October 2010

2010 Goodwill Impairment Study

Introduction

In November 2009 Duff & Phelps and the Financial Executives Research Foundation (FERF) published the results of its comprehensive *2009 Goodwill Impairment Study* ("2009 Study"). The *2009 Study* examined U.S. publicly-traded companies' recognition of goodwill impairment at the height of the financial crisis (the end of 2008 and the beginning of 2009), and featured a comparative analysis of the goodwill impairments for over 5,000 companies (by industry), as well as the findings of a survey of FEI members.

The *2010 Goodwill Impairment Study* ("2010 Study") follows up and expands on the *2009 Study*'s results. In the *2010 Study*, the time horizon over which goodwill impairments are studied is extended to five years (2005–2009), enabling an assessment of goodwill impairment trends over time.

In addition, the *2010 Study* features an analysis of the relative performance of companies over the 12-month period before and after the goodwill impairment[1].

Purpose of the 2010 Study

- To report and examine the general and industry trends of goodwill and goodwill impairment of U.S. companies.
- To analyze the relative performance of companies that recorded goodwill impairment to the performance of the market as a whole.
- To report the 2010 results of the annual goodwill impairment survey of FEI members.

Highlights of the 2010 Study

- Compared to 2008, the total amount of goodwill impaired in 2009 declined by over 80 percent.
- Financial service firms had the greatest proportion of total impairments in 2009. Over 70 percent of total impairments were recognized in the financial services, industrials and information technology sectors.
- Most of the underperformance of companies that recorded goodwill impairment occurs prior to the actual impairment charge, indicating that in general, investors are aware of the issues that may lead to a subsequent impairment long before the actual impairment is taken.
- FEI members were asked whether they performed an interim goodwill impairment test in either 2009 or 2010. Fifty percent of the respondents indicated they had, with nearly 30 percent citing economic declines as the triggering event.

[1] Performance is measured relative to the market. The market is defined throughout the *2010 Study* as the Standard & Poor's 500 Index.

Inside

Overview of Goodwill and Goodwill Impairment

Goodwill is "an asset representing future economic benefits arising from other assets acquired in a business combination or an asset acquisition by a not-for-profit entity that are not individually identified and separately recognized."[2]

In general terms, the amount of goodwill recognized is the excess of the consideration transferred (including the fair value of any noncontrolling interest and previously held equity interest, if applicable) over the net acquisition-date amounts of the identifiable assets acquired and liabilities assumed.

Goodwill Impairment Testing

Goodwill impairment is measured as the excess of the carrying amount of goodwill over its implied fair value.[3] The Financial Accounting Standards Board's (FASB) standard for the accounting for goodwill, Accounting Standards Codification (ASC) Topic 350 *Intangibles–Goodwill and Other* (formerly FASB Statement No. 142), specifies that goodwill must be tested for impairment at least annually.[4]

Triggering Events

Interim impairment tests are required if a triggering event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. Examples of such triggering events may include:[5]

- Significant adverse change in business climate
- Legal issues
- Regulatory issues
- Unanticipated change in competition, and
- Loss of key personnel

In addition, an interim impairment test may be necessary if it is more likely than not that a reporting unit (or a significant portion of a reporting unit) will be sold or otherwise disposed of.[6]

For a quick guide to relevant goodwill impairment accounting references, see Appendix B.

2010 Study: Company Base Set Selection and Methodology

The *2010 Study* includes four distinct areas of analysis:

1. Goodwill Impairment and Market-to-Book Value
2. Summary Statistics by Industry
3. Returns-Based Analysis
4. Survey Results

With the exception of the survey results section, the primary source of data for the *2010 Study* is Standard & Poor's Research Insight and Capital IQ databases, Copyright © 2010, a division of the McGraw-Hill Companies. After excluding American Depositary Receipts (ADRs) and exchange traded funds (ETFs), the Research Insight database included 8,263 U.S.-based, U.S.-traded companies as of July 15, 2010. From this set, companies whose ticker was solely comprised of numbers, companies which did not have a Global Industry Classification Standard (GICS) designation, and companies which did not have returns data and market capitalization data over the study period were excluded, resulting in a base set of 5,175 companies. This base set ("All U.S. Companies"), which represents over 90 percent of U.S.-based, U.S.-traded market capitalization as of December 2009, was used to calculate all ratios, summary statistics, and portfolio returns throughout the *2010 Study*.

