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Accounting For Negative Goodwill
Arising from Business Combinations

By
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A thesis submitted to the faculty of the University of
Mississippi in partial fulfillment of the requirements of
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Abstract

The purpose of this study is to determine both the long-term and short-term effects of negative goodwill- the result of acquiring a company for less than its fair value- upon the acquiring company in a business combination. The researcher hypothesizes that while the new accounting standard of SFAS 141R will make acquiring companies more attractive to stakeholders in the year of acquisition, the long term effects of acquiring negative goodwill will be detrimental to the company's long-term success, as there has to be some reason that a company would be sold for less than it is worth.

The study takes into account the short-term effects of a new accounting standard and also examines long-term company performance in trying to determine whether a company that acquires negative goodwill is likely to perform poorly on a long-term basis. The research is done by obtaining year-end financial reports for selected companies that have engaged in transactions involving negative goodwill and calculating their financial ratios in order to analyze their performance. The financial ratios, which are tools commonly used in evaluating a company's performance, are calculated for both the old accounting standard as well as the new standard in order to determine

the effects of the new standard. The long-term effects of negative goodwill are studied by researching the return performance of some of the purchasing companies' stocks, assuming that the theory of semistrong market efficiency is true. The research hypothesizes that the information about the companies that is made publicly available, such as the existence of negative goodwill, will have an effect on the performance of the companies' stocks. This idea that the publicly available information regarding the company will affect its stocks is the central idea behind the semistrong market efficiency.

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Introduction

In the corporate environment, there exist many cases in which whole companies are purchased for amounts greater than the market value of the net assets owned by the purchased company. When such a transaction occurs, the excess of the purchase price over the market value of the purchased company's assets is known as "goodwill." The accounting treatment for goodwill is a heavily debated topic. Of all of the accounting issues needing to be resolved, this one "is the most controversial issue" (Swanson, et al 131). While goodwill is usually positive, there does exist negative goodwill, which occurs when a whole company is acquired for less than its fair value.

This study hypothesizes that a recently implemented standard for negative goodwill accounting in the United States will inflate companies' perceived performance during the year of acquisition by improving many of their financial ratios, which are calculated using the financial data available on the companies' financial reports. The companies will be reporting larger amounts of assets as well as higher profits in the year that negative goodwill is acquired, and they will be more attractive to stakeholders like creditors and potential investors because

of the lower cost of capital. This change will be a challenge to the traditional accounting principal of conservatism, because it will force companies to report higher income.

The study further hypothesizes that this inflation of company performance will hurt the company in the years subsequent to acquisition. This hypothesis is tested through analysis of the companies' stock returns using information from the Center for Research in Security Prices database. Assuming that a form of semistrong market efficiency exists, meaning that a company's publicly-available information is reflected in its stock performance, a trend in the stock returns of the companies studied should give an indication of the effects of negative goodwill upon the companies. While the study shows that the financial ratios are improved for the year of acquisition, it is unable to show that negative goodwill has a long-term effect on company performance.

Accounting for Goodwill

A company's fair value is calculated by first determining the company's total assets, which are items that can be converted into cash. Next, the total liabilities, or claims against the company, are computed.

The difference in the assets of the company over its liabilities is the fair value of the company's net assets. The difference in the net assets' value and the purchase price of the company is the amount of goodwill or negative goodwill.

The treatment of "negative goodwill" is an issue for which U. S. Generally Accepted Accounting Principles (GAAP) and international accounting standards have differed greatly in the past. In situations where negative goodwill is generated in a bargain purchase, a purchase for less than the company's fair value, the two different accounting standard-setters have chosen to take very different courses of action.

International Standards Before 2004

Under International Accounting Standard (IAS) 22, accounting for negative goodwill before 2004 included a very specific set of steps that were followed. All assets and liabilities were reviewed to ensure that they were recorded correctly and that no clerical or recording errors were made. If negative goodwill still existed, the purchased company had to "identify all intangible assets whose value was determined on a basis other than by reference to an active market" (Bloomer 316). The value of

these assets was reduced by the amount of negative goodwill in order to reduce negative goodwill. If negative goodwill existed after the assets were reduced to zero, a liability was established so that the gains from the negative goodwill could be recognized over future periods. Any remaining negative goodwill was "recognized in income over the remaining weighted-average useful life of the identifiable acquired depreciable and amortizable assets" (Bloomer 316).

International Standards Since 2004

In recent years, International Standards have gained a much broader scope and are being used by many countries, including those in the European Union. The standards are now governed by International Financial Reporting Standards (IFRS). In 2004, IFRS 3 was approved, and the international method of accounting for negative goodwill changed. IFRS 3 requires that before negative goodwill can be accounted for, the company must first reassess the values of all of its assets and liabilities as well as the cost of the business combination to ensure that no errors were made at the beginning of the process.

