

Return On Goodwill


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ABSTRACT

Goodwill represents value not recorded until a company is purchased by another company. The value of goodwill comes from intangibles such as location, superior market position or the skill and learning of management. Goodwill is the difference between the purchase price of a company and the fair value of its assets. The residual nature of goodwill makes measurement of its contribution to performance difficult. Two questions flow from this. The first is whether the contribution of goodwill is measurable. The second question is whether the contribution of goodwill varies from industry to industry. One way to measure contribution is return on assets. This study analyses 38,519 years of company operations in 48 industries and compares the return of companies with and without goodwill. For some, but not all industries, return on assets for companies with goodwill was higher than for companies without goodwill. The contributions of this study are to demonstrate whether goodwill contributes to performance and to analyze variability of performance by industry.

Keywords: Goodwill, return, rent, value, booked goodwill

I. INTRODUCTION

 One difficulty in measuring the return on goodwill is that goodwill is a residual. Goodwill is the difference between the purchase price of a company and the fair value of its assets. This difference is booked as an asset under authority of Financial Accounting Standards Board (FASB) Statement of Accounting Standard (SFAS) No. 141 *Business Combinations* (2001) and Accounting Principals Board (APB) Opinion 16, *Business Combinations* (1970) prior to that.

Goodwill has historically been a significant asset on the books of US corporations and with the implementation of SFAS 141 (2001), which requires all business combinations to be treated as purchases, it will become more significant. In 2005, the 4,815 largest companies on Compustat had \$54.4 trillion of assets and \$2.3 trillion of booked goodwill or about 4.23% of total assets. In 2006, the 4,815 largest companies had \$62.7 trillion of assets and \$2.4 trillion of booked goodwill or about 3.91% of total assets.

The argument for goodwill is that acquirers pay the fair market value of firms and the difference between the purchase price and the fair market value of acquired assets represents a premium for the skills of management and other value not captured by Generally Accepted Accounting Practices (GAAP).

One characteristic of an asset is that it can generate rent which can be measured in terms of return on assets. This study analyzes the return on assets of companies with and without goodwill on an industry by industry basis and tests whether goodwill provides abnormal returns.

The contributions of this study are to demonstrate whether the impact of goodwill on company performance is measurable and to analyze variability of that impact on an industry by industry basis.

Section II of this study is a literature review. Section III presents the research questions. Section IV describes the data and methodology used. Section V presents the empirical analysis and suggestions for future research and Section VI is the conclusion.

II. LITERATURE REVIEW

There is large and authoritative body of literature discussing the rationale for goodwill (Barber and Strack 2005; Massoud & Raiborn 2003; SFAS141 2001; APB16 1970; Accounting Research Bulletin (ARB) No.24 1944; California Code of Civil Procedure §1263.510(b)), Bourne 1888). However, not everyone agrees that goodwill represents value.

Some suggest that goodwill is simply a plug figure (Lander and Reinstein 2003; Massoud and Raiborn 2003); that it should be written off immediately (Accounting Research Study No. 10, “Accounting for Goodwill” 1968) or that it represents an overpayment (Johnson and Petrone 1998). Some suggest that goodwill is not a good theoretical fit into the definition of an asset (Samuelson 1996; Schuetze 1993; Fisher 1906). These criticisms of goodwill are inconsistent with the fact that companies pay billions of dollars for goodwill each year. A more nuanced question is whether goodwill contributes to profitability in a measurable way. If goodwill contributes to profitability as much as any other asset, that provides support for booking goodwill as an asset.

Six studies have analyzed the market’s perception of whether goodwill generates rent by using market capitalization as the dependent variable and goodwill and a variety of other measures as independent variables (Begley, Chamberlain and Yinghua 2006, Jennings, Robinson, Thompson and Duvall 1996, McCarthy and Schneider 1995, Wang 1995, 1993 and Chauvin and Hirschey 1994). These studies found that goodwill was valued by the markets at least as much as other assets except in manufacturing companies. This is consistent with the argument of Barber and Strack (2005) that performance depends more on people than assets. Each of these studies was limited to companies with goodwill. Samples sizes and the results of these six studies are summarized in Table 1 Prior empirical findings.

Table 1: Prior Empirical Research

The number of companies in each study varied from year to year. The common denominator is the total number of years of company operations considered in each study.

Study	Years of operations	Methodology	Finding
Begley, Chamberlain and Li 2006	1,865	Regression of loan and deposit levels, new loans and new deposits, non-performing loans and fee income against goodwill defined as the difference between equity and market value. Limited to banks.	Banks are consistently valued higher than their underlying assets which suggest the difference is goodwill.
Jennings, Robinson, Thompson and Duvall 1996	259	Regression of plant, property and equipment, goodwill, other assets and liabilities against the market value. Limited to non-depository firms with goodwill.	Markets consistently value goodwill higher than either plant, property and equipment or other assets.
McCarthy and Schneider 1995	6,216	Regressions of goodwill, other assets, liabilities, other assets and income against market value. Limited to firms with goodwill.	Markets consistently value goodwill at least as much as other assets.
Wang 1995	3,728	Regressions of goodwill, other assets and liabilities against market value. Limited to firms with goodwill.	Markets consistently value goodwill more than other assets.
Chauvin and Hirschey 1994	2,693	Recursive regression of goodwill, net income, advertising, R&D expenditures, market share, intangible assets, tangible assets, leverage, sales growth and Beta against market value. Limited to firms with goodwill.	Goodwill was valued for non-manufacturing companies, but not for manufacturing companies.
Wang 1993	136	Regressions of goodwill, non-goodwill assets and liabilities against market value. Limited to service firms with goodwill.	Goodwill assets are understated relative to their theoretical value.