It is also important to note that calendar years (rather than "most recent fiscal year") were used in all cases in order to examine impairment values during a specific period of time, irrespective of company-specific choices of fiscal years.

[2] ASC 805 Glossary.
[3] ASC 350-20-35-11.
[4] ASC 350-20-35-38.
[5] ACS 350-20-35-30.
[6] ACS 350-20-35-57.

Goodwill Impairment and Market-to-Book Value

Market-to-Book Value Overview

While not a sole or definitive indicator of impairment, a company's market capitalization should not be ignored during Step 1 of a goodwill impairment test. Companies that take goodwill impairment charges ostensibly do so as a result of more-than-temporary changes in the financial and operating conditions of their reporting units, corroborated by associated market capitalization declines. It seems reasonable that companies, which have historically relied upon their stock prices during up markets to justify no impairments in their businesses, should consider the implications of stock price declines as well[7].

The 2008–2009 financial crisis highlighted the need for companies to consider their market capitalization during the impairment testing process. In a speech made during the crisis[8], an SEC staff member indicated that "it would not be reasonable for a registrant to simply ignore recent declines in their stock price, as the declines are likely indicative of factors the registrant should consider in their determination of fair value, such as a more-than-temporary repricing of the risk inherent in any company's equity that results in a higher required rate of return or a decline in the market's estimated future cash flows of the company." Nonetheless, the SEC recognized that the market capitalization of a registrant at a given point in time may not fully capture the fair value of reporting units in the aggregate. The SEC staff member acknowledged in the speech that certain factors need to be considered when market capitalization reconciliations are performed, including understanding recent trends in the registrant's market capitalization and valuating any "control premium" in excess of that amount.

[7] Mark M. Donahue, MBA. "Impairment Revisited: Beware of goodwill impairment analyses during extreme market conditions", *The Value Examiner*, September/October 2010, pages 13–16.

[8] Robert G. Fox III, "Remarks before the 2008 AICPA National Conference on Current SEC and PCAOB Developments" (Washington, D.C., December 8, 2008).

Goodwill Impairment and Market-to-Book Value

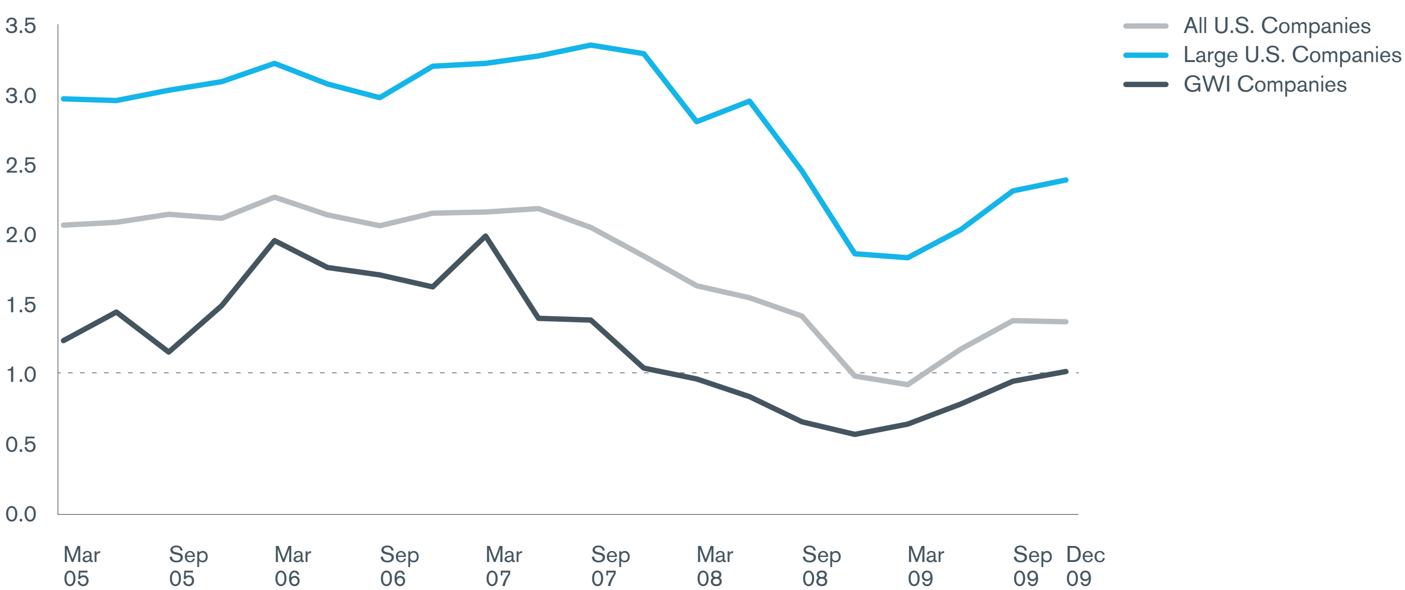
Graph 1 plots the median market-to-book ratio for the following portfolios of companies:

1. 5,175 U.S. publicly-traded companies (which are labeled for purposes of this study, "All U.S. Companies");
2. The 500 largest U.S. publicly-traded companies ("Large U.S. Companies"); and
3. U.S. publicly-traded companies that recorded a goodwill impairment charge ("GWI Companies")[9].

As is illustrated in Graph 1, at the height of the financial crisis (the end of 2008 and the beginning of 2009), all three of these portfolios experienced relatively low market-to-book ratios. Around this time, the median (typical) company in the portfolio *All U.S. Companies* and the portfolio *GWI Companies* were trading at levels below the reported book value of equity. This implied that, at least temporarily, the market perceived the reported book values to be too high relative to the underlying value of these companies.

Graph 1 indicates that the median market-to-book value of the set *All U.S. Companies* fell slightly below 1.0 at the end of 2008, indicating that the median market capitalization was less than book value. The median *Large U.S. Company's* market-to-book ratio was higher over the entire period (March 2005–December 2009) than was the median value of *All U.S. Companies*, but was still significantly depressed at the end of 2008. Rather unsurprisingly, the median goodwill impairment company had a lower market-to-book value ratio than both the median of *All U.S. Companies* and the median of *Large U.S. Companies* in any given quarter, and over the entire period[10].

Graph 1: Median Market-to-Book Ratio for *All U.S. Companies*, *Large U.S. Companies*, and *GWI Companies*
March 2005–December 2009, Quarterly



[9] Source: Standard & Poor's Research Insight and Capital IQ databases. Market-to-book is defined as monthly market value divided by the common shareholder's interest in the company, including common stock, capital surplus, retained earnings and treasury stock adjustments. All portfolios reset quarterly. *All U.S. Companies* are represented by the median market-to-book ratio of 5,175 U.S.-based, publicly-traded firms. *Large U.S. Companies* are represented by median market-to-book ratio of the 500 largest U.S.-based, publicly-traded firms as determined by market capitalization in the quarter measured. *GWI Companies* are represented by the median market-to-book ratio of all companies existing within the *All U.S. Companies* portfolio set that also took a goodwill impairment charge in the quarter measured.

[10] Source: Standard & Poor's Research Insight and Capital IQ databases.