Once these values have been verified and there still exists some negative goodwill, the company does not reduce

the value of any assets. It instead recognizes the value of the remaining negative goodwill immediately as a profit.

Much of the reasoning for this method of accounting for negative goodwill is explained in *Wiley IFRS 2007*. This book says that "since arm's-length business acquisition transactions will usually favor neither party, the likelihood of the acquirer obtaining a bargain is considered remote" (Epstein 413). According to IFRS 3, the most likely source of what is considered negative goodwill is usually "measurement error (i.e., where the fair values assigned to assets were incorrect to some extent) or the failure to recognize a contingent or actual liability (such as for employee severance payments)" (Epstein 413).

U.S. Standards Before 2001

U. S. Standards prior to 2001 treated negative goodwill under APB Opinion 16 much differently than did International Standards:

Opinion 16 appears to more closely align its accounting to the notion that assets cannot be valued fairly if their purchase price is less than their purported value. Opinion 16 requires that the values assigned to noncurrent assets (except long-term investments in marketable securities) be reduced proportionately by the amount of negative goodwill in determining their respective fair values (Bloomer 317).

If there was any excess negative goodwill, it was recognized as a deferred credit that was amortized for no more than 40 years.

U.S. Standards from 2001-2007

In 2001, the Financial Accounting Standards Board(FASB), the governing body for accounting standards in the United States, passed Statement of Financial Accounting Standards(SFAS) 141, which was the standard that dictated the accounting procedures for business combinations. Negative goodwill was defined as "the amount by which the sum of the fair values of the assets acquired less liabilities assumed exceeds the acquisition cost. Negative goodwill may only arise in a business combination"(KPMG 162).

Under SFAS 141, negative goodwill was to be eliminated from the financial statements. The first step in eliminating negative goodwill was to recognize the part of the negative goodwill that was to be used as a contingent consideration. "That is, a combination that might result in the acquiring enterprise recognizing additional purchase price in a future period"(KPMG 162-3). This portion of negative goodwill was considered a liability to reduce the balance of negative goodwill.

Any additional negative goodwill was then allocated to reduce the value of the assets of the acquired company, but no asset could be reduced to a value lower than zero. Some assets were not reduced in this process, though, because "they are viewed as having a more reliably determinable fair value, and so a lower risk of measurement error" (KPMG 163). Any additional negative goodwill that remained after this process was considered an extraordinary gain for the year of acquisition.

Convergence of U.S. and International Standards

In 2007 the FASB approved SFAS 141R. This new standard makes the process for negative goodwill accounting in the United States more like that of IFRS 3. Under SFAS 141R, all negative goodwill is immediately recognized as an extraordinary gain. The new standard was effective beginning December 15, 2008.

One reason for the movement to the new standard is that it allows for the assets of a company to be reported at fair value rather than being proportionately reduced by the amount of negative goodwill. There are also proponents of the new standard who believe that SFAS 141 was too conservative in its valuation of companies' assets.

There existed valid arguments in favor of keeping SFAS 141 as well. The old standard reduced the chance that the acquired company's assets would be overvalued in the financial statements. It also decreased the amount of gains reported, a feature which made the standard more conservative.

The Principle of Conservatism

Conservatism, one of the key principles of accounting, "is defined as the differential verifiability required for recognition of profits versus losses. In its extreme form the definition incorporates the traditional conservatism adage: 'anticipate no profit, but anticipate all losses.'" (Watts 207). Conservatism is using "accounting methods and estimates that keep the book values of net assets relatively low" (Penman 238). Conservatism does not, however, require that "all revenue cash flows should be received before profits are recognized" (Watts 208). Thus, there is a delicate balance between being conservative and understating assets and income. This balance is an issue in the debate over the acceptance of SFAS 141R.

Three possible explanations of conservatism are "(1) investors have asymmetric loss functions; (2) conservative claims of management may be more easily verified than

optimistic claims; and (3) managers may optimistically bias their reports, leading auditors to compensate by being conservative" (Kwon et al. 30). There may exist more reasons why accountants tend to be conservative, but the reasons above will suffice for the purposes of this paper.

Opponents of SFAS 141R have argued that, because potentially overstated assets are not reduced and an extraordinary gain is reported under the new standard, it violates the longstanding constraint of conservatism. Proponents of the standard note that assets are valued at their fair values under SFAS 141R and that the reduction of their values in accordance with SFAS 141 understates the value of the assets. They argue that SFAS 141 "is accounting conservatism carried too far" (Comiskey et al., 19). While SFAS 141 did report lower assets and income, it may not have accomplished the true goals of conservatism by being too conservative.