The studies in Table 1 embrace the broadest possible definition of goodwill which includes both booked and unbooked goodwill, where unbooked goodwill is assumed to be the difference between recorded assets and market value. This study examines the subset of goodwill that is booked pursuant to SFAS141 (2001) and its predecessor APB 16 (1970). A critical question is whether goodwill generates rents equal to, greater than or less than other assets. Previous studies of goodwill raise some interesting questions. For example, does the rent generating power of goodwill vary from industry to industry? One contribution of this study is to answer that question on a much more granular level than prior studies.

III. RESEARCH QUESTIONS

The residual nature of goodwill makes measurement of its contribution difficult. If goodwill is a rent generating asset then companies with goodwill should produce a return on assets comparable to companies without booked goodwill. Return on assets (ROA) is defined in this study as operating income before depreciation and amortization scaled by average assets.

Some industries, like coal mining, rely heavily on physical assets whereas other industries, like business services, rely on intellectual capital. If goodwill represents the skill and learning of employees and management, it is possible that goodwill generates more rent in industries that rely on knowledge than industries that rely on assets. This is consistent with the findings research cited in Table 1 and leads to research question one.

Is there a statistically significant difference in the ROA of companies with booked goodwill and those without booked goodwill on an industry by industry. Stated algebraically hypothesis H_0 is:

$$ROA_{GWi} = ROA_{NGWi}$$

where ROA_{GWi} is the return on assets of companies with goodwill in industry i and ROA_{NGWi} is the return on assets of companies with no goodwill in industry i .

In this study, a company is considered to have goodwill if goodwill comprises one percent or more of its assets. Companies for which goodwill represents less than one percent of assets are considered not to have goodwill. This raises the possibility that companies with no goodwill are being compared to companies with slightly more than one percent goodwill. To place the issue of whether goodwill generates rent in bold relief, the ROA of companies without goodwill are also compared to companies in which goodwill represents at least twenty percent of assets. These are called high goodwill companies. This leads to the research question two.

Is there a statistically significant difference between the ROA of companies with no booked goodwill and those with high booked goodwill on an industry by industry basis? Stated algebraically hypothesis H_1 is:

$$ROA_{HGWi} = ROA_{NGWi}$$

where ROA_{HGWi} is the return on assets of companies with high goodwill in industry i and ROA_{NGWi} is the return on assets of companies with no goodwill in industry i .

IV. METHODOLOGY

Data Source

To explore the questions raised by the literature and this paper, return on assets was analyzed for the ten year period 1995 to 2004. Firms which began each year with at least \$20 million of assets, stock price of at least \$1, and sales of at least \$5 million were selected from the Compustat North American database. Firms with less than \$20 million in assets were eliminated so that numerous small firms without goodwill would not distort statistical analyses through dint of numbers. Sales of \$5 million was selected as a minimum threshold for an active company. Firms with a stock price of less than \$1 were eliminated to remove more speculative companies. Companies that had sufficient assets, sales and stock price to be selected one year did not necessarily qualify for selection in all ten years

of this study. Some companies merged, went out of business or fell below the selection threshold. For example, a company could be unselected in one year because it did not meet minimum criteria, classified as a company without goodwill for five years and a company with goodwill for four years. To maximize the data available for this study, companies were selected and their performance in terms of ROA was evaluated on a year by year basis, with each year being a data point. These data points were aggregated by industry and then classified by the percentage of goodwill on their balance sheet in a particular year.

Firms with incomplete information were also eliminated from the sample. There were 2,652 firms that met the foregoing criteria in 1995 and 4,985 firms which met these criteria in 2004. See Table 2 Overview of study population. In total, this study analyzes some 38,519 years of company operating experience.

Table 2: Overview of Study Population

Publicly traded companies listed on Compustat with at least \$20 million in assets, a share price of \$1 and \$5 million in sales were selected for this study to eliminate smaller, more speculative and inactive companies. Return on Assets (ROA) is operating income before depreciation and amortization divided by average assets. Dollars are in millions.