Goodwill Impairment and Market-to-Book Value

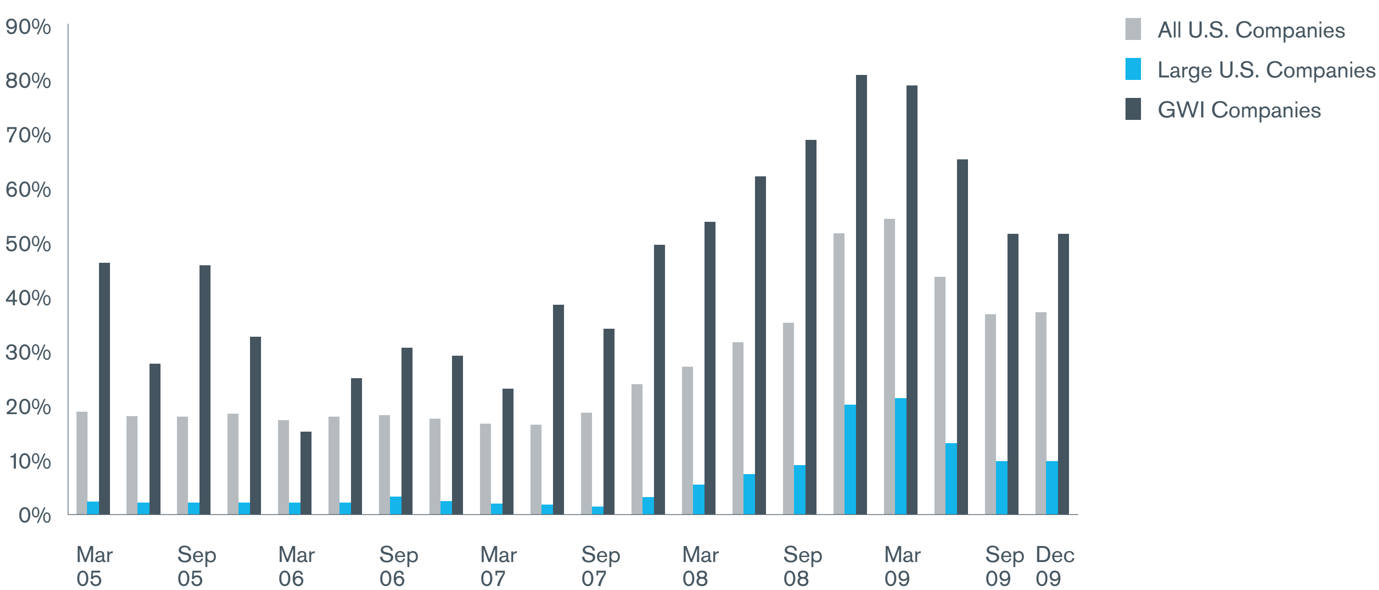
While it is instructive to analyze the median market-to-book ratios of companies over time, it is also important to measure the *percentage* of U.S. firms that have market-to-book ratios less than 1.0 over similar periods. As illustrated in Graph 2, the percentage of such companies in each of the three portfolios increased significantly towards the end of 2008[11].

Large U.S. Companies had the lowest percentage of firms with market-to-book ratios less than 1.0 in any given quarter over the entire period (March 2005–December 2009). Even at the peak of the financial crisis, only 21 percent of *Large U.S. Companies* registered market-to-book value ratios lower than 1.0.

Conversely, and continuing with the pattern set previously, *GWI Companies* had the highest percentage within their ranks with market-to-book ratios less than 1.0, peaking at over 80 percent at the height of the financial crisis.

Understanding the dynamics of the market-to-book ratios is informative, but the fact that an individual company has a ratio below 1.0 does not by default result in failing either Step 1 or 2 of the goodwill impairment test. Reporting unit structures, their respective performance, and where the goodwill resides are a few of the critical factors that must be considered in the impairment testing process.

Graph 2: Percentage of *All U.S. Companies*, *Large U.S. Companies*, and *GWI Companies* with Market-to-Book Value Ratios Less than 1.0
March 2005–December 2009, Quarterly



[11] Source: Standard & Poor's Research Insight and Capital IQ databases.