The new guidelines set forth in SFAS 141R are expected to bring about many changes in financial reporting. "There will no longer be initial (negative goodwill) and residual (negative goodwill) but only (negative goodwill)" (19). "The new policy has important implications for financial analysis, as assets, shareholders' equity, and net income will be reported at higher amounts" (19).

The Impact of SFAS 141R on Financial Ratios

This research analyzes information from financial statements that have been submitted to the Securities Exchange Commission (SEC) by companies that have been involved in acquisitions containing negative goodwill. The statements, which were submitted under the standard of SFAS 141, are re-cast to conform to SFAS 141R in an attempt to understand what impact SFAS 141R will have on financial reporting in the United States. The study analyzes the impact that the standard change has upon financial ratios. The author believes that the change from SFAS 141 to SFAS 141R will significantly improve the financial ratios of the consolidated entity in the first year of consolidation.

Financial ratios are common tools used by creditors, investors, and other stakeholders. "Analysts and other interested parties can gather qualitative information from financial statements by examining relationships between items on the statements and identifying trends in these relationships" (Kieso, et al. 200)

Some of the financial ratios commonly used to evaluate a company's performance are Return on Investment (Net Income/Total Assets), Debt Ratio (Total Liabilities/Total Assets), Asset Turnover (Sales/Average Assets), and Profit

Margin(Net Income/Sales). Each of these ratios has the potential to be significantly affected by the required change in accounting for negative goodwill under SFAS 141R. The change will increase the acquiring companies' reported noncurrent assets, net incomes, and stockholders' equity.

Return on Investment (ROI) is a ratio used to determine how much profit a company is making relative to the amount of assets that it owns. A company with a very low ROI relative to similar companies is obviously not using its assets in the best possible manner, because it is not making much money on those assets. A company with a high ROI has used its assets efficiently in making a profit.

The Debt Ratio is used to determine the percentage of company assets that have been contributed by creditors as opposed to investors. This ratio is useful for knowing the amount of assets for which the company still owes money. Knowing how many of its assets a company has paid for and how many it has bought through issuing debt that it still owes can be very useful information for stakeholders.

Asset Turnover quantifies a company's ability to use its assets in making sales. It is much like the ROI in that a relatively low Asset Turnover ratio means that a company is not using its assets well while a high Asset

Turnover means that the company has made wise decisions in purchasing assets.

Profit Margin is the amount of net income that is being earned as a percentage of a company's revenue. A low Profit Margin Ratio means that a company is selling products or services that have high costs relative to their selling prices, while a high profit margin means that costs are relatively low. This ratio requires industry knowledge in order to be useful, as different industries have different acceptable ranges for profit margins.

Example

For example, Company A acquires Company B by paying \$775,000 to buy all of the outstanding stock of company B. Company B has net assets valued at \$1,000,000. As a result, \$225,000 of negative goodwill arises. Balance sheet information for Company A and Company B for the year of acquisition is presented in columns one and two of Figure 1 on the next page. These numbers represent year-end information for the companies after the acquisition has taken place. Company B's assets and stockholders' equity are shown at historical cost, or the cost that they would have had recorded at the time of acquisition. The last two

columns show the amount of total entity assets under SFAS 141 and SFAS 141R, respectively.

Under SFAS 141, the amount of noncurrent assets has been reduced by the amount of negative goodwill. Under SFAS 141R, the noncurrent assets will be valued at \$3,700,000 and the consolidated entity will report an extraordinary gain of \$225,000. While this example does not take into account the effect of income taxes on the financial statements, it is a good starting point in understanding the effects of the changes in accounting for negative goodwill.

Figure 1. Example of Negative Goodwill Acquisition

	Company A	Company B	Consolidated Entity (SFAS 141)	Consolidated Entity (SFAS 141R)
Current Assets	1,000,000	300,000	1,300,000	1,300,000
Noncurrent Assets	3,000,000	700,000	3,475,000	3,700,000
Total Assets	4,000,000	1,000,000	4,775,000	5,000,000
Current Liabilities	750,000	150,000	900,000	900,000
LT Liabilities	1,500,000	300,000	1,800,000	1,800,000
Total Liabilities	2,250,000	450,000	2,700,000	2,700,000
Owner Equity	1,750,000	550,000	2,075,000	2,300,000
Total Liabilities + Owner Equity	4,000,000	1,000,000	4,775,000	5,000,000
Sales	3,000,000	800,000	3,800,000	3,800,000
Net Income	1,000,000	200,000	1,200,000	1,425,000

The impact upon the financial ratios of the company must now be determined. Figure 2 shows the ratios for Company A before it acquires Company B for the consolidated entity under SFAS 141, and for the consolidated entity under SFAS 141R.