Year	Companies selected	Total Assets beginning of year	Average beginning assets	Total Goodwill beginning of year	Average beginning goodwill	Beginning of year goodwill as % of assets	Average ROA
1995	2,652	10,634,953	4,010	156,674	59	1.47%	13.52%
1996	2,986	12,996,179	4,352	172,546	58	1.33%	13.06%
1997	3,390	15,111,693	4,458	242,881	72	1.61%	12.73%
1998	3,640	16,790,999	4,613	325,667	89	1.94%	11.54%
1999	3,925	20,981,758	5,346	464,872	118	2.22%	10.95%
2000	4,173	25,524,547	6,117	674,422	162	2.64%	10.24%
2001	4,385	31,676,147	7,224	1,045,970	239	3.30%	7.68%
2002	4,420	37,306,619	8,440	1,129,075	255	3.03%	8.62%
2003	4,594	42,014,932	9,146	1,648,537	359	3.92%	9.38%
2004	4,354	38,525,819	8,848	1,695,474	389	4.40%	9.91%

Variables

The dependent variable tested in this study is return on assets (ROA) defined as operating income before depreciation and amortization scaled by average assets. The independent variables in this study include: industry, whether or not a company has goodwill, and whether a company is a high goodwill company.

The mean and standard deviation of ROA were computed by industry for companies with goodwill, without goodwill and with high goodwill. These measures were then tested for statistically significant differences.

This study uses the Fama and French (1997) classification system which assigns four digit standard industrial codes (SIC) to forty eight industries. A SIC / industry cross reference table is provided as Appendix A.

V. EMPIRICAL ANALYSIS

Goodwill Companies vs. Non-Goodwill Companies

The Coal, Gold, and Smoke industries were eliminated from the study because, over a ten year period, they had less than twenty years of operations with goodwill, the minimum number deemed necessary to draw statistically reliable conclusions. Of the remaining forty five industries, companies without goodwill outperformed companies with goodwill in six industries on a statistically significant basis. Such findings tend to support the notion that goodwill is simply a plug figure rather than an asset as claimed by SFAS 141 (2001). However, in twenty one industries, there was no statistically significant difference in the performance of companies with and without goodwill. This finding tends to support the assumption underlying SFAS 141 (2001) that goodwill represents value not captured by traditional accounting means, but which is recognized in the price paid for purchased firms. The more surprising finding is that companies with goodwill outperformed those without goodwill in eighteen of forty

five industries. This indicates that goodwill provides a return superior return to that of traditional assets in many industries and is consistent with the argument of Barber and Strack (2005) that performance depends more on people than assets. The performance of companies with and without goodwill by industry is provided in Table 3 Performance analysis.

The data answer research question one in the affirmative by demonstrating the rent generating power of goodwill varies from industry to industry. Therefore we must reject H_0 for some, but not all industries. See Table 4 Summary of industry results.

High Goodwill Companies vs. Non-Goodwill Companies

While companies with goodwill perform at least as well as companies without goodwill in thirty nine of forty five industries, it is reasonable to ask whether a firm conclusion can be drawn by comparing companies with less than one percent goodwill to companies with slightly more than one percent goodwill. Research question two seeks to address this by comparing the performance of high goodwill companies, that is those with twenty percent or more of their assets in goodwill, to companies without booked goodwill. Ten industries were eliminated from this analysis (Agric, Banks, Beer, Coal, Gold, Guns, Mines, Smoke, Soda and Txtls) because each had less than twenty years of operating history with high goodwill companies. Of the remaining thirty eight industries, the data show that in six industries, high booked goodwill companies underperformed companies with no booked goodwill by statistically significant margins; in twenty industries there is no statistically significant difference between companies with high booked goodwill and those without booked goodwill; and in twelve industries companies with high booked goodwill outperformed companies with no booked goodwill by a statistically significant margin. Table 3 provides the performance analysis and statistical details of each industry and Table 4 provides a summary of industry results.

The answer to research question two, which asks whether there is a difference in the rent generating power of high booked goodwill companies and companies without booked goodwill on an industry by industry basis, is that there is a statistically significant difference for some industries. We must therefore reject hypothesis H_1 for some, but not all industries. However, the fact that thirty two of the thirty eight industries with high booked goodwill performed as well as, or better than, companies without booked goodwill tends to refute the theory that goodwill is simply a plug number and not a rent generating asset.

Questions for Further Research

As robust as these findings seem, they raise several questions for further research. For example, is the guidance provided by FASB 141 (2001) is too broad? Perhaps it should be revised to include tests to determine whether goodwill is likely to generate promised benefits as suggested by SFAC 6 (1985). One such test might be whether goodwill has historically generated rent in a particular industry.

Even in industries where companies with booked goodwill under perform those without booked goodwill we cannot necessarily conclude that all booked goodwill is worthless. Some fraction of it, perhaps that fraction representing an overpayment, may be worthless. Distinguishing rent generating goodwill from non-rent generating goodwill presents a question for further research.

One theory advanced for the value of booked goodwill is that the skill and learning of a company's management is a key value driver. If so, perhaps goodwill is simply a marker for some set of superior management behaviors. A future line of research might concentrate on identifying such behaviors and determining whether there is a better means of measuring such value than by booking goodwill generated through a business combination.

