner disclose substantial expected earnings increases once amortization of goodwill ceases (see Figure 2).

In addition to ceasing amortization, many firms record an initial impairment. Will the impairment be ignored like the past amortization expenses? Research generally suggests that impairments have information content; however, no prior study focuses solely on goodwill impairments. The implementation of SFAS No. 142 provides a large number of

observations of goodwill impairments that provide a basis for my tests. For example, AOL-Time Warner recognized a $54 billion impairment of goodwill in the 2nd quarter of 2002.

Some firms offer a press release warning of the impending impairment; others stay silent until revealing the impairment with the quarterly earnings release. Prior research on warnings of earnings declines provides conflicting results as to whether the warning mitigates the stock price effect. Firms have an incentive to warn of bad news to mitigate legal and reputation costs. Also, prior research finds that market reactions are stronger during the earnings announcement period, giving firms an incentive to release bad news outside of the earnings announcement. However, other research shows that firms that warn of bad news receive a larger decline in stock price than those that do not warn (Kasznik and Lev, 1995). These findings may be due to the broad nature of items that can cause earnings declines. My sample of goodwill impairments provides a homogeneous charge to earnings to examine if warning of the impairment helps minimize the stock price decline. Therefore, I plan to compare the disclosure choices to determine whether it is better, in terms of the market reaction to the total news, to warn of impending impairments or to stay silent until the entire earnings information is released.

The rest of the paper is organized as follows. The next section contains a discussion of the previous research on goodwill and impairments, as well as the development of my hypotheses pertaining to the impairment

and amortization announcements. Section 3 also contains a literature review regarding disclosure strategy and my hypothesis regarding the effects of warning of the impairment. Section 4 contains a discussion of my data and sample criteria. The analysis and results are discussed in Section 5, and Section 6 is the summary.

# 2. INFORMATION CONTENT OF AMORTIZATION AND IMPAIRMENT OF GOODWILL

## 2.1 *GOODWILL AMORTIZATION AND MARKET VALUES*

### 2.1.1 Previous Research

While numerous research papers examine goodwill created during the year of the merger, relatively little empirical research investigates the role of goodwill and goodwill amortization in explaining prices or returns.

Jennings et al. (1996) relate goodwill and other components of net assets to the market value of equity. They find higher multiples on goodwill than on tangible assets. In a separate regression of market value of equity on earnings components, including the amortization of goodwill, they find weaker results suggesting that goodwill amortization is negatively related to market values. They interpret their results as supporting the hypothesis that the amortization period is too short or that the market views goodwill as a non-decaying asset. These results support the FASB's new position on accounting for goodwill.

Moehrle, Reynolds-Moehrle and Wallace (MRW, 2001) examine the ability of cash flows from operations, earnings from continuing operations

and earnings from continuing operations before goodwill amortization to explain returns. Regressing 12-month market adjusted returns on each performance measure and a one-period lag of the performance measure, the authors find that both earnings measures significantly outperform cash flows from operations. However, they find no difference between the two earnings numbers, suggesting that goodwill amortization has no additional explanatory power for annual returns.

Similar to MRW, Jennings et al. (2001) use a sample from 1993-1998 to determine the usefulness of goodwill amortization to explain security prices. They run two separate regressions of price on the earnings per share with and without goodwill amortization. They find the R-squared is higher for the model using earnings without goodwill amortization as the independent variable. They then run a model with earnings per share before goodwill and the goodwill amortization component as independent variables to look for incremental information in the amortization expense. If the amortization expense is value relevant, one would expect a negative coefficient on the variable. Instead they find the amortization expense has a positive but insignificant coefficient, and conclude that goodwill amortization is not useful in determining prices. This result appears to contradict the income statement tests in Jennings et al. (1996) where amortization expense was negatively related to market values.

Henning et al. (2000) look at goodwill during the year of acquisition. In their second test, they regress 12-month returns during the year of

acquisition on earnings and components of goodwill amortization relating to different aspects of the goodwill asset. They find a large negative relation between returns in the year of acquisition and the part of the amortization most closely related to the amount of goodwill attributable to overpayment. In sensitivity tests using returns in future years, they find no relation between returns and amortization expense. Their results lead to the conclusion that investors discount the overpayment portion of goodwill in the year of the acquisition, but appear to view the other components of goodwill as fairly permanent, non-depreciating assets.

Hopkins, Houston and Peters (2000), use an experimental settingf to examine how accounting method differences in business combinations impact analysts' valuation judgments. They find analysts' made higher valuation judgments for firms using pooling-of-interests accounting than those using purchase accounting and amortizing goodwill. They also find the timing of the combination affects the valuation. Firms whose combination occurred 3 periods prior received lower valuations than those whose combination occurred in the previous period. While actual value and cash flows are not affected by the accounting choice, the financial reporting appears to make a difference in the analysts' judgments. An important part of their predictions is the salience of the goodwill amortization in the presentation of the financial statements effects the valuation judgments. When the business combination occurred 3 periods ago, the goodwill amortization became less salient and the analysts did not adjust the earnings

numbers. In their final hypothesis the authors present an income statement with goodwill charges net of taxes after the income taxes line item. By doing this, the information about goodwill amortization became more salient and analysts' valuation judgments were higher than when the goodwill amortization was included in the main portion of the income statement. Their results suggest that goodwill amortization may still affect firm value in periods after the first year due to how the information is presented.

Finally, Choi, Kwon and Lobo (2000), examine the differential ability of tangible and intangible assets to explain market values, as well as studying the differential ability of depreciation and amortization expenses to explain current returns. In their study, they find that intangible and tangible assets are priced similarly despite the difficult nature in assessing the values of intangibles. This result supports the idea that goodwill is valued as an asset and is not simply overpricing in business combinations. If goodwill is not an asset then testing the value relevance of amortization or impairments of goodwill would be completely uninteresting. In their income statement tests, they find that depreciation is negatively related to returns, but amortization expenses are insignificant. These results support the FASB's determination that some intangibles, such as goodwill, are non-wasting assets which should not be amortized.

### 2.1.2 Hypothesis of Goodwill Amortization and Market Values

So when is goodwill amortization value relevant? We have some research suggesting that amortization expense is value relevant shortly after an acquisition has occurred, while other research suggests that amortization may become more value relevant after it has appeared several periods. However, the majority of research supports the idea that the market views goodwill, or at least a portion of goodwill, as an asset with an indefinite life making goodwill amortization value irrelevant. These results may be driven by the market's view of goodwill as a non-decaying asset or by the lack of value relevant information pertaining to the amortization expense.

During 2001, many firms issued press statements announcing expected increases in future earnings due to the change in accounting for goodwill. (See, Figure 1 for a timeline of disclosures) This disclosure of the increase in earnings from the cessation of amortizing goodwill offers an opportunity to settle some of the conflicts in the prior literature regarding the market pricing of the amortization expense. However, if the initial implementation of SFAS No. 142 results in an impairment charge, earnings could be much lower in the year of adoption than if the company continued to amortize. Some firms warn investors of this possible impairment of goodwill. For instance, Armstrong offered the following disclosure concerning the implementation of SFAS No. 142:

Armstrong adopted the new goodwill accounting standard, FAS 142**,** effective January 1, 2002. Under this standard, goodwill is no longer amortized; in the first quarter of 2001, goodwill amortization was $5.7 million. The Company recorded restructuring costs in several of its businesses totaling $0.5 million and $5.4 million in the first quarters of 2002 and 2001, respectively.