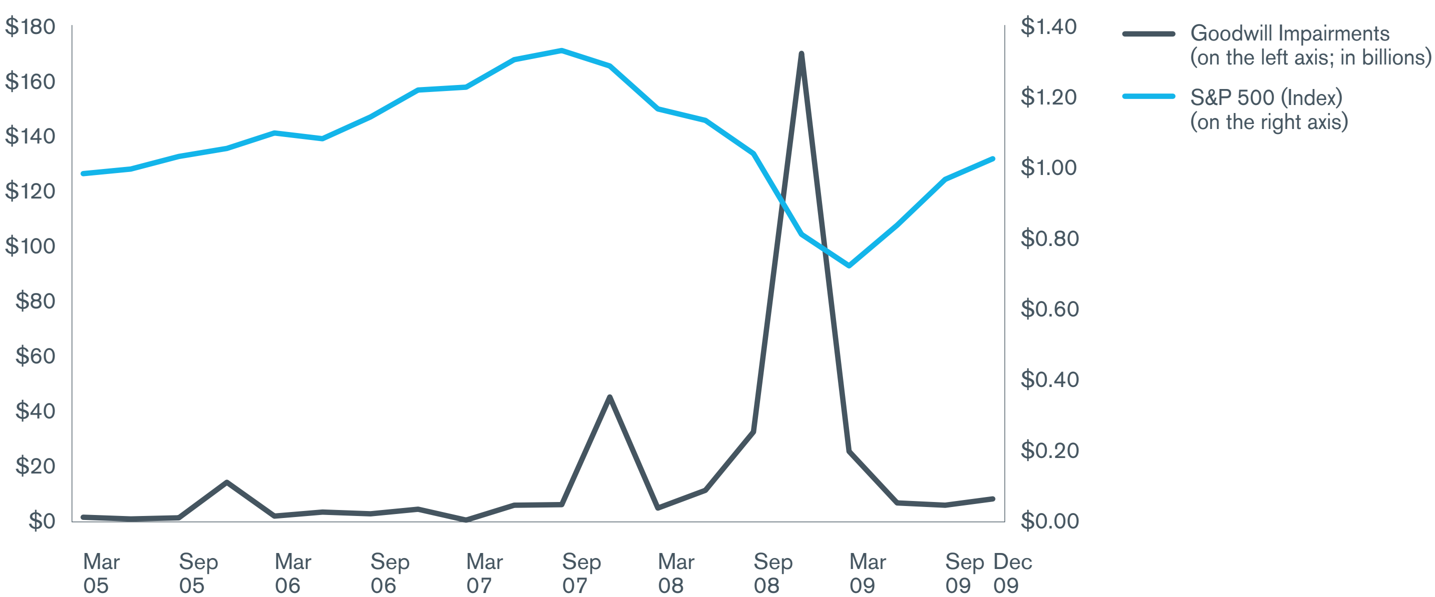
Goodwill Impairment and Market-to-Book Value

An additional perspective is provided in Graph 3, where the quarterly dollar amount of goodwill impairment charges (on the left axis) are plotted against an index representing the growth of $1 invested in the S&P 500 at year-end 2004 (on the right axis)[12].

It is noteworthy in Graph 3 that a very significant dollar amount of goodwill impairment over the 2005–2009 period occurred just as the financial crisis was reaching its zenith, and the stock market was nearing a low for the period. This, as expected, correlated with the drop in the market-to-book ratios.

Such a decline, along with the SEC staff speech cited earlier, likely had a significant impact on the number and magnitude of goodwill impairment charges at that point in time.

Graph 3: Goodwill Impairments, U.S. Companies (in $billions) vs. the S&P 500
(Year-end 2004 = $1.00)
March 2005–December 2009, Quarterly



[12] Source: Standard & Poor's Research Insight and Capital IQ databases. Goodwill impairment in Graph 3 is as of the period to which the impairment charges were attributed.

Summary Statistics by Industry

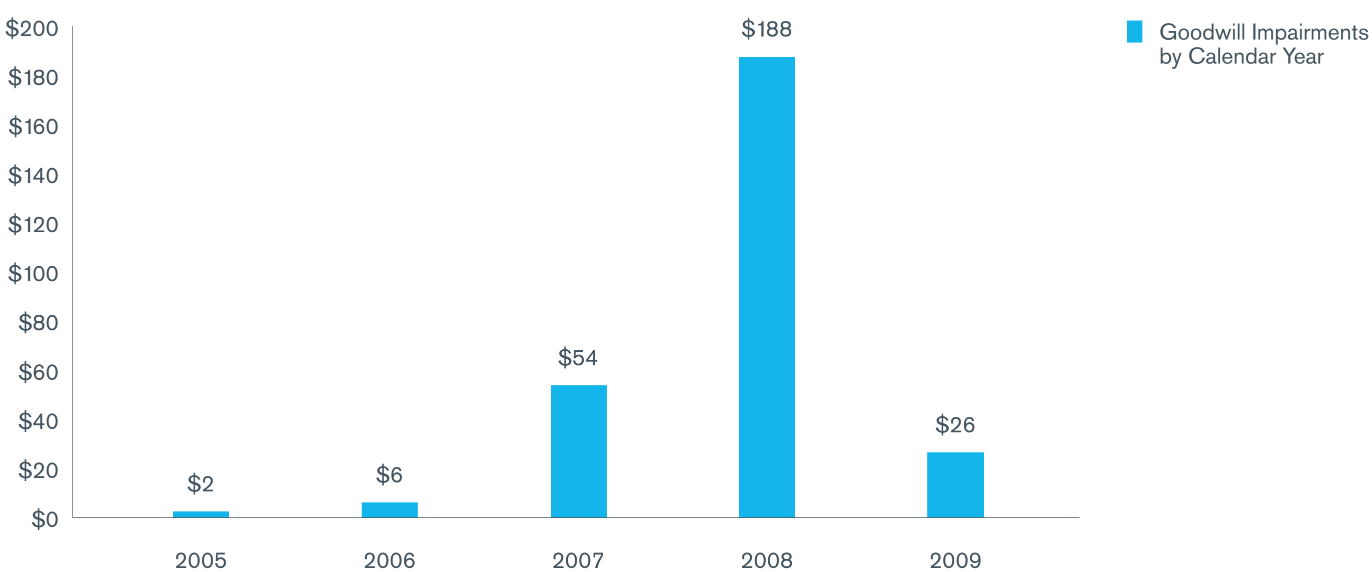
In order to assess the relative performance of a subject company and evaluate the impact of industry trends, it is beneficial to understand how other U.S. companies recorded impairments of goodwill within specific industries[13]. This information can facilitate the comparability of financial statements and provide a useful benchmark during the goodwill impairment testing process.