Table 3: Performance Analysis

All companies reported on Compustat from 1995 to 2004 with at least \$20 million in assets, a stock price of \$1 and sales of \$5 million were selected for this study. The result was some 38,519 years of operating history. Return on assets (ROA) is defined as operating income before depreciation and amortization scaled by average assets. Companies were classified by industry using the Fama and French (1997) system. Companies with goodwill had at least one percent of their assets in goodwill. Companies without goodwill had less than one percent of their assets in goodwill. High goodwill companies were those with at least twenty percent of their assets in goodwill. High goodwill companies are a lesser included set of companies with goodwill. The winner column indicates whether companies with goodwill (GW) outperformed those without goodwill (NoGW) or whether no goodwill companies outperformed those with goodwill. Entries in italics are industries for which there were less than twenty operating years with goodwill or high goodwill respectively, so no conclusions were drawn about rent generation. They are included in this table for completeness only.

Industry	Cos with goodwill			Cos with no goodwill			Cos with high goodwill			Goodwill v. no goodwill			High goodwill v. no goodwill		
	n	Mean ROA	Std.dev. ROA	n	Mean ROA	Std.dev. ROA	n	Mean ROA	Std.Dev. ROA	t-stat	p-value	winner	t-stat	p-value	winner
Aero	105	13.8%	5.2%	38	13.60%	7.31%	33	14.15%	3.40%	0.1318	0.4483		0.4150	0.3372	
Agric	53	13.3%	7.6%	72	9.21%	7.15%	15	14.70%	5.39%	3.0760	0.0010	*** GW	3.3745	0.0004	*** GW
Autos	324	13.2%	8.6%	302	14.77%	10.20%	91	13.33%	10.96%	-2.1293	0.0166	** NoGW	-1.1161	0.1314	
Banks	77	10.6%	9.5%	5069	3.00%	2.87%	16	12.68%	8.17%	6.9543	0.0000	*** GW	4.7384	0.0000	*** GW
Beer	84	16.0%	7.3%	84	14.27%	7.51%	7	14.83%	5.45%	1.5206	0.0643	* GW	0.2526	0.4013	
BldMt	339	15.5%	7.1%	332	15.53%	8.75%	69	14.84%	6.60%	0.0000	0.5000		-0.7432	0.2296	
Books	184	15.8%	11.6%	152	16.86%	11.35%	125	14.86%	6.60%	-0.8765	0.1894		-1.8288	0.0336	** NoGW
Boxes	96	15.5%	5.5%	48	14.28%	4.63%	30	12.56%	2.33%	1.4251	0.0764	* GW	-2.1712	0.0150	** NoGW
BusSv	1828	12.2%	15.9%	1921	6.56%	22.50%	628	11.19%	12.55%	8.9388	0.0000	*** GW	6.4559	0.0000	*** GW
Chem	389	12.6%	8.2%	344	15.45%	9.54%	80	14.55%	9.69%	-4.2548	0.0000	*** NoGW	-0.7505	0.2260	
Chips	815	9.2%	13.0%	1427	9.70%	16.98%	165	6.19%	11.77%	-0.8127	0.3090		-3.4391	0.0003	*** NoGW
Clths	241	14.7%	9.9%	308	15.42%	12.79%	35	14.96%	9.01%	-0.7348	0.2327		-0.2725	0.3936	
Cnstr	238	12.0%	6.9%	175	12.33%	10.46%	55	10.18%	6.03%	-0.3189	0.3745		-1.8957	0.0287	** NoGW
Coal	1	24.8%	0.0%	45	11.67%	11.23%	1	24.78%	0.00%	7.8312	0.0000	*** GW	7.8312	0.0000	*** GW
Comps	428	7.5%	12.1%	912	5.92%	20.02%	92	6.94%	11.82%	1.7514	0.0401	** GW	0.7289	0.2327	
Drugs	419	10.0%	18.1%	922	-3.70%	26.19%	93	7.32%	11.87%	11.0604	0.0000	*** GW	7.3321	0.0000	*** GW
ElcEq	297	12.9%	10.2%	275	8.13%	20.00%	93	12.31%	8.41%	3.5594	0.0000	*** GW	2.8086	0.0025	*** GW
Enrgy	287	15.7%	7.7%	928	17.72%	13.05%	33	16.33%	5.76%	-3.2777	0.0005	*** NoGW	-1.2748	0.1020	
FabPr	65	13.5%	6.8%	67	12.70%	6.94%	30	12.31%	5.69%	0.6675	0.2514		-0.2908	0.3859	
Fin	200	18.6%	16.2%	856	14.16%	24.35%	70	21.07%	14.54%	3.1357	0.0008	*** GW	3.5861	0.0000	*** GW