It is likely there will be a non-cash impairment charge representing the cumulative effect of adopting FAS 142. While the amount has not been determined, the non-cash charge is expected to be in excess of $500 million. (Armstrong Holdings, Inc., April 30, 2002, PR Newswire)

Other firms stated that they expected that the goodwill impairment testing would not have a material effect on future earnings or that they did not expect an impairment to occur. For example, International Flavors & Fragrances and AZZ offered the following disclosures:

> Expected 2002 earnings reflect the elimination of approximately $ .35 per share of amortization of goodwill in accordance with Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets, which the Company adopted effective January 1, 2002. This Standard eliminates the amortization of goodwill and other indefinite life intangibles, and requires an evaluation of goodwill impairment on adoption, and annually thereafter. The Company is assessing the impact of adopting the impairment provisions of this Standard, but does not believe it has a material impairment of goodwill on adoption. Under this Standard, for comparative purposes, 2001 full year earnings excluding nonrecurring charges would have approximated $ 1.75 per share. (International Flavors & Fragrances, Inc., April 25, 2002, PR Newswire)

> The Company plans to adopt FAS 142, Goodwill and Other Intangible Assets, on March 1, 2002. Starting in FY 2003, the Company will no longer amortize goodwill. Amortization of goodwill will be approximately $1.2 million in FY 2002. The impact on the Company of the adoption of FAS 142 is currently under review. The Company does not believe at this time that the adoption of FAS 142 will reflect any goodwill impairment. (AZZ Inc., December 19, 2001, PR Newswire)

Will investors react positively to the earnings increase? Will they ignore the impact of the amortization savings? One could predict a positive reaction to the amortization savings in some scenarios. If investors are functionally fixated on earnings and fail to consider the full impact of SFAS No. 142, then stock prices should increase upon the announcement of an increase in earnings from reducing amortization. However, functional fixation could also predict a zero or negative return for the subsample of companies that include a warning of future goodwill impairments.

If investors are sophisticated rather than functionally fixated, they may not react to the amortization savings. If they view goodwill as a non-decaying asset, then they likely ignored past amounts of amortization expense in forming their earnings expectations. Therefore, ceasing amortization of goodwill will not affect their expectations of future earnings or their valuation of the firm. A small positive reaction is possible if the cessation of goodwill amortization is expected to loosen debt covenants, although such a reaction should occur at the passage of SFAS No. 142 rather than specific company press releases. A negative reaction is possible for the subsample that warns of future goodwill impairments if investors are sophisticated but did not fully anticipate the impending impairments.

To establish a baseline for future tests and to reconcile my paper with prior research about goodwill amortization, my first research question is stated formally as:

> $H_B$: Does the market react to an announcement of an earnings increase due to the cessation of goodwill amortization?

To test this question, I will use the following model:

$$CAR_t = \alpha + \beta_1 Amt_{t+1} + \beta_2 IWarn_{t+1} + \beta_3 Amt_{t+1} * IWarn_{t+1} + \beta_4 UE_t + \varepsilon \quad (1)$$

*CAR*: Cumulative abnormal returns for (-2,2) days around the announcement
*Amt*: Quarterly amortization expense savings from the announcement, per share
*IWarn*: 1 if announcement warns of future impairment, 0 if no warning of impairment
*UE*: Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

*Amt* is the expected savings from the cessation of amortization in future quarters. *IWarn* is a control variable for firms which also release warnings of expected future impairments when adopting the new standard.

Both of these variables capture expectations of future periods and hence have a subscript of (t+1). *UE* is the current period (t) forecast error, measured as the *IBES* actual eps minus the latest consensus forecast. *UE* is used in the model to control for other accounting information that may be disclosed at the press release date.

I do not adjust*UE* for amortization for two reasons. First it is uncertain if analysts include goodwill amortization in their forecasts. Gu and Chen (2004) find that First Call analysts exclude goodwill amortization and impairments over 70% of the time. Second the *IBES* actual eps number should represent a pro forma earnings number of all the items the analysts attempt to forecast. If the actual and forecast both include (exclude) the amortization, then the resulting *UE* measure will not contain amortization expense. I also run the test using a different definition of *UE* (actual quarterly earnings – 4 quarters prior earnings). Using this simple definition of *UE* helps maintain the power of the test by allowing me to use firms not in the *IBES* database.

If the market reacts to the earnings increase of the no warning group then $\beta_1$ will be positive; however, $\beta_1$ will be zero if the amortization savings are value irrelevant. If the market understands the implications of the impairment warning and the impairment warning is value relevant, then $\beta_2$ will be negative. The interaction coefficient, $\beta_3$, helps determine if the impairment warning affects the market's perception of the amortization savings. One possibility is that the amortization savings are value relevant,

but for the warning group, the announcement of a probable impairment offsets these savings. If the market sees both the impairment charge and amortization expense as value relevant, then $\beta_1$ will be positive and $\beta_2$ will be negative. If the warning totally negates the value relevance of the amortization savings, ($\beta_1$+ $\beta_3$) will not be statistically different from zero.

Testing whether $\beta_1$ and ($\beta_1$+ $\beta_3$) differ from zero is important even though I expect a failure to reject. These tests provide a basis for future tests in this paper. The reaction to the amortization savings could potentially be positive, due to functional fixation or other causes. If $\beta_1$ and ($\beta_1$+ $\beta_3$) are not statistically different from zero, then my results are consistent with past literature and provide an interesting comparison of the market reactions to impairments versus amortization.

Another piece of information that may be effected by the cessation of amortization is analyst forecasts. If analysts use goodwill amortization in their forecasted eps numbers, then the adoption of SFAS No. 142 should cause them to revise their forecasts of future earnings. However, the firm specific announcements of amortization savings may cause analysts to revise their forecasts if they did not realize the impact SFAS No. 142 would have on the firm's earnings until this date. Liu and Thomas (2000) find that revisions of future earnings are correlated with contemporaneous returns. This leads me to add *Revise* as an additional control variable to model (1). *Revise* is defined as the revision in the *IBES* consensus forecast of earnings in quarter

t+1 from the period just before the announcement to the period immediately following. This leads me to the following two models:

$$CAR_t = \alpha + \beta_1 Amt_{t+1} + \beta_2 IWarn_{t+1} + \beta_3 Amt_{t+1} * IWarn_{t+1} + \beta_4 UE_t + \beta_5 Revise_{t+1} + \varepsilon \quad (2)$$

$$Revise_{t+1} = \alpha + \beta_1 Amt_{t+1} + \varepsilon \quad (3)$$

*CAR*: Cumulative abnormal returns for (-2,2) days around the announcement
*Amt*: Quarterly amortization expense savings from the announcement, per share
*IWarn*: 1 if announcement warns of future impairment, 0 if no warning of impairment
*UE*: Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast
*Revise*: *IBES* consensus forecast revision of next quarter's eps from the last consensus forecast prior to the announcement to the first consensus forecast following the announcement.