Figure 2. Financial Ratios for Example Company Before Consolidation, Under SFAS 141 and SFAS 141R After Acquisition

Ratios	Company A	Entity- SFAS 141	Entity- SFAS 141R
ROI (Net Income/Average Total Assets)	0.2500	0.2513	0.2850
Debt Ratio (Total Liabilities/Total Assets)	0.5625	0.5654	0.5400
Asset Turnover (Sales/Average Assets)	0.7500	0.7958	0.7600
Profit Margin (Net Income/Sales)	0.3333	0.3158	0.3750

SFAS 141R not only increases the amount of reported assets, but it also increases the company's income by creating a gain.

In Figure 2, Return on Investment is increased from 0.2513 to 0.2850 when the financial statements are switched from following SFAS 141 to SFAS 141R, a change of 13.4%. This change occurs because, as the Net Income and Total Assets both increase by the amount of negative goodwill, Net Income becomes a larger percentage of Total Assets. This change works to the company's advantage, as it appears to be utilizing its assets more efficiently.

The Debt Ratio also shows a change that appears to be advantageous when SFAS 141R is used in place of SFAS 141, as it decreases by 4.5%. This change means that the company will have more assets available after it pays off

its debts under SFAS 141R than it would have had under SFAS 141.

Asset Turnover, however, decreases by 4.5% when the statement follow SFAS 141R instead of SFAS 141. Because the amount of reported assets increases while sales remain the same, the company appears to have generated less revenue based on the amount of assets that it possesses.

SFAS 141R creates a large change in the example company's profit margin. The profit margin increases by 18.7%. This difference will be very attractive to potential creditors and investors as well as company management and other users of the financial statements.

Methodology

The research for this paper is done by obtaining financial statements found in 10-K forms submitted to the SEC by publicly traded companies that have been involved in business combinations in which negative goodwill was incurred. These companies' financial data were used to calculate their financial ratios in an attempt to show the effects of SFAS 141R during the first year of acquisition. The companies used are:

Elephant Talk Communications
National Coal Corp
China America Holdings, Inc.

NewMarket Technology, Inc.
International Wire Group, Inc.
Biophan Technologies, Inc.
Smithfield Foods, Inc.

A second group of companies, which had experienced negative goodwill acquisitions in prior years, was used to study the long-term effects of negative goodwill. The companies used for this portion of the study are:

Burger King Holdings, Inc.
ViaCell, Inc.
Cogent Communications Group, Inc.
Oplink Communications, Inc.
INXX
Terabeam, Inc.
First Banks, Inc.
Sequa Corp DE

The performance of these companies' stocks is analyzed over a period of multiple years to try to determine whether the acquisition of negative goodwill did have a negative impact on the companies.

The financial statements of the companies that experienced negative goodwill within the last year are recast to conform to SFAS 141R, much like the example company. Many of the financial ratios changed, some of them by large percentages. One such ratio is Return on Investment, as is shown in Figure 3.

Figure 3. Change in Return on Investment (ROI) Under SFAS 141R

Company	ROI Under SFAS 141	ROI Under SFAS 141R	% Change in ROI
Elephant Talk Communications	-0.4900	-0.4367	10.9
National Coal Corp	-0.1522	-0.1090	28.4
China America Holdings Inc.	-0.0992	-0.0966	2.6
NewMarket Technology, Inc.	0.0979	0.1116	14.0
International Wire Group, Inc.	0.0430	0.0430	<0.1
Biophan Technologies, Inc.	-0.1930	-0.0152	92.1
Smithfield Foods, Inc.	0.0145	0.0255	75.9

The change in ROI resulting from switching to SFAS 141R seems to benefit all of the companies documented here. In Biophan Technologies' case, the change in accounting standard almost erased the company's net loss and recorded a gain for the year of acquisition. Thus, for Biophan, the negative ROI almost became positive.

The change in principle affected the Debt Ratio as well, although not as drastically. The Debt Ratio was less under SFAS 141R than under SFAS 141 in each case, although the percentage of change was relatively small. The results are shown in Figure 4 below.

Figure 4. Change in Debt Ratio Under SFAS 141R

Company	Debt Ratio Under SFAS 141	Debt Ratio Under SFAS 141R	% Change in Debt Ratio
Elephant Talk Communications	1.3853	1.3358	-3.6
National Coal Corp	0.9438	0.9084	-3.8
China America Holdings Inc.	0.2708	0.2701	-0.3
NewMarket Technology, Inc.	0.1988	0.1958	-1.5
International Wire Group, Inc.	0.4938	0.4938	>-0.1
Biophan Technologies, Inc.	0.1679	0.1429	-14.9
Smithfield Foods, Inc.	0.6544	0.6471	-1.1

The Asset Turnover was the only one of the tested ratios that was affected in an unfavorable manner by the switch from SFAS 141 to SFAS 141R. The reported assets increased while revenues remained the same, making it appear that the company was making less efficient use of its assets. The results can be seen in Figure 5 on the next page.