*** Statistically significant at the .01 level

** Statistically significant at the .05 level

* Statistically significant at the .10 level

Table 3: Performance Analysis – continued

Industry	Cos with goodwill			Cos with no goodwill			Cos with high goodwill			Goodwill v. no goodwill				High goodwill v. no goodwill			
	n	Mean ROA	Std.dev. ROA	n	Mean ROA	Std.dev. ROA	n	Mean ROA	Std.Dev. ROA	t-stat	p-value			t-stat	p-value		
Food	191	16.0%	7.9%	336	14.48%	9.87%	57	15.54%	5.26%	1.9216	0.0274	**	GW	1.2038	0.1151		
Fun	192	15.7%	11.4%	248	15.76%	12.09%	39	17.29%	11.70%	-0.0712	0.4960			0.7557	0.2236		
Gold	11	9.6%	8.6%	180	5.12%	14.28%	2	13.74%	3.64%	1.6087	0.0537	*	GW	3.0949	0.0010	***	GW
Guns	46	10.7%	6.5%	22	18.33%	10.44%	18	8.98%	4.98%	-3.1714	0.0011	***	NoGW	-3.7157	0.0000	***	NoGW
Hlth	361	16.1%	11.9%	194	13.64%	15.22%	196	18.00%	10.57%	1.9154	0.0274	**	GW	3.2827	0.0005	***	GW
Hshld	264	15.6%	10.2%	340	15.54%	8.86%	61	16.38%	11.01%	0.1140	0.4562			0.5640	0.2877		
Insur	460	6.7%	8.2%	844	6.19%	8.01%	66	13.34%	7.94%	1.1023	0.1539			7.0409	0.0000	***	GW
LabEq	308	10.5%	11.8%	409	9.35%	15.56%	78	13.57%	12.13%	1.1063	0.1446			2.6806	0.0037	***	GW
Mach	689	12.7%	8.3%	572	11.99%	13.58%	200	12.81%	5.67%	1.0454	0.1469			1.1797	0.1190		
Meals	246	17.4%	7.8%	414	14.87%	8.81%	27	15.94%	5.67%	3.8481	0.0000	***	GW	0.9114	0.1814		
MedEq	417	13.2%	15.0%	440	5.65%	20.17%	168	13.71%	11.95%	6.2554	0.0000	***	GW	6.0504	0.0000	***	GW
Mines	54	15.4%	6.1%	110	15.05%	10.05%	6	16.54%	2.76%	0.3087	0.3483			1.0074	0.1562		
Misc	164	12.2%	9.1%	97	12.91%	14.98%	39	12.66%	7.98%	-0.4347	0.3336			-0.1258	0.4483		
Paper	257	14.8%	7.4%	246	13.67%	7.60%	73	13.16%	4.41%	1.6340	0.0516	*	GW	-0.7204	0.2358		
PerSv	206	15.6%	11.5%	146	17.12%	13.30%	92	15.70%	11.29%	-1.1399	0.1271			-0.8811	0.1894		
Retail	747	14.1%	9.9%	1256	16.21%	11.74%	150	12.61%	9.11%	-4.3417	0.0000	***	NoGW	-4.4212	0.0000	***	NoGW
RIEst	64	11.8%	9.9%	236	8.04%	8.61%	22	18.01%	9.12%	2.7608	0.0029	***	GW	4.9270	0.0000	***	GW
Rubbr	194	14.8%	5.9%	135	13.26%	8.79%	58	13.60%	4.13%	1.7769	0.0384	**	GW	0.3653	0.3557		
Ships	39	13.2%	11.2%	41	9.90%	8.59%	18	13.45%	6.01%	1.4709	0.0708	*	GW	1.8196	0.0287	**	GW
Smoke	15	21.3%	3.9%	47	27.86%	2.79%	12	21.74%	4.23%	-5.9689	0.0000	***	NoGW	-4.7548	0.0000	***	NoGW
Soda	48	15.9%	6.7%	51	14.15%	8.77%	5	12.81%	2.71%	1.1362	0.1271			-0.7766	0.2177		
Steel	285	13.3%	7.2%	373	11.18%	9.44%	43	14.64%	6.94%	3.2989	0.0005	***	GW	2.9680	0.0015	***	GW
Telcm	592	11.6%	11.0%	850	11.21%	15.49%	173	10.73%	9.68%	0.6014	0.2743			-0.5288	0.2981		
Toys	129	14.1%	7.8%	139	14.54%	19.40%	29	13.16%	5.56%	-0.2693	0.3936			-0.7104	0.2389		
Trans	423	13.7%	8.0%	676	13.60%	9.40%	82	10.76%	9.60%	0.2629	0.3974			-2.5355	0.0055	***	NoGW
Txtls	83	12.8%	8.6%	83	14.85%	11.18%	18	9.71%	10.31%	-1.3393	0.0918	*	NoGW	-1.8881	0.0294	**	NoGW
Util	152	10.9%	8.2%	1387	10.78%	4.02%	69	12.53%	9.00%	0.1044	0.4602			1.6072	0.0537	*	GW
Whsl	712	11.1%	7.8%	551	10.85%	10.71%	157	11.62%	7.39%	0.3695	0.3520			1.0326	0.1515		

*** Statistically significant at the .01 level
 ** Statistically significant at the .05 level
 * Statistically significant at the .10 level

Table 4 Summary of industry results

This table summarizes whether goodwill generates rent equal to or greater than other assets on an industry by industry basis. Companies with goodwill had at least one percent goodwill among their assets. Companies without goodwill had less than one percent goodwill. High goodwill companies, a subset of companies with goodwill, had at least twenty percent of assets in goodwill.