Model (2) uses *Revise* as a control for the market reaction to the amortization savings announcement. Model (3) examines the direct impact of the amortization savings announcement on the analysts' forecast revisions. If analysts understand the implications of SFAS No. 142 or they have excluded goodwill amortization from their forecasts, then the announcement of cessation of goodwill amortization should have no impact on the analysts' earnings forecast revisions.

## 2.2 *GOODWILL IMPAIRMENTS AND MARKET VALUES*

### 2.2.1 Previous Research

Most recently, Hirschey and Richardson (2002) examine market reactions to goodwill write-offs from 1992-1996. Using a sample of 80 firms from this period, they find that goodwill write-off announcements have an

average 2-day CAR of -2 to -3%. They also find market-adjusted returns of about -40% during the year prior to the announcement as well as -11% market-adjusted returns during the year after the announcement. These results suggest that the market views impairments and write-offs of goodwill as being fundamentally different from amortization.

Barth and Clinch (1998) look at Australian firms and the relation between prices and revaluations. Although they had insufficient numbers of revaluations to analyze goodwill separately, they find a positive association between the revaluation of intangibles and prices. In a secondary test examining downward revaluations, they find that while tangible asset revaluations are significantly associated with future performance, downward revaluations of intangible assets are negatively signed but statistically insignificant. One limitation of this test is the inability to gather a large sample of downward revaluations of intangibles from their Australian sample. Overall, they conclude that revaluations of both tangible and intangible assets are valued in the market.

One challenge for the market studies on impairments is the apparent ability of the market to anticipate impairments. Alciatore, Easton and Spear (AES, 2000) look at impairments in oil and gas firms and find that the correlation between the impairment charge and contemporaneous returns is statistically significant. However, it is smaller than the correlation of the impairment with lagged returns, suggesting the market has anticipated at least part of the impairment prior to recognition by the firm.

### 2.2.2 Hypothesis of Goodwill Impairments and Market Values

So do goodwill impairments affect market values? Overall, the research appears to support the idea that goodwill impairments are associated with decreases in stock price, although the market appears to anticipate the impairment. However, goodwill impairments surrounding SFAS No. 142 are unique in that the new standard is a mandatory change from amortization to impairment testing (see Appendix). SFAS No. 142 requires all firms to perform an impairment test on existing goodwill. Previous standards covering impairments were not as rigid in the timing of impairment tests. For instance, SFAS No. 121 does not require firms to perform impairment tests until economic factors lead the firm to believe impairment may have occurred. The mandatory testing required by SFAS No. 142 may reduce the likelihood that the market anticipates the impairment, but it may also change the value relevance of the impairment charges. Under SFAS No. 142, a large number of firms are reporting impairments in a very short time frame rather than spread out over time. Given these circumstances, it is unclear how the market will respond to impairments under SFAS No. 142.

My main hypotheses are as follows

$H_1$: The announcement of the impairment of goodwill is associated with a negative market reaction.

$H_2$: The size of the reaction is positively related to the size of impairment charge

Despite prior evidence that goodwill amortization is not priced, previous studies show that goodwill is valued as an asset. Prior research on

assets other than goodwill shows that impairment expenses are fundamentally different from amortization expenses. Amortization starts with the basic assumption that the underlying asset is decaying in value, and accountants then try to estimate the rate of decay using an amortization schedule. If investors view goodwill as non-decaying, then ignoring amortization expenses is a rational action. However, investors who view goodwill as non-decaying would rationally respond to the impairment expense. The impairment expense is only taken if a material decline in the asset value is detected. Therefore, the impairment expense is a signal that the underlying value of the asset has declined. Impairments do not have a cash flow or tax benefit in the current period, so firms do not have a cash flow incentive for recording or measuring the impairment.

To test $H_1$ and $H_2$, I will use the following three models:

$$CAR_t = \alpha + \varepsilon \quad (4)$$

$$CAR_t = \alpha + \beta_1 IMP_t + \varepsilon \quad (5)$$

$$CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon \quad (6)$$

*CAR*: Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP*: amount of the impairment divided by the number of shares outstanding
*UE*: Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

In all of the models, the independent variables are deflated by the price at the beginning of the returns period. The returns variable is defined as the accumulated returns for the five days starting two days before the announcement of the impairment and ending two days after the

announcement adjusted for the cumulative market returns of the same period. The *UE* in model (6) is a control variable to capture the earnings shock coming out during the period which typically coincides with the announcement of the impairment. I define *UE* as the actual earnings per share reported by *IBES* of the quarter of the announcement less the last *IBES* consensus forecast of earnings prior to the announcement date. I do not adjust the eps figures for the impairment of goodwill since it is unlikely that analysts attempt to forecast such charges.

*IMP* is the impairment loss announced in the press release on a per share basis. I record *IMP* as a positive amount so that the relation between the loss and returns should be negative.

In model (4) a significantly negative $\alpha$ coefficient would support my hypothesis. If the size of the impairment affects the size of the reaction, then in models (5) and (6), I predict $\beta_1$ to be significantly negative. Support for $H_1$ does not immediately translate into support for $H_2$. The market could react negatively to the impairment news, but the market's view of the size of the impairment could be different than the amount recognized by the firm.

The $\beta_1$ coefficient is likely to be small due to the transitory nature of the impairment. If estimated well, the impairment charge should not contain information that persists into the future. Therefore, market responses to the impairment component of earnings should be significantly lower than to the rest of the earnings data (Lipe 1986, and many others). Additionally, the sign on $\beta_1$ could be positive if the market anticipated the impairment to be larger,

or if the market sees impairments as a positive signal of management taking a necessary action toward "righting the ship."

Prior event studies have used both 3- and 5-day returns windows. I use both in this paper. Using a short window is preferred because it reduces the likelihood of omitted correlated variables biasing the coefficient on the variable of interest compared to using a long window return. However, prior research indicates that accounting recognition of impairments is untimely, and the impairment is impounded into returns well before it is recognized in earnings. As a result, using a short window for the tests will not necessarily capture the full effect of the impairment even if it is value relevant. Therefore, in all the models, I will also cumulate returns over a longer window to try to assess the anticipation of the impairment.

# 3. IMPACT OF DISCLOSURE CHOICE

## 3.1 Disclosure Strategy Literature

The implementation of SFAS No. 142 also provides an opportunity to examine differences between the firms that offered a negative announcement warning of the goodwill impairment versus those that stayed silent yet still recognized a goodwill impairment charge in their quarterly earnings. Skinner (1994) proposes that firms have an incentive to warn of large negative earnings news prior to the earnings announcement. This warning helps reduce legal liability and potential loss of a manager's reputation. Extending this idea, one would suspect that firms that offer positive or no news prior to

an impairment loss may suffer a larger negative price reaction than those that warn of the impairment.