In this section, goodwill impairment information is compiled for U.S. companies over the time period 2005–2009. The analysis includes 5,175 U.S.-based, U.S.-traded companies, as previously described[14].

An unprecedented aggregate amount of goodwill impairment was recorded by U.S. companies in calendar year 2008, as illustrated in Graph 4[15].

In 2009, the amount of goodwill impaired dropped precipitously from approximately $188 billion in 2008 to $26 billion in 2009, representing an 86 percent decline.

Graph 4: Goodwill Impairments, U.S. Companies (in $billions)
2005–2009



[13] Industries are defined throughout the *2010 Report* in accordance with Global Industry Classification Standard (GICS) codes.
[14] Companies that did not have returns and market capitalization data over the period analyzed were eliminated. Accordingly, the companies examined here were the survivors, and most likely have recorded fewer losses relative to including companies that filed for bankruptcy, were acquired, or otherwise ceased to exist as an independent publicly-traded entity.
[15] Source: Standard & Poor's Research Insight and Capital IQ databases.

Summary Statistics by Industry

Table 1 lists the total dollar value of goodwill impairments (in $billions) by industry from 2005 to 2009[16]. The total dollar value of goodwill impairments increased each year from 2005 to 2008. The largest increases (in dollar terms, compared to the previous year) generally occurred in 2008 (Consumer Discretionary, Financials, Energy, and Information Technology), and the largest decreases (in dollar terms, compared to the previous year) generally occurred in 2009 (Consumer Discretionary, Energy, and Information Technology).

A notable exception to this general trend is the large increase in the dollar value of goodwill impairment in Telecommunication Services from 2006 to 2007, and subsequent large dollar value decrease from 2007 to 2008. This anomaly results primarily from Sprint Nextel's write-off of nearly $30 billion in 2007, attributable to its acquisition of Nextel in 2005.

Table 1: Goodwill Impairments, U.S. Companies, by Industry (in $billions)
2005–2009

	2005	2006	2007	2008	2009
Energy	$0.0	$0.0	$5.0	$35.5	$0.3
Materials	0.2	0.8	1.6	15.0	0.3
Industrials	0.6	0.4	2.4	16.3	5.3
Consumer Discretionary	0.1	0.6	7.5	46.3	2.3
Consumer Staples	0.0	0.1	0.0	3.8	2.3
Healthcare	0.0	1.4	0.4	6.2	0.9
Financials	0.1	0.1	1.0	34.8	10.7
Information Technology	1.3	1.9	6.4	28.8	3.1
Telecomm. Services	0.0	0.0	29.8	1.2	0.0
Utilities	0.1	0.8	0.0	0.5	1.3
Total	$2.4	$6.1	$54.2	$188.4	$26.4

[16] Source: Standard & Poor's Research Insight and Capital IQ databases. For a complete listing of goodwill impairments for 2009 at the GICS sub-industry level, see Appendix A.

Summary Statistics by Industry

In Graphs 5a and 5b, goodwill impairments by industry (as a percentage of total goodwill impairments across all industries) are shown for 2008 and 2009[17].