Condition	Goodwill vs. -----no goodwill companies -----		High goodwill vs. -----no goodwill companies-----	
	Industries	n	Industries	n
Industries excluded because of insufficient data.	Coal, Gold, Smoke	3	Agric, Banks, Beer, Coal, Gold, Guns, Mines, Smoke, Soda & Txtls	10
Industries in which companies without goodwill outperform those with goodwill.	Autos, Chem, Enrgy, Guns, Retail & Txtls	6	Books, Boxes, Chips, Cnstr, Retail & Trans	6
Industries in which there is no statistically significant difference in the performance of companies with and without goodwill.	Aero, BldMt, Books, Chips, Clths, Cnstr, FabPr, Fun, Hshld, Insur, LabEq, Mach, Mines, Misc, PerSv, Soda, Telcm, Toys, Trans, Util & Whlsl	21	Aero, Autos, BldMt, Chem, Clths, Comps, Enrgy, FabPr, Food, Fun, Hshld, Mach, Meals, Misc, Paper, PerSv, Rubbr, Telcm, Toys & Whlsl	20
Industries in which companies with goodwill outperform those without goodwill.	Agric, Banks, Beer, Boxes, BusSv, Comps, Drugs, ElcEq, Fin, Food, Hlth, Meals, MedEq, Paper, RIEst, Rubbr, Ships & Steel	18	BusSv, Drugs, ElcEq, Fin, Hlth, Insur, LabEq, MedEq, RIEst, Ships, Steel & Util	12
	Totals	48		48

VI. CONCLUSION

The results of this study broadly support the implicit assumption underlying FASB 141 (2001) that goodwill is a rent generating asset. While companies with booked goodwill under perform in a few industries, companies with goodwill performed as least as well as companies without goodwill in thirty nine of the forty five industries or about 87%. To determine whether this phenomenon was the result of comparing firms with no goodwill to those with slightly more than one percent goodwill, a second analysis compared the performance of companies with no goodwill to those with 20% or more of their assets in goodwill. The data show that companies with high goodwill generate a return on assets at least as great as that of non-goodwill companies in thirty two of thirty eight industries or about 84% of the industries analyzed.

Even though goodwill represents a residual value, the difference between the purchase price of a company and the fair value of its assets, its effect can be measured in company returns. This effect varies from industry to industry. Yet there are still many unanswered questions about the nature and economic impact of goodwill. These questions await some the intrepid researcher to probe goodwill further.

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REFERENCES

1. _____ Accounting Research Bulletin (ARB) No. 24 1944. "Accounting for Intangible Assets," Dec.
2. _____ Accounting Research Study (ARS) No. 10. 1968 "Accounting for Goodwill."
3. _____ Accounting Principals Board (APB) Opinion No. 16. 1970. "Business Combinations"
4. Barber, F. and R. Strack. *Harvard Business Review* June 2005, Vol.83. Iss. 6. 80-91.
5. Begley, J., S. L. Chamberlain and L. Yinghua. 2006. "Modeling Goodwill for Banks: A Residual Income Approach with Empirical Tests," *Contemporary Accounting Research*. Spring, Volume 23 Iss. 1.
6. Bourne, J. H. 1888 "Goodwill," *The Accountant*, Sept. 22, 604.
7. _____ California Code of Civil Procedure §1263.510(b)
8. Chauvin, K. W. and M. Hirschey 1994. "Goodwill, Profitability, and the Market Value of the Firm," *Journal of Accounting & Public Policy*. Summer, Vol. 13 Issue 2. 159-180
9. _____ *Compustat*. Standard & Poor's, a Division of the McGraw-Hill Companies, Inc. New York. 2007.
10. _____ "Statement of Financial Accounting Concepts No. 6 Elements of Financial Statements," (SFAC 6) Financial Accounting Standards Board June 1985.
11. _____ "Statement of Financial Accounting Standards No. 141 Business Combinations," (SFAS 141) Financial Accounting Standards Board. June 2001
12. _____ "Statement of Financial Accounting Standards No. 142 Goodwill and Other Intangible Assets," (SFAS 142) Financial Accounting Standards Board. June 2001
13. Fama, E. F., and K. R. FRENCH. "Industry costs of equity." *Journal of Financial Economics* 43 (1997), 153-193.
14. Fisher, I. 1906. *The Nature of Capital and Income*. New York: Reprints of Economic Classics, Augustus M. Kelley, Publisher.
15. Jennings, R., J. Robinson, R. B. Thompson II and L. Duvall. 1996 "The relationship between accounting goodwill numbers and equity values," *Journal of Business Finance & Accounting*, June, Vol. 23 Iss. 4. 513-533
16. Johnson, T. L. and K. R. Petrone. 1998. "Is goodwill an asset?" *Accounting Horizons* Sept. 1998 Vol. 12 Iss. 3. 293-304.
17. Lander, G. and A. Reinstein. 2003. "Models to Measure Goodwill Impairment," *International Advances in Economic Research*, Aug. Vol. 9 Issue 3, p227-232
18. Massoud, M. F. and Raiborn, C. A. 2003. "Accounting for Goodwill: Are We Better Off?" *Review of Business*, Spring, Vol. 24 Issue 2, 26-32
19. McCarthy, M. G. and D. K. Schneider. 1995. "Market Perception of Goodwill: Some Empirical Evidence," *Accounting & Business Research*, Winter, Vol. 26 Iss. 1. 69-81
20. Samuelson, R. A. 1996. "The concept of assets in accounting theory," *Accounting Horizons*. Sept. Vol.10 Iss.3. 147-157.
21. Schuetze, W. P. 1993. "What is an asset?" *Accounting Horizons* Sept. Vol 7. No.3. 66-70.
22. Vance, D. E. 2005. *Raising Capital* Springer, New York. 2005.
23. Wang, Z. 1995. "An Empirical Assessment of IASC's Proposed Goodwill Amortization Requirement," *International Journal of Accounting*, Vol. 30 Iss. 1, 37-47
24. Wang, Z. 1993. "An Empirical Evaluation of Goodwill Accounting," *Journal of Applied Business Research*, Vol. 9 No. 4. 127-133