Contrary to Skinner (1994), Kasznik and Lev (1995) studied preemptive announcements of large unexpected earnings and found that firms that released an early warning of bad news had larger negative returns than those that did not release a warning. They suggest that investors may overreact to bad news warnings. This leads to managers weighing the cost of overreaction to the bad news warning with the potential legal and reputation costs of staying silent. Kasznik and Lev also suggest that the larger negative reaction may be due to the persistence of the earnings news. Managers choose to issue a warning when the bad news is more persistent; therefore, a larger negative reaction makes sense for the early warning firms.

Libby and Tan (1999) studied this issue in an experiment. Using analysts to forecast future earnings, they find that analysts issue lower future earnings forecasts when firms warn of bad earnings news than when they release all of the bad news at the earnings announcement. Interestingly, in a debriefing question, the analysts stated that they viewed the bad news in the warning firms as less permanent than those that did not warn, however, their forecast values suggest they attached more permanence to the bad news in the warning group. In a follow up study using similar methods, Tan, Libby and Hunton (2002) find that the lowest forecasts are for firms which issue bad news warnings that fall short of the total bad news in the earnings. Their

results suggest that lower forecasts are associated with over-optimistic disclosures (i.e. understating the bad news).

Soffer, Thiagarajan and Walther (2000) examine voluntary earnings preannouncements. They suggest that investors pay more attention to earnings announcement news rather than preannouncements. Under this condition, firms would always seek to manage expectations before the earnings announcement period, so that the earnings surprise is always positive. To achieve this goal, they find that firms generally preannounce all of their negative news but only about half of the positive news and that market reactions are stronger for earnings announcement period than the preannouncement period.

### 3.2 Disclosure Strategy Hypothesis

Given the results of past research my third hypothesis is formally stated as:

$H_3$: The market reacts more negatively to firms that warn of future impairments.

To test how investors react to the impairment for different disclosure methods, I use the following model:

$$CAR_t = \alpha + \beta_1 IMP_t + \beta_2 IWARN + B_3 IWARN^* IMP_t + \beta_4 UE_t + \beta_5 IWARN^* UE_t + \varepsilon \quad (7)$$

*CAR*: Market adjusted daily returns for the 5 days surrounding the announcement of the impairment and the earnings announcement date
*IMP*: amount of the impairment divided by the number of shares outstanding
*IWARN*: dummy variable = 1 if firm gave wire release warning of the impairment due to 142
*UE*: Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

The returns in this test are measured using two 5-day windows around the warning disclosure date as well as the earnings announcement date. Firms that do not issue a warning of the impairment will not have a disclosure date window. Instead, I use a dummy 5-day *CAR* and combine it with the 5-day *CAR* around the earnings announcement date for the non-warning firms. The dummy 5-day *CAR* is measured around the median number of days that the warning firms issued a warning of the coming goodwill impairment. $\beta_2$ should be negative to support $H_3$ that warning firms have a more negative *CAR*. However, the direction could go either way, so I will use a two-tailed t-test. If the results in Kasznik and Lev are due to overreaction, then the returns for the early warning group should be more negative ($\beta_2 < 0$) than those who stayed silent. If firms are penalized when holding back bad news, then $\beta_2$ would be positive. If the impairments are anticipated from other sources or signals, then $\beta_3$ will not differ from zero. Using a longer return window in sensitivity tests may capture any market reactions that occur before in the 5-day windows.

## 4. SAMPLE & DATA

In gathering the data, I began with a search of the *PR Newswire* and *Business Wire* on the *LexisNexis* database. Using a search based on the words "impairment", "goodwill", and "142", I found 3,183 press releases in the years 2001 through 2003 representing over 1,200 firms. Expanding the search to include "amortization" or "impairment" with the previous search terms yielded 6,076 in the same time period. The vast majority of these press

releases are quarterly earnings reports. These numbers are significantly larger than the final data set due to multiple disclosures of the same event in later quarterly announcements.

To collect firms not releasing information through the newswire services, I searched *Compustat* quarterly data for goodwill impairments (data items 249 – 252). This search yields 471 additional firms which were not in the news wires dataset. I have collected prior 8-k and 10-q reports for these companies and searched them for potential warnings of impairments. After checking the 10q and 8k reports, 68 of these firm observations have prior warnings or disclosures of the impairments and have been coded as warning firms.

To remain in the sample for all the tests, I require the firms have daily returns data available in *CRSP*. For later tests, I require that firms have financial data in *Compustat* and earnings forecast data in *IBES*. I compiled a list of ticker symbols and company names from the news wires, in order to match these to the cusips in the *IBES, Compustat* and *CRSP* databases. Firms which I could not match either the ticker symbol or the company name were deleted. 375 firms that are covered by *Compustat* and the newswires did not have returns data available in *CRSP*.

In my impairment sample, 44 firms had stock price under $0.50, and these low prices could adversely affect my tests because I use price as a deflator. Since deflating by a variable under $1.00 will actually inflate the variables, I decided to run the tests after deleting these observations. Firms

trading at such low prices are generally not representative of the wider population of firms, lead to extreme returns from small price changes, and are likely to add noise to any tests. After imposing these constraints, the data set of the impairment firms contains a total of 1,167 observations for 915 firms. Of these 915, 248 firms are classified as Warning firms for the disclosure tests. Adding the *IBES* constraint the sample is reduced to 603 firms.

The amortization sample has 555 firm observations, with 228 firms classified as warning firms. The amortization savings are collected from the press release disclosures of the expected savings from adopting SFAS No. 142. *AMT* represents the savings for the next quarter. When annual savings were disclosed, I divided the amount by 4 assuming that goodwill amortization is constant over the year.

Table 1 shows some descriptive statistics of the current sample. There are 915 firms with 1060 impairments. The subsequent impairments occur in separate quarters and are not used in the impairment tests of $H_1$ and $H_2$. In these tests I use only the first announcement of the impairment per firm not per impairment. I use warnings announcements and earnings announcements of the subsequent impairments in the disclosure tests ($H_3$).

## 5. RESULTS & ANALYSIS

### 5.1 Amortization Hypothesis

Table 2, Panel A shows the results of the tests of Model (1) & (2). As hypothesized there is no reaction to the earnings increase due to the cessation of goodwill amortization. This result supports prior research that

amortization is not value relevant. Another way of examining the value relevance of amortization disclosures is to examine the relationship between the announcement of the amortization savings and the revisions of earnings forecasts for the next quarter made by analysts. Panel B, shows that forecast revisions made from the period before the announcement to the period after the announcement have no relation with the amortization savings. Either analysts ignore the goodwill amortization, or they have removed the amortization from their forecasts at an earlier date, such as the enacting of SFAS No. 142 by the FASB. These results support the assertion that goodwill amortization lacks value relevance, but cannot be seen as conclusive since the hypothesis supports the null and there are numerous reasons why a test may fail to reject the null. It does, however, offer some evidence that my sample is similar to goodwill samples used in prior literature.