Figure 5. Change in Asset Turnover Under SFAS 141R

Company	Asset Turnover Under SFAS 141	Asset Turnover Under SFAS 141R	% Change in Asset Turnover
Elephant Talk Communications	2.4729	2.4154	-2.3
National Coal Corp	0.7270	0.7087	-2.5
China America Holdings Inc.	2.8339	2.8273	-0.2
NewMarket Technology, Inc.	1.3334	1.3224	-0.8
International Wire Group, Inc.	1.9627	1.9627	>-0.1
Biophan Technologies, Inc.	0.4194	0.3868	-7.8
Smithfield Foods, Inc.	1.4335	1.4246	-0.6

The Profit Margin Ratio saw some very large increases when the financial information was restated to conform to SFAS 141R. The extraordinary gain that resulted from the negative goodwill caused Net Income to increase while Sales did not change, causing the ratio to improve.

Figure 6. Change in Profit Margin Ratio Under SFAS 141R

Company	Profit Margin Under SFAS 141	Profit Margin Under SFAS 141R	% Change in Profit Margin
Elephant Talk Communications	-0.2546	-0.2353	7.6
National Coal Corp	-0.2777	-0.2065	25.6
China America Holdings Inc.	-0.0687	-0.0670	2.5
NewMarket Technology, Inc.	0.0789	0.0914	15.8
International Wire Group, Inc.	0.0217	0.0217	<0.1
Biophan Technologies, Inc.	-0.4431	-0.0411	90.1
Smithfield Foods, Inc.	0.0114	0.0201	76.3

While all of the companies' ratios changed in the same direction when changed from SFAS 141 to SFAS 141R, the same cannot be said for the change of the ratios from the year before the acquisition to the year that the acquisition occurred. Figure 7 shows the changes that occurred in company ratios from the year before acquisition to the year of acquisition under SFAS 141R.

Figure 7. Directional Change in Financial Ratios From Before Acquisition to Consolidated Entity Under SFAS 141R

Company	ROI	Debt Ratio	Asset Turnover	Profit Margin
Elephant Talk Communications	U	U	F	F
National Coal Corp	F	F	U	F
China America Holdings Inc.	F	F	F	F
NewMarket Technology, Inc.	F	F	U	F
International Wire Group, Inc.	F	F	U	F
Biophan Technologies, Inc.	F	F	F	F
Smithfield Foods, Inc.	F	F	U	F

U=Unfavorable F=Favorable

All of the companies studied showed an increase in their Return on Investment with the exception of Elephant Talk Communications. They all showed a decrease in Debt Ratio with the exception of Elephant Talk as well. The companies' Asset Turnover Ratios were more varied. Three of the seven companies showed an increased Asset Turnover, and all of the companies reported an increased Profit Margin.

A majority of the companies show favorable changes in ratios by acquiring companies in a bargain purchase.

Increased ROI and decreased Debt Ratios seem to work in the

companies' favor. But why would a company like Elephant Talk acquire a company generating negative goodwill when it reduces ROI and increases the Debt Ratio? Management must have seen an advantage in acquiring the company that cannot be explained by the ratios used in this study. There also exists the possibility that there were other influences on the ratios that were not affected by the generation of negative goodwill. The acquisition of the subsidiary could have prevented the ratios from being any worse than they were.

Figures 8 through 11 show the percentages by which the companies' financial ratios changed from pre-acquisition to the consolidated entity under SFAS 141R.

Figure 8. Percentage Change in ROI from Pre-Acquisition to Consolidated Entity Under SFAS 141R

Company	ROI Before Acquisition	ROI Under SFAS 141R	% Change in ROI
Elephant Talk Communications	-0.2125	-0.4367	-105.5
National Coal Corp	-0.2724	-0.1090	60.0
China America Holdings Inc.	-16.8759	-0.0966	99.5
NewMarket Technology, Inc.	0.0912	0.1116	22.4
International Wire Group, Inc.	0.0266	0.0430	61.7
Biophan Technologies, Inc.	-0.6133	-0.0152	97.5
Smithfield Foods, Inc.	0.0239	0.0255	6.7

While the ROI (Figure 8) for Elephant Talk has decreased by over 100 percent, the other companies all showed greatly improved ratios. The ROI for China America Holdings and Biophan Technologies nearly doubled as a result of the acquisitions that generated negative goodwill.