APPENDIX A - INDUSTRY CLASSIFICATIONS

This appendix is based on the Fama and French (1997) industry classifications plus the classification of the omitted SIC code of 3690 classified as electrical equipment, ElcEq.

SIC range	Code	Industry	SIC range	Code	Industry
0100-0799	Agric	Agriculture	2850-2899	Chems	Chemicals
0800-0899	BldMt	Construction Materials	2900-2911	Enrgy	Petroleum and Natural Gas
0900-0999	Toys	Recreational Products	2950-2952	BldMt	Construction Materials
1000-1039	Mines	Nonmetallic Mining	2990-2999	Enrgy	Petroleum and Natural Gas
1040-1049	Gold	Precious Metals	3000-3000	Rubbr	Rubber and Plastic Products
1060-1099	Mines	Nonmetallic Mining	3010-3011	Autos	Automobiles and Trucks
1200-1299	Coal	Coal	3020-3021	Clths	Apprel
1310-1389	Enrgy	Petroleum and Natural Gas	3050-3099	Rubbr	Rubber and Plastic Products
1400-1499	Mines	Nonmetallic Mining	3100-3111	Clths	Apprel
1500-1549	Cnstr	Construction	3130-3159	Clths	Apprel
1600-1699	Cnstr	Construction	3160-3199	Hshld	Consumer Goods
1700-1799	Cnstr	Construction	3200-3219	BldMt	Construction Materials
2000-2046	Food	Food Products	3210-3221	Boxes	Shipping Containers
2047-2047	Hshld	Consumer Goods	3229-3231	Hshld	Consumer Goods
2048-2048	Agric	Agriculture	3240-3259	BldMt	Construction Materials
2050-2063	Food	Food Products	3260-3260	Hshld	Consumer Goods
2064-2068	Soda	Candy and Soda	3261-3264	BldMt	Construction Materials
2070-2079	Food	Food Products	3262-3263	Hshld	Consumer Goods
2080-2085	Beer	Alcoholic Beverages	3269-3269	Hshld	Consumer Goods
2086-2087	Soda	Candy and Soda	3270-3299	BldMt	Construction Materials
2090-2095	Food	Food Products	3300-3369	Steel	Steel Works, etc.
2096-2097	Soda	Candy and Soda	3390-3399	Steel	Steel Works, etc.
2098-2099	Food	Food Products	3400-3400	FabPr	Fabricated Products
2100-2199	Smoke	Tobacco Products	3410-3412	Boxes	Shipping Containers
2200-2295	Txtls	Textiles	3420-3442	BldMt	Construction Materials
2296-2296	Autos	Automobiles and Trucks	3443-3444	FabPr	Fabricated Products
2297-2299	Txtls	Textiles	3446-3452	BldMt	Construction Materials
2300-2390	Clths	Apprel	3460-3479	FabPr	Fabricated Products
2391-2392	Hshld	Consumer Goods	3480-3489	Guns	Defense
2393-2395	Txtls	Textiles	3490-3499	BldMt	Construction Materials
2396-2396	Autos	Automobiles and Trucks	3510-3536	Mach	Machinery
2397-2399	Txtls	Textiles	3537-3537	Autos	Automobiles and Trucks
2400-2439	BldMt	Construction Materials	3540-3569	Mach	Machinery
2440-2449	Boxes	Shipping Containers	3570-3579	Comps	Computers
2450-2459	BldMt	Construction Materials	3580-3599	Mach	Machinery
2490-2499	BldMt	Construction Materials	3600-3621	ElcEq	Electrical Equipment
2510-2519	Hshld	Consumer Goods	3622-3622	Chips	Electronic Equipment
2520-2549	Paper	Business Supplies	3623-3629	ElcEq	Electrical Equipment
2590-2599	Hshld	Consumer Goods	3630-3639	Hshld	Consumer Goods
2600-2639	Paper	Business Supplies	3640-3646	ElcEq	Electrical Equipment
2640-2659	Boxes	Shipping Containers	3647-3647	Autos	Automobiles and Trucks
2670-2699	Paper	Business Supplies	3648-3649	ElcEq	Electrical Equipment
2700-2749	Books	Printing and Publishing	3650-3652	Toys	Recreational Products
2750-2759	BusSv	Business Services	3660-3660	ElcEq	Electrical Equipment
2760-2761	Paper	Business Supplies	3661-3679	Chips	Electronic Equipment
2770-2799	Books	Printing and Publishing	3680-3689	Comps	Computers
2800-2829	Chems	Chemicals	3691-3692	ElcEq	Electrical Equipment
2830-2836	Drugs	Pharmaceutical Products	3693-3693	MedEq	Medical Equipment
2840-2844	Hshld	Consumer Goods	3694-3694	Autos	Automobiles and Trucks