### 5.2 Impairment Hypotheses

Table 3 shows the results of the tests of $H_1$ and $H_2$. To correct for heteroscedasticity, I use White's adjusted standard errors when computing the t-statistics. The sample for the test of Model (4) consists of the first warning or reporting of the first impairment per firm. Using only firms with *IBES* data; the sample contains 603 observations. As shown in Table 3, Panel A, the price reaction is negative during the announcement window surrounding the impairment news. These results appear insensitive to the length of the returns window or the use of the equal or value weighted market index for computing the abnormal returns. The negative intercept supports

my first hypothesis that there is a negative reaction to the announcement of the impairment of goodwill. Examining the size of the reaction shows a -1.3% reaction in the 3-day window, which is smaller than the –2% to –3% reaction found by Hirschey and Richardson in their pre-142 goodwill impairment tests.

To test $H_2$, I estimate models (5) and (6). To produce the impairment per share and earnings surprise numbers, I require the appropriate numbers be available in *Compustat* and *IBES* for that firm quarter. This reduces my sample to 542 observations (one per firm). Tests of model (5) (Table 3, Panel B), produce no support for $H_2$. In Panel C, adding the earnings surprise as a control variable, shows that the coefficients are all in the hypothesized direction, but $\beta_1$ remains insignificant. While $H_1$ is supported, the lack of support for $H_2$ may be due to a number of reasons. The small sample size may lead to a lack of power to capture effects which do exist. Another explanation may be that while the impairment does have information content, the market does not associate the accounting measure of the impairment with the underlying economic impairment. This may be due to the nature of the goodwill tests suggested by the FASB, and the implementation choices of the firms in applying the standard.

While I cannot address the measurement issue directly, I can examine the power explanation more fully by expanding my test to include more observations. To address this issue, I run the tests using a naïve quarterly earnings surprise model, where $UE = EPS_t – EPS_{t-4}$. This increases the

number of observations in the tests from 555 to 817. Table 4, shows the results of the test of $H_2$ using this definition of UE. $\beta_1$ is negative and significant in all tests, suggesting that the size of the impairment is negatively related to the returns.

This result lends some credibility to the lack of support for $H_2$ in the original model being a power issue, but other issues arise. First, the nature of firms tracked by *IBES* may be vastly different from those not tracked. Second, using the naïve UE definition is possibly an inferior specification to the *IBES* forecast in capturing the true earnings expectations of the market, especially in a short-returns window setting. To examine if the non-*IBES* firms are the sole cause for the results in Table 4, I run the tests again using only non-*IBES* firms. Table 5 shows the regressions of only non-*IBES* firms. This table shows no support for $H_2$, suggesting that the non-*IBES* data is not driving the results in Table 4.

While power may be the issue, I also test for outliers driving the differences in results from Tables 3 and 4. To address this issue, I winsorized the extreme 1% of each independent variable. If extreme values in the independent variables, instead of power, are driving the results then applying this correction should show more harmony between the *IBES* sample in Table 3 and the whole sample in Table 4. Table 6 shows the results of the original sample with all the data after winsorizing extreme values. Table 7 shows the winsorized results for the larger sample after relaxing the IBES constraint. The coefficient on *IMP* is now significant in the hypothesized direction for

all the model specifications supporting $H_2$. The intercept is only significant in Table 7 in the 5-day returns windows. The results of Tables 6 and 7 both show strong support for $H_2$ and the similar results between the two samples suggest that extreme observations in Tables 3 & 4 may have been driving the different results.

The short-window tests show some support for my hypotheses. One may conclude that at least part of the impairment news is new or unanticipated information. Table 8 shows the cumulative abnormal long-window returns prior to the first announcement in my sample. All of these long-window returns show significant and negative abnormal returns, which implies some or much of the impairment news may have been anticipated by the market. Table 9 shows tests of $H_1$ and $H_2$ using 3- and 12-month return windows. Both windows show support for $H_1$, suggesting a longer anticipation of the impairment that just the announcement period. While all of the coefficients are signed as hypothesized, only the 12-month window returns show a marginally significant relation of the returns with the size of the impairment. This suggests that while the market anticipates the impairment well in advance of its recognition, it may not be able to accurately predict the actual size of the impairment. It may also suggest, as in the original tests of $H_2$, that the market's view of the impairment is different from the accounting measurement.

### 5.3 Disclosure Strategy

Table 10, shows the results of the disclosure strategy tests. In these tests, I include all available firms and impairment disclosures. Panel A shows a simple model of the tests with just the indicator variable, Warn. The results in Panel A suggest marginal support for $H_3$, that firms that warn have a larger decline in stock prices over the warning and earnings announcement date than firms which release all the bad news at the announcement date. Panel B shows the full model. The Warning indicator variable again shows a significant negative coefficient supporting $H_3$. These results support the findings in Kasznik and Lev that it is better to surprise the market with all the bad news at once than release two announcements of bad news consecutively.

Looking at the differences between the Warn and NoWarn groups shows that over the 10-day window the Warn group shows a mean CAR of -9.5%, while the NoWarn group experiences a decline of -6%. This mean decline is fairly insensitive to the size of the impairment. Increasing the impairment while holding UE constant reduces the overall negative return ($\beta_3 > 0$) but only by a small margin. Using the impairment per share at the 3$^{rd}$ quartile, results in only a 0.1% increase in the CAR to 9.4%. In the main test I compute the 10(6)-day return window for the Warn firms as the combination of the 5(3)-day window around the warning and the 5(3)-day window around the earnings announcement date. Sample companies release their warnings a median of 85 days prior to the earnings announcement. For the No Warn firms, I compute a 10(6)-day window using the 5(3)-day window around the earnings announcement date and combining it with a

5(3)-day window 85 days prior to the earnings announcement. I run the same tests using a random window between 60 and 120 days prior to the earnings announcement date, and the results are similar.

## 6. SUMMARY

With the implementation of SFAS No. 142, firms no longer amortize goodwill, but instead they subject goodwill to annual impairment tests. The nature of the disclosures surrounding the implementation of SFAS No. 142 provides an opportunity for accounting researchers to examine the value relevance of goodwill amortization and goodwill impairments. The news releases about SFAS No. 142 also offer an opportunity to examine how the market reacts to disclosure strategies managers' use when releasing news of future earnings increases due to cessation of amortization as well as the future earnings decreases for goodwill impairments. This paper contributes to the goodwill and impairment literature by examining the value relevance of goodwill impairments in setting prices. This study also contributes to the disclosure strategy literature along the lines of Skinner (1994) and Kasznik and Lev (1995), by examining the potential differences in market reactions to firms who warn of impending impairments versus those who remain silent.

The results of this paper suggest, as in prior research, amortization of goodwill is not viewed as value relevant to the market. However, goodwill impairments are value relevant. These results support the FASB's new position on accounting for goodwill as a non-decaying asset and suggest the

accounting for goodwill is more in line with the market. However, even with the new standard mandating annual goodwill impairment tests, evidence suggests the returns lead the impairment news. I believe further research could address the timing of goodwill recognition across firms and the methods employed to apply the impairment tests to determine the predictability of the impairments.