Figure 9. Percentage Change in Debt Ratio from Pre-Acquisition to Consolidated Entity Under SFAS 141R

Company	Debt Ratio Before Acquisition	Debt Ratio Under SFAS 141R	% Change in Debt Ratio
Elephant Talk Communications	0.9371	1.3358	42.6
National Coal Corp	1.0224	0.9084	-11.2
China America Holdings Inc.	0.5736	0.2701	-52.9
NewMarket Technology, Inc.	0.2812	0.1958	-30.4
International Wire Group, Inc.	0.5440	0.4938	-9.2
Biophan Technologies, Inc.	0.6564	0.1429	-78.2
Smithfield Foods, Inc.	0.6764	0.6471	-4.3

Many of the companies showed a drastic change in Debt Ratio from the acquisition of a subsidiary that generated negative goodwill. For most of the companies, the Debt Ratio decreased, showing a favorable change.

Figure 10. Percentage Change in Asset Turnover from Pre-Acquisition to Consolidated Entity Under SFAS 141R

Company	Asset Turnover Before Acquisition	Asset Turnover Under SFAS 141R	% Change in Asset Turnover
Elephant Talk Communications	0.0116	2.4154	207.2
National Coal Corp	0.9923	0.7087	-28.6
China America Holdings Inc.	0.3666	2.8273	671.2
NewMarket Technology, Inc.	1.3375	1.3224	-1.1
International Wire Group, Inc.	2.0126	1.9627	-2.5
Biophan Technologies, Inc.	0.0348	0.3868	1,011.5
Smithfield Foods, Inc.	1.4304	1.4246	-0.04

The change in Asset Turnover (Figure 10) was the most varied of the ratios studied. Some of the companies showed very large increases in Asset Turnover, while others showed a much smaller decrease. There must have been some other influences on the financial ratios than those that can be attributed to the creation of negative goodwill.

Figure 11. Percentage Change in Profit Margin Ratio from Pre-Acquisition to Consolidated Entity Under SFAS 141R

Company	Profit Margin Before Acquisition	Profit Margin Under SFAS 141R	% Change in Profit Margin
Elephant Talk Communications	-18.3816	-0.2353	98.7
National Coal Corp	-0.2676	-0.2065	22.8
China America Holdings Inc.	-46.0377	-0.0670	99.9
NewMarket Technology, Inc.	0.0758	0.0914	20.6
International Wire Group, Inc.	0.0134	0.0217	61.9
Biophan Technologies, Inc.	-17.9099	-0.0411	99.8
Smithfield Foods, Inc.	0.0178	0.0201	12.9

Finally, the Profit Margins (Figure 11) increased for all of the companies. The acquisition of negative goodwill increases net income in the year of acquisition with the generation of an extraordinary gain, which increases the numerator in the Profit Margin ratio.

Long-Term Effects

Now that it has been established that SFAS 141R allows companies to buy better financial ratios and record higher income for the year of acquisition, the question arises as to the long term effects of purchasing a company for less than its fair value. Specifically, is the purchase of

negative goodwill beneficial to companies in the years following the acquisition? The following tables show financial ratios that have been calculated based on the financial statements of companies involved in negative goodwill acquisitions for the two years following the acquisition. The direction of change, positive or negative, is also shown in the tables. Some of the cells are blank because the company did not file a 10-K for that year.

Figure 12. ROI for years following acquisition

Company	ROI- Year of Acquisition	Change	ROI- Year After Acquisition	Change	ROI- 2 Years After Acquisition
Burger King	0.016	+	0.058	+	.0707
ViaCell	(0.1558)	-	(0.2558)		
Cogent	(0.1922)	+	(0.1596)	+	(0.0681)
Oplink	(0.0183)	+	0.0490		
INYX	(0.3365)				
Terabeam	(0.1493)	-	(0.4644)	-	(0.5236)
First Banks	0.0105	+	0.0109	-	0.0052
Sequa	0.0130	+	0.0323		

Figure 12 shows that the companies studied have generally shown an improved ROI following the acquisition of a

business unit that generated negative goodwill, meaning that they seem to be using their assets in a more efficient manner than they previously were. A few of the companies did show ROIs that were worse.

Figure 13. Debt Ratio for the years following acquisition

Company	Debt Ratio- Year of Acquisition	Change	Debt Ratio- Year After Acquisition	Change	Debt Ratio 2 Years After Acquisition
Burger King	0.778	+	0.7155	+	.6855
ViaCell	0.4056	-	0.5343		
Cogent	0.3710	+	0.3599	-	0.6951
Oplink	0.0811	+	0.1134		
INXX	1.3299				
Terabeam	0.2948	-	0.3818	-	0.5238
First Banks	0.9253	+	0.9207	+	0.9199
Sequa	0.6827	+	0.6333		

The Debt Ratios (Figure 13) also generally improved in the years following acquisition. This means that the companies are having to use less debt to finance their assets. Some of the same companies whose ROIs were worse also had debt ratios that did not improve.