APPENDIX A - INDUSTRY CLASSIFICATIONS - CONTINUED

SIC range	Code	Industry	SIC range	Code	Industry
3695-3695	Comps	Computers	5800-5813	Meals	Restaurants, Hotel, Motel
3690-3690	ElcEq	Electrical Equipment	5890-5890	Meals	Restaurants, Hotel, Motel
3699-3699	ElcEq	Electrical Equipment	5900-5999	Retail	Retail
3700-3716	Autos	Automobiles and Trucks	6000-6099	Banks	Banking
3720-3729	Aero	Aircraft	6100-6199	Banks	Banking
3730-3731	Ships	Shipbuilding, Railroad Eq.	6200-6299	Fin	Trading
3732-3732	Toys	Recreational Products	6300-6399	Insur	Insurance
3740-3743	Ships	Shipbuilding, Railroad Eq.	6400-6411	Insur	Insurance
3750-3751	Hshld	Consumer Goods	6500-6553	RIEst	Real Estate
3760-3769	Guns	Defense	6700-6799	Fin	Trading
3790-3792	Autos	Automobiles and Trucks	7000-7019	Meals	Restaurants, Hotel, Motel
3795-3795	Guns	Defense	7020-7021	PerSv	Personal Services
3799-3799	Autos	Automobiles and Trucks	7030-7039	PerSv	Personal Services
3800-3800	Hshld	Consumer Goods	7040-7049	Meals	Restaurants, Hotel, Motel
3810-3810	Chips	Electronic Equipment	7200-7212	PerSv	Personal Services
3811-3811	LabEq	Measuring and Control Eq.	7213-7213	Meals	Restaurants, Hotel, Motel
3812-3812	Chips	Electronic Equipment	7215-7299	PerSv	Personal Services
3820-3830	LabEq	Measuring and Control Eq.	7300-7372	BusSv	Business Services
3840-3851	MedEq	Medical Equipment	7373-7373	Comps	Computers
3860-3879	Hshld	Consumer Goods	7374-7394	BusSv	Business Services
3900-3900	Misc	Miscellaneous	7395-7395	PerSv	Personal Services
3910-3919	Hshld	Consumer Goods	7397-7397	BusSv	Business Services
3930-3949	Toys	Recreational Products	7399-7399	BusSv	Business Services
3950-3955	Paper	Business Supplies	7500-7500	PerSv	Personal Services
3960-3961	Hshld	Consumer Goods	7510-7519	BusSv	Business Services
3965-3965	Clths	Apprel	7520-7549	PerSv	Personal Services
3990-3990	Misc	Miscellaneous	7600-7699	PerSv	Personal Services
3991-3991	Hshld	Consumer Goods	7800-7841	Fun	Entertainment
3993-3993	BusSv	Business Services	7900-7999	Fun	Entertainment
3995-3995	Hshld	Consumer Goods	8000-8099	Hlth	Healthcare
3996-3996	BldMt	Construction Materials	8100-8199	PerSv	Personal Services
3999-3999	Misc	Miscellaneous	8200-8299	PerSv	Personal Services
4000-4099	Trans	Transportation	8300-8399	PerSv	Personal Services
4100-4199	Trans	Transportation	8400-8499	PerSv	Personal Services
4200-4299	Trans	Transportation	8600-8699	PerSv	Personal Services
4400-4499	Trans	Transportation	8700-8748	BusSv	Business Services
4500-4599	Trans	Transportation	8800-8899	PerSv	Personal Services
4600-4699	Trans	Transportation	8900-8999	BusSv	Business Services
4700-4799	Trans	Transportation	9900-9999	Misc	Miscellaneous
4800-4899	Telcm	Telecommunications	5800-5813	Meals	Restaurants, Hotel, Motel
4900-4999	Util	Utilities	5890-5890	Meals	Restaurants, Hotel, Motel
5000-5099	Whsl	Wholesale	5900-5999	Retail	Retail
5100-5199	Whsl	Wholesale	6000-6099	Banks	Banking
5200-5299	Retail	Retail	6100-6199	Banks	Banking
5300-5399	Retail	Retail	6200-6299	Fin	Trading
5400-5499	Retail	Retail	6300-6399	Insur	Insurance
5500-5599	Retail	Retail	6400-6411	Insur	Insurance
5600-5699	Retail	Retail	6500-6553	RIEst	Real Estate
5700-5736	Retail	Retail	6700-6799	Fin	Trading

NOTES