Additionally, the disclosure tests suggest that firms that voluntarily warn of goodwill impairments prior to recording them in earnings have more negative returns than firms that release the goodwill impairment news at the earnings date. A difference in returns of 3.5% in a 10-day window due solely to a voluntary disclosure shows a significant penalty to firms which choose to warn of goodwill impairments. While this paper cannot measure losses in manager reputation or potential litigation costs which may offset the benefits of not disclosing the bad news, it does provide evidence that managers may minimize the negative stock price effects of bad news, at least transitory bad news, by withholding the information until the earnings are released. One area of further research may be to examine other forms of earnings news to determine how the market views warnings in other contexts.

Academic researchers helped provide evidence for the FASB's decision to eliminate amortization in issuing SFAS No. 142 (para. B10). Now its implementation provides a setting that allows research to uncover additional knowledge about the use of accounting information by market participants.

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**Table 1 – Descriptive Statistics**

**Distribution of Impairments**

| Qtr | N | Impairments | N |
|---|---|---|---|
| 1 | 172 | Initial | 915 |
| 2 | 284 | | |
| 3 | 252 | Subsequent | 145 |
| 4 | 351 | | |
| Total | 1060 | Total | 1060 |

**Variables Used in Tests**

| **Amortization Set** | | **Impairment Set** | |
|---|---|---|---|
| Variable | Mean(Median) | Variable | Mean(Median) |
| *Amt_Undeflated* | 0.44 (0.02) | *IMP_Undeflated* | 1.83 (0.06) |
| *UE_Undeflated* | -0.02 (0.01) | *UE_Undeflated* | -0.01 (0.01) |
| *AMT* | 0.04 (0.00) | *IMP* | 0.41 (0.01) |
| *UE* | -0.00 (0.00) | *UE* | -0.00 (0.00) |

This table shows some descriptive statistics of the firms in the data set. Each firm is represented only once, using the earliest date of impairment news. The first set of variables are the undeflated variables while the second group represents the mean(median) of the deflated variables as entered into the regressions.

*AMT* = Quarterly amortization expense savings from the announcement, per share
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

**Table 2 – Market Reaction to Announcement of Future Amortization Savings**

Model: $CAR_t = \alpha + \beta_1 AMT_{t+1} + \beta_2 IWARN_t + \beta_3 AMT_{t+1}*IWARN_t + \beta_4 UE_t + \varepsilon_t$

| N = 555 | Market Adjusted Returns 5-day | |
|---|---|---|
| Variable | Estimate | P-value |
| Intercept | -0.0542 | 0.0003 |
| *AMT* | 0.0245 | 0.9421 |
| *IWARN* | -0.0031 | 0.7389 |
| *AMT*IWARN* | 0.1308 | 0.7174 |
| *UE* | 0.2860 | 0.0079 |

This table shows the test of the full sample which had all available data necessary to run each test using a 5-day return window. Firm observations were lost due to lack of price, share, or earnings figures necessary to compute the independent variables. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The amortization savings per share is a positive number. *UE* is calculated as the *IBES* forecast error for the period on the announcement. Amortization Savings are projected savings for the next quarter. Revise is the forecast revision for the next quarter between the consensus forecast prior to the announcement and the first consensus in the period following the announcement. The variables in the regression are defined as follows:

*CAR* = Cumulative abnormal returns for days (-2,2) around the announcement
*AMT* = Quarterly amortization expense savings from the announcement, per share
*IWARN* = 1 if announcement warns of future impairment, 0 if no warning of impairment
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

Using value-weighted index to compute market adjusted returns yields similar results. Using 3-day return windows yields similar results.

**Table 3 – Market Reaction to Impairment News**

Panel A: $CAR_t = \alpha + \varepsilon_t$

| Market Adjusted Returns | N | Estimate | T-stat(P-value) |
|---|---|---|---|
| 3-day return equal weighted | 603 | -0.0131 | -2.75(0.006) |
| 5-day return equal weighted | 603 | -0.0191 | -3.54(0.000) |
| 3-day return value weighted | 603 | -0.0120 | -2.56(0.011) |
| 5-day return value weighted | *603* | -0.0173 | -3.23(0.001) |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 542 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0130 | 0.006 | -0.0189 | 0.001 |
| *IMP* | -0.0000 | 0.728 | -0.0001 | 0.323 |

Panel C: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 542 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0141 | 0.003 | -0.01994 | 0.000 |
| *IMP* | -0.0000 | 0.735 | -0.00009 | 0.326 |
| *UE* | 0.0573 | 0.020 | 0.05476 | 0.056 |

This table shows the test of the full sample which had all available data necessary to run each test. Firm observations were lost due to lack of price, share, or earnings figures necessary to compute the independent variables. 312 observations were lost due to incomplete *IBES* data. Additionally, 23 observations were lost due to prices being under $1 per share.. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. The variables in the regression are defined as follows:

*CAR* = Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

**Table 4– Market Reaction to Impairment News using a Larger Sample**

Panel A: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 817 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0060 | 0.1577 | -0.0148 | 0.0022 |
| *IMP* | -0.0037 | 0.0001 | -0.0040 | 0.0002 |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 817 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0038 | 0.3820 | -0.0125 | 0.0121 |
| *IMP* | -0.0037 | 0.0001 | -0.0041 | 0.0002 |
| *UE* | 0.0081 | 0.0477 | 0.0086 | 0.0602 |

This table shows the results of $H_2$ using a larger sample and a Naïve model for *UE* instead requiring *IBES* data. This adds 312 observations to the sample. 40 observations are lost due to lack of price, share, or earnings figures. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. *UE* is calculated as the change in quarterly earnings $EPS_t - EPS_{t-4}$. The variables in the regression are defined as follows:

*CAR* = Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

*** Using value-weighted index to compute market adjusted returns yields similar results.

**Table 5 – Market Reaction to Impairment News - Non-IBES firms**

Panel A: $CAR_t = \alpha + \varepsilon_t$

| Market Adjusted Returns | N | Estimate | T-stat(P-value) |
|---|---|---|---|
| 3-day return equal weighted | 312 | -0.0250 | -3.84 (0.005) |
| 5-day return equal weighted | 312 | -0.0417 | -5.63 (0.000) |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 272 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0237 | 0.0003 | -0.0403 | 0.0001 |
| *IMP* | 0.0000 | 0.9506 | -0.0000 | 0.8514 |

Panel C: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 272 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0164 | 0.0127 | -0.0358 | 0.0001 |
| *IMP* | -0.0000 | 0.7043 | -0.0001 | 0.3610 |
| *UE* | 0.0107 | 0.0290 | 0.0080 | 0.1932 |

This table shows the test of the sample which had all available data necessary to run each test, but was *not* in the*IBES* database. The purpose of this test is to see if the non-*IBES* firms are driving the results in Table 4. Firm observations were lost due to lack of price, share, or earnings figures necessary to compute the independent variables. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. UE is calculated as the change in quarterly earnings $EPS_t - EPS_{t-4}$.