Figure 14. Asset Turnover in the years following acquisition

Company	Asset Turnover- Year of Acquisition	Change	Asset Turnover- Year After Acquisition	Change	Asset Turnover- 2 Years After Acquisition
Burger King	0.7765	+	0.8814	+	.9435
ViaCell	0.5723	+	0.6167		
Cogent	0.3705	+	0.4332	+	0.4687
Oplink	0.3546	+	0.5533		
INXX	0.9272				
Terabeam	0.7759	+	1.1667	+	1.5363
First Banks	0.0552	+	0.0669	-	0.0665
Sequa	0.9830	+	1.0567		

The companies' Asset Turnover Ratios (Figure 14) showed even greater improvement than the first two ratios, as all of the Asset Turnovers improved with the exception of First Banks' Asset Turnover in the second year after the acquisition. This improvement means that the companies are making better use of their assets in generating revenues.

Figure 15. Profit Margin in the years following acquisition

Company	Profit Margin- Year of Acquisition	Change	Profit Margin- Year After Acquisition	Change	Profit Margin- 2 Years After Acquisition
Burger King	.0182	+	0.0662	+	.0774
ViaCell	(0.3382)	+	(0.3867)		
Cogent	(0.4993)	+	(0.3606)	+	(0.1671)
Oplink	(0.0629)	+	0.0747		
INXX	(0.6256)				
Terabeam	(0.1892)	-	(0.3186)	+	(0.2876)
First Banks	0.1946	-	0.1716	-	0.0807
Sequa	0.0137	+	0.03000		

Finally, the Profit Margins (Figure 15) of the companies once again generally improved.

The preceding figures show that many of the financial ratios of these companies improved in the years following acquisition. There exist many other factors that could have influenced these changes, though. The more interesting fact that these tables tell is that many of these companies stopped reporting to the SEC as early as a year or two after the acquisition. This means that they are either no longer publicly traded or that they have gone out of business. It is possible that the willingness to make large negative goodwill purchases shows a management

style that tends to be very risky and often results in failure.

Of the companies that are no longer reporting on the stock markets, Viacell has been bought by Perkin Elmer, INYX went bankrupt, and Sequa was bought out as well.

The next step in evaluating the long-term performance of the companies is a market study. Because research has shown a strong relationship between stock performance and overall company performance, this study uses stock performance to try to determine the effects of negative goodwill on long-term performance.

Market Study

One indicator of the long-term performance of a company is the performance of the company's stock. Studies, such as Ball and Brown (1968) and Beaver, Clarke, and Wright (1979), have shown that there is a strong positive correlation between companies' stock prices and their accounting earnings. The percentage change for the stock prices is usually greater in magnitude than that of the earnings, but the direction of change in the studies was the same (Beaver 90-92).

Market efficiency is another area that is important to understand in analyzing the performance of companies and

their stocks. The theory of market efficiency essentially states that in an efficient market, the performance of companies' stocks reflects all information about the companies. That is, investors and other parties with interest in the companies are aware of the events and data surrounding the companies, and they use this information to make their decisions regarding the organizations. Thus, the stock prices reflect the available information (Beaver 125-6).

There are three basic forms of market efficiency. The first form, weak, means that the only information being used to determine stock price is historical stock price information, and not other current information about the company, such as information found in the financial statements. The second form, semistrong, means that the stock prices reflect all information that is made available to the public, such as financial statement information. The third form, strong, means that the stock price is a reflection of all information, both public information and that information which is private to the company (Beaver 128).

While market efficiency is a theory, and there are many people who question it, most of its supporters believe in some variation of its semistrong form (Beaver 128-129).

The most common belief is that stock prices reflect all publicly available information regarding companies.

Knowledge of the relationship between stock prices and earnings and an understanding of market efficiency lead to an interesting study of the performance of the companies involved in this study. This study attempts to answer the following question: Using a belief in semistrong market efficiency, can research use stock returns of companies to determine the long-term effects of negative goodwill acquisitions?

To determine if this question can be answered, this study attempts to establish a trend among the companies studied thus far. The research attempts to determine if there is a reason to believe, through the use of stock returns, that negative goodwill does have a negative long-term impact upon companies.

To research this issue, this study uses the Center for Research in Security Prices (CRSP) database. CRSP stores stock return data for companies on all of the public exchanges in the United States and is able to perform various intricate calculations from those data.