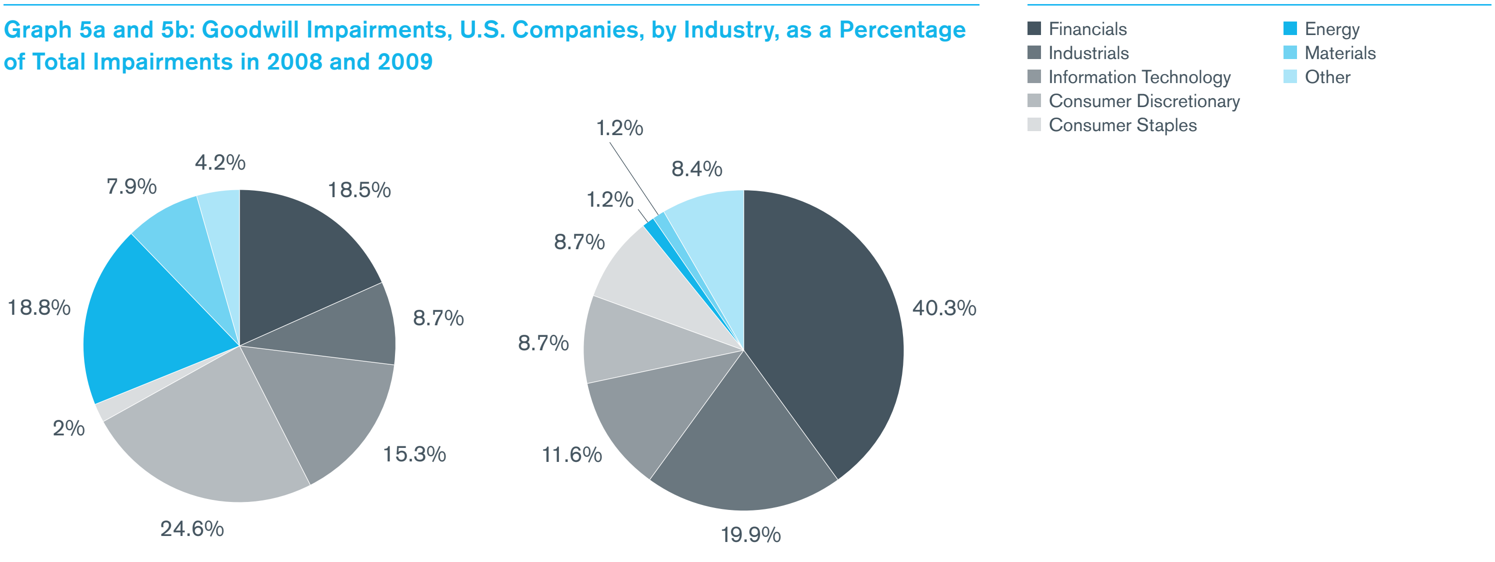
In 2008, Consumer Discretionary accounted for the largest percentage of goodwill impairment (24.6 percent), followed by Energy (18.8 percent), and then Financials (18.5 percent).

In 2009, Financials accounted for the largest percentage of goodwill impairment (40.3 percent), followed by Industrials (19.9 percent) and then Information Technology (11.6 percent).

Bear in mind that Graphs 5a and 5b represent the percentage of impairment by industry relative to the total amount of impairment across all industries in each year. For instance, Financials represented 18.5 percent of total impairments in 2008, and 40.3 percent of impairments in 2009, but this does not necessarily mean that the dollar amount of impairments in Financials increased from 2008 to 2009.

It simply means that Financial's impairments represented a greater percentage of total impairments in 2009 than they did in 2008 (in actuality, the total dollar value of goodwill impairments in Financials decreased from $34.8 billion in 2008 to $10.7 billion in 2009–see Table 1).

Graph 5a and 5b: Goodwill Impairments, U.S. Companies, by Industry, as a Percentage of Total Impairments in 2008 and 2009



Graph 5a: 2008

Graph 5b: 2009

[17] Source: Standard & Poor's Research Insight and Capital IQ databases. "Other" is represented here by the sum of goodwill impairment in the Healthcare, Telecommunications Services, and Utilities industries.