*CAR* = Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

*** Using value-weighted index to compute market adjusted returns yields similar results.

**Table 6 – Market Reaction to Impairment News of Winsorized Sample**

Panel A: $CAR_t = \alpha + \varepsilon_t$

| Market Adjusted Returns | N | Estimate | T-stat(P-value) |
|---|---|---|---|
| 3-day return equal weighted | 603 | -0.0102 | -2.15 (0.032) |
| 5-day return equal weighted | 603 | -0.0168 | -3.18 (0.002) |
| 3-day return value weighted | 603 | -0.0120 | -2.56 (0.011) |
| 5-day return value weighted | *603* | -0.0173 | -3.23 (0.001) |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 542 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0048 | 0.3174 | -0.0095 | 0.0793 |
| IMP | -0.0514 | 0.0322 | -0.0666 | 0.0152 |

Panel C: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 542 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0045 | 0.3251 | -0.0093 | 0.0813 |
| IMP | -0.0495 | 0.0418 | -0.0653 | 0.0151 |
| UE | 0.1193 | 0.1757 | 0.0876 | 0.1563 |

This table shows the test of the full sample which had all available data necessary to run each test. This table uses the same data as Table 3, except that the extreme 1% tails of each independent variable is Winsorized to address potential outliers. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. The variables in the regression are defined as follows:

*CAR* = Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

**Table 7– Market Reaction to Impairment News of Winsorized Sample**

Panel A: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 817 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0039 | 0.3811 | -0.0128 | 0.0108 |
| *IMP* | -0.0157 | 0.0026 | -0.0158 | 0.0076 |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 817 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0041 | 0.3693 | -0.0127 | 0.0133 |
| *IMP* | -0.0164 | 0.0072 | -0.0156 | 0.0244 |
| *UE* | 0.0143 | 0.5418 | 0.0056 | 0.6437 |

This table shows the results of $H_2$ using a larger sample and a Naïve model for *UE* instead requiring *IBES* data and Winsorizing the independent variables at the 1% tails to address the potential for outliers. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. *UE* is calculated as the change in quarterly earnings $EPS_t - EPS_{t-4}$. The variables in the regression are defined as follows:

*CAR* = Market adjusted daily returns for the 5 days surrounding the announcement of the impairment
*IMP* = Amount of the impairment divided by the number of shares outstanding
*UE* = Forecast error, calculated as the *IBES* actual eps less the latest *IBES* eps consensus forecast

*** Using value-weighted index to compute market adjusted returns yields similar results.

**Table 8 – Anticipation of Impairment News**

| Market Adjusted Returns – Equal Weighted | | | |
|---|---|---|---|
| Window | N | Cumulative Return | P-value |
| 12-month prior | 894 | -19.86% | <.001 |
| 6-month prior | 896 | -10.78% | <.001 |
| 3-month prior | 915 | -7.15% | <.001 |
| 2-month prior | 915 | -5.29% | <.001 |
| 1-month prior | 915 | -1.93% | .010 |

| Market Adjusted Returns – Value Weighted | | | |
|---|---|---|---|
| Window | N | Cumulative Return | P-value |
| 12-month prior | 892 | -24.06% | <.001 |
| 6-month prior | 908 | -12.93% | <.001 |
| 3-month prior | 911 | -7.22% | <.001 |
| 2-month prior | 911 | -4.17% | <.001 |
| 1-month prior | 910 | -2.06% | .006 |

| Market Model Returns | | | |
|---|---|---|---|
| Window | N | Cumulative Return | P-value |
| 12-month prior | 793 | -22.81% | <.001 |
| 6-month prior | 855 | - 7.59% | <.001 |
| 3-month prior | 871 | -6.89% | .036 |
| 2-month prior | 871 | -2.65% | .082 |
| 1-month prior | 872 | -2.26% | .033 |

| Size Portfolio Returns | | | |
|---|---|---|---|
| Window | N | Cumulative Return | P-value |
| 12-month prior | 851 | -20.78% | <.001 |
| 6-month prior | 865 | -10.85% | <.001 |
| 3-month prior | 866 | -6.50% | <.001 |
| 2-month prior | 866 | -3.78% | <.001 |
| 1-month prior | 865 | -1.91% | .015 |

This table measures the extent to which the impairment announcement may be predicted by prior returns. The windows are calculated back from the first announcement date of the impairment. The return window is the month prior to the announcement (i.e. A June 2002 announcement, the one month return would be calculated as the May return period, the 2 month return would be April-May cumulative returns, etc.). The abnormal return in the first panel is the cumulative return minus the cumulative return of the equally-weighted market portfolio for the same period. The subsequent panels define the cumulative return using a value-weighted portfolio, the market-model, and a market portfolio using size deciles.

## Table 9 – Anticipation of Impairment News – Long-window Tests

Panel A: $CAR_t = \alpha + \varepsilon_t$

| Market Adjusted Returns | N | Estimate | T-stat(P-value) |
|---|---|---|---|
| 3-month return equal weighted | 525 | -0.1126 | -2.05 (0.041) |
| 12-month return equal weighted | *525* | -0.5008 | -3.61 (0.000) |

Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \varepsilon_t$

| N = 525 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-month | | 12-month | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.1125 | 0.0412 | -0.2939 | 0.0346 |
| IMP | -0.0003 | 0.6131 | -0.0028 | 0.0624 |

Panel C: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 UE_t + \varepsilon_t$

| N = 525 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-month | | 12-month | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0118 | 0.0355 | -0.2809 | 0.0458 |
| IMP | -0.0003 | 0.6138 | -0.0028 | 0.0663 |
| UE | -0.0440 | 0.5952 | 0.1290 | 0.5288 |

This table shows the test of the full sample which had all available data necessary to run each test using 3- and 12-month return windows. Firm observations were lost due to lack of price, share, or earnings figures necessary to compute the independent variables. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. UE is calculated as the change in quarterly earnings $EPS_t - EPS_{t-4}$.

*** Using value-weighted index to compute market adjusted returns yields similar results.

## Table 10– Tests of Total returns of Warning and No Warning Firms

| Panel A: $CAR_t = \alpha + \beta_1 IWARN_t + \varepsilon_t$ | | | | |
|---|---|---|---|---|
| N = 963 | Market Adjusted Returns | | | |
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0470 | 0.0001 | -0.0675 | 0.0001 |
| IWARN | -0.0192 | 0.0760 | -0.0244 | 0.0483 |

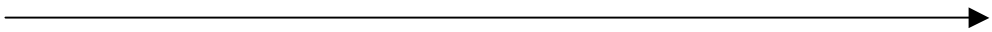
Panel B: $CAR_t = \alpha + \beta_1 IMP_t + \beta_2 IWARN + B_3 IWARN*IMP_t + \beta_4 UE_t + \beta_5 IWARN*UE_t + \varepsilon_t$

| N = 702 | Market Adjusted Returns | | | |
|---|---|---|---|---|
| | 3-day | | 5-day | |
| Variable | Estimate | P-value | Estimate | P-value |
| Intercept | -0.0516 | 0.0005 | -0.0608 | 0.0004 |
| IMP | -0.0000 | 0.7442 | -0.0000 | 0.7776 |
| IWARN | -0.0249 | 0.0488 | -0.0349 | 0.0156 |
| IWARN*IMP | 0.0003 | 0.1587 | 0.0004 | 0.0682 |
| UE | 0.0126 | 0.2396 | 0.0221 | 0.0638 |
| IWARN*UE | 0.2023 | 0.1251 | 0.1704 | 0.3269 |

This table shows the test of the sample which had all available data necessary to run each test. Firm observations were lost due to lack of price, share, or earnings figures necessary to compute the independent variables. The returns variable is two 3- or 5-day CAR windows around the warning disclosure and the earnings release date. In the No Warn firms a 3- or 5-day dummy CAR is computed in a window around median (85) days prior to the announcement date. This is the median length of the impairment warning for WARN firms. Using a random CAR in the 60 to 120 days prior to the announcement date yields similar results. Each independent variable is entered into the regression on a per share basis and deflated by price at the beginning of the returns period. The impairment per share is coded as a positive number so that the negative coefficient implies a negative relation of impairment size to returns. UE is calculated as the forecast error from the *IBES* actual eps minus the latest *IBES* consensus forecast.