The process used for this study computes a Beta value known as the Cumulative Abnormal Return (CAR) for companies' stock returns based on company size. In other

words, the program begins by separating publicly traded companies into groups called portfolios based on the size of the companies. It then computes an average return for each day of trading for each portfolio. For each company, a Beta value is calculated. This value describes the returns of the individual company in relation to those of the entire market. A Beta of +1.0 would mean that the company responds perfectly to the market. For example, if the market had returns of 2% over a period of a month, then one would expect a company within that market with a Beta of +1.0 to have a 2% return for the month as well. Conversely, a company within the portfolio with a Beta of -1.0 would be expected to have a return of -2%.

For the purposes of this research, the abnormal return was found for the companies previously used to study long-term effects of negative goodwill with respect to their portfolios. The returns for each month from January of 2005 through December of 2007 were found, as most of these companies acquired their negative goodwill during or prior to early 2005.

The results from the year 2007 are shown on the following page:

Table 16. Abnormal Returns of Companies Selected for the Year 2007

	1/31/2007	2/28/2007	3/30/2007	4/30/2007	5/31/2007	6/29/2007
Burger King Holdings, Inc.	-0.05119	0.019548	0.003227	0.050073	0.044056	0.043433
ViaCell Holding, Inc.	0.165855	-0.06157	0.03676	0.120887	-0.04121	-0.08981
Cogent Communications Group, Inc.	0.28018	0.081128	0.036315	0.056472	0.092902	0.04558
Oplink Communications, Inc.	-0.08707	-0.13045	0.07958	-0.09253	0.036485	-0.1448
Terabeam, Inc.	0.054448	0.021785	-0.14548	0.194434	-0.06257	0.00303
Sequa Corp DE	0.078819	-0.02022	-0.03449	-0.04663	-0.09859	0.03553
	7/31/2007	8/31/2007	9/28/2007	10/31/2007	11/30/2007	12/31/2007
	-0.03388	-0.02215	0.044324	0.003719	0.05102	0.092673
	-0.05785	-0.10945	0.061303	0.515582	-88	-88
	0.020187	-0.13793	-0.08805	0.148804	-0.17132	0.14389
	0.135881	-0.20493	0.028299	0.089162	0.146011	-0.05352
	-0.05511	-0.00871	-0.19359	-0.23331	-0.18883	0.125561
	0.530187	-0.01742	-0.01275	0.019528	0.070078	-88

Note: There were not data available for First Banks, Inc. or INYX

There are several values that read either -88 or -99, meaning that there were no data available for that month. For most of the entities, the lack of data during a given period means that the company was not being traded publicly during that period of time.

The results of this research do not clearly show any patterns that suggest that the companies are performing similarly. For example, both Cogent and Oplink reported slightly more than \$350,000,000 in total assets for the year of negative goodwill acquisition, yet their abnormal returns are very different. In the year 2007, the two

companies' abnormal returns were of opposing directions seven of the twelve months. Oplink's average Beta for the year was .11, while Cogent's was .042.

The same can be said for Burger King Holdings and Sequa. Both company reported total assets in excess of \$2,000,000, yet their abnormal returns do not show any significant trends. Their abnormal returns often opposed each other in direction, and Sequa's average abnormal return for 2007, .046, was over twice as large as Burger King's, .020.

In summary, while the market study did reveal valuable information about the companies, it did not show any trends that suggest that negative goodwill has a negative long-term effect on companies. There does not seem to be any consistent positive or negative performance that is related to these companies' acquisition of negative goodwill. The stock returns of companies of similar size were compared, and no trends were noted that would lead to support of the hypothesis. The market does not appear to react to the acquisition of negative goodwill.

Conclusions

While the positive short term effects of negative goodwill acquisitions under the new SFAS 141R are easy to

show, the evidence that negative goodwill causes long-term problems is not evident. There does not appear to exist much empirical evidence that purchasing a company for less than its market value will lead to problems in the future. Many of the companies studied even showed improved financial results in the years following the acquisition of negative goodwill.

The market study also failed to show any real connection between the acquiring of negative goodwill and poor long-term performance, as many of the companies of similar size produced abnormal returns of different directions and magnitudes. These numbers may simply mean that negative goodwill does not greatly affect the decisions of companies' stakeholders. The only evidence that suggests that negative goodwill might have an unfavorable impact upon companies is the fact that so many of the companies involved in the study are no longer in business or have been bought by other companies.

Another issue in determining the impact of negative goodwill alone is that there are many other factors contributing to these companies' performances. Management decisions, as well as market conditions and many other variables contribute to these companies on a daily basis,

and determining what portion of a company's performance is due to negative goodwill is almost impossible.

In conclusion, this study must fail to accept the hypothesis that while the acquisition of negative goodwill is favorable in the year of acquisition, the long-term effects of negative goodwill are damaging to companies.

This research proposes that studies be done in the future regarding the financial crises that started in 2008. The author believes that many companies will be bought for less than market value and that the availability of more companies for the sample could lead to more definitive research in the future.

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