*** Using value-weighted index to compute market adjusted returns yields similar results.

**Figure 1**- Timeline of Events and Types of Possible Disclosures



| June 1, 2001 | 3/2001[A] – 12/2001 | 6/2001 – 9/2002 | 8/2001 – 12/2002 |
|---|---|---|---|
| SFAS 142 Enacted | Adoption of SFAS 142. Firms could:<br><br>**D (Disclose)**<br>Discussion of change from Amortization to Impairment testing. | Assess Goodwill impairment. If impaired, firms can:<br><br>**W (Warn)**<br>Warning of coming Impairment charge. | Earnings Release can include:<br><br>**I (Impairment)**<br>Earnings announced with impairment of Goodwill. |
| | **DG (Disclose Good news)**<br>Discussion with favorable mention of increase in earnings due savings from no longer Amortizing Goodwill. No mention of impairment. | **NW (No Warning)**<br>Impairment exists but firm chooses not to warn. No press release is given until the impairment is recognized for these firms. | **NI (No Impairment)**<br>Earnings announced. No goodwill impairment exists. |
| | **DN (Disclose Nothing)**<br>No disclosure of SFAS 142 impact. | | |

6 Potential combinations exist in my sample. The *NI*(No impairment) group is not part of my sample only the Impairment (*I*) firms. There are four potential disclosure paths for Impairment firms:

*I* – (*W* or *NW*) – (*D* or *GD*)

An *I* firm can use either disclosure strategy of *W* or *NW* prior to releasing the impairment news. This difference is the basis of the Disclosure strategy test in my proposal. All of the *I* firms are used in the impairment hypothesis tests.

Additionally, the choice to warn or not warn of the impending goodwill is independent of the disclosure upon adopting SFAS No. 142. Firms with goodwill were required to address the impact of the new standard in some way so no I firm can have no disclosure addressing the impact of adoption. However, they may have disclosed only the amortization saving without mention of the impairment testing, or they could have issued the amortization savings and explained the new method of impairment testing as well.

[A]Firms were required to adopt for fiscal years after 12/15/2001, but could adopt as early a 3/15/2001 fiscal year. After adopting the statement, firms began to apply the transitional impairment tests to their existing goodwill. These tests could result in the firm choosing to warn of a coming impairment charge. The range of the warnings is considerable due to the fact that FASB gave firms up to six months after adopting SFAS No. 142 to complete the transitional impairment test.

**Figure 2–** Example of Amortization Disclosure

The following is an excerpt from AOL Time Warner's 10-Q dated 8-14-2001:

Accounting for Business Combinations

In July 2001, the FASB issued Statements of Financial Accounting Standards No. 141, "Business Combinations" ("FAS 141") and No. 142, "Goodwill and Other Intangible Assets" ("FAS 142"). These standards change the accounting for business combinations by, among other things, prohibiting the prospective use of pooling-of-interests accounting and requiring companies to stop amortizing goodwill and certain intangible assets with an indefinite useful life created by business combinations accounted for using the purchase method of accounting. Instead, goodwill and intangible assets deemed to have an indefinite useful life will be subject to an annual review for impairment. The new standards generally will be effective for AOL Time Warner in the first quarter of 2002 and for purchase business combinations consummated after June 30, 2001. AOL Time Warner is in the process of quantifying the anticipated impact of adopting the provisions of FAS 142, which is expected to be significant.

Upon adoption, AOL Time Warner will stop amortizing goodwill, including goodwill included in the carrying value of certain investments accounted for under the equity method of accounting. Based on the current levels of goodwill, this would reduce amortization expense and, with respect to equity investees, it would reduce other expense, net, by approximately $5.3 billion and $600 million, respectively. Because goodwill amortization is nondeductible for tax purposes, the impact of stopping goodwill amortization and the amortization of goodwill included in the carrying value of equity investees would be to increase AOL Time Warner's annual net income by approximately $5.9 billion. In addition, AOL Time Warner is in the process of evaluating certain intangible assets to determine whether they are deemed to have an indefinite useful life. As a result of this process, AOL Time Warner may stop amortizing an additional $25 billion to $40 billion of intangible assets. This could result in an additional reduction of pretax amortization of approximately $1.0 billion to $1.5 billion, which will have a corresponding after-tax increase in AOL Time Warner's net income of $600 million to $900 million.

**Appendix**: Discussion of SFAS No. 142

SFAS No. 142 supercedes previous standards pertaining to the accounting for goodwill and other intangible assets. Previous standards required intangible assets to be amortized for a period no longer than 40 years and were subject to periodic impairment tests. In general, impairment tests were not performed unless the company had become aware of a possible impairment existing in their goodwill (usually through a sustained decline in stock price).

SFAS No. 142 requires that firms no longer amortize goodwill or indefinite-life intangibles, but instead subject them to *annual* impairment tests. Firms must group goodwill and intangibles into reportable segments, regardless of the transaction which gave rise to the assets. Each of these segments is annually valued and compared to reported book values to determine if an impairment may exist. If the book value of the segment is greater than the market value, then the book value of goodwill is compared to the market value of the goodwill (present value of expected future cash flows) to determine the size of the impairment. SFAS No. 142 also requires additional disclosures regarding the changes in values of goodwill across reportable segments, as well as estimates of future amortization charges for the next 5 years.

SFAS No. 142 became effective as of June 1, 2001. FASB required adoption of SFAS No. 142 for fiscal years beginning after December 15, 2001. Firms will fiscal years beginning after March 15, 2001 could choose to adopt the statement earlier. In the initial transition from amortization to annual impairment testing, firms are required to complete a transitional impairment test, of goodwill existing prior to adoption, within 6 months of adopting SFAS No. 142. Any impairment charge recorded in the transitional analysis is recorded as a Cumulative Effect of Accounting Change. Impairments arising from the annual impairment tests are recorded in ordinary income. The Cumulative Effect of Accounting Change is applied to the 1$^{st}$ quarter earnings; however, the actual impairment may not be recorded until as late as the 3$^{rd}$ quarter of the fiscal year. The news releases in my data set will correctly identify the period of the impairment being recorded, but the *Compustat* database records these charges retroactively in the first quarter