Summary Statistics by Industry

In order to better understand which industries were most affected by goodwill impairments over time, Table 2 provides the rank order (from 1 to 10) of total dollar value of goodwill impairment by industry for the period 2005–2009. Industries were ranked annually from the highest dollar value of goodwill impairment (ranked first) to the lowest dollar value of goodwill impairment (ranked 10th).

For example, in 2005 the Energy industry impaired the least amount of goodwill (ranked 10th), but in 2008 Energy registered the second highest amount of goodwill impairment.

Table 2: Rank Order of Goodwill Impairments, U.S. Companies, by Dollar Value, by Industry (1 = Highest, 10 = Lowest)
2005–2009

Rank Order	2005	2006	2007	2008	2009
1	Information Technology	Information Technology	Telecomm. Services	Consumer Discretionary	Financials
2	Industrials	Healthcare	Consumer Discretionary	Energy	Industrials
3	Materials	Utilities	Information Technology	Financials	Information Technology
4	Consumer Discretionary	Materials	Energy	Information Technology	Consumer Discretionary
5	Financials	Consumer Discretionary	Industrials	Industrials	Consumer Staples
6	Utilities	Industrials	Materials	Materials	Utilities
7	Healthcare	Financials	Financials	Healthcare	Healthcare
8	Consumer Staples	Consumer Staples	Healthcare	Consumer Staples	Materials
9	Telecomm. Services	Energy	Consumer Staples	Telecomm. Services	Energy
10	Energy	Telecomm. Services	Utilities	Utilities	Telecomm. Services

Summary Statistics by Industry

In Table 3, the percentage of companies (out of the 5,175 companies included in the study) that recorded goodwill impairment in each of 10 industries is shown over time (the largest percentage in each year is indicated in gray).

Referring to Table 3, 14.8 percent of the publicly-traded companies in Consumer Discretionary recognized a goodwill impairment in 2008.

In 2009, Industrials had the largest percentage of companies that impaired goodwill (9.4 percent), followed by Information Technology (6.6 percent). The average and median percentage of companies (across all industries) that impaired goodwill increased in the most recent years.

Table 3: Percentage of U.S. Companies that Recorded Goodwill Impairment by Industry
2005–2009

	2005	2006	2007	2008	2009
Energy	0.0%	0.4%	1.4%	9.5%	2.8%
Materials	1.5	1.5	3.8	11.4	4.2
Industrials	2.5	1.5	3.3	12.4	9.4
Consumer Discretionary	1.1	2.0	4.9	14.8	6.4
Consumer Staples	0.5	1.6	2.6	4.2	5.2
Healthcare	0.6	2.1	1.8	5.6	3.2
Financials	0.6	0.7	1.9	6.2	6.4
Information Technology	2.3	1.6	4.5	14.5	6.6
Telecomm. Services	1.4	1.4	5.8	10.1	4.3
Utilities	1.9	2.9	1.0	3.8	4.8
Average	1.2%	1.6%	3.1%	9.2%	5.3%
Median	1.3%	1.5%	3.0%	9.8%	5.0%

Summary Statistics by Industry

In Table 4, the percentage of companies (out of the 5,175 U.S. companies included in the study) *with* goodwill in each of 10 industries is shown over time (the largest percentage in each year is indicated in gray).

Approximately half of U.S companies carry goodwill on their balance sheets. With the exception of 2006, Industrials had the highest percentage of companies with goodwill. Financials had the lowest percentage of companies with goodwill in each year over the 2005–2009 period.

Table 4: Percentage of U.S. Companies with Goodwill by Industry
2005–2009

	2005	2006	2007	2008	2009
Energy	33.0%	36.8%	42.1%	39.6%	40.7%
Materials	40.2	42.8	47.0	45.8	45.8
Industrials	57.7	58.7	64.0	63.0	62.1
Consumer Discretionary	52.8	55.3	57.2	54.2	52.5
Consumer Staples	51.6	52.6	55.7	56.3	55.2
Healthcare	42.1	44.0	46.7	46.0	47.0
Financials	26.4	28.3	33.8	32.5	29.8
Information Technology	55.6	58.9	60.7	58.4	57.0
Telecomm. Services	50.7	52.2	56.5	53.6	56.5
Utilities	51.9	51.0	54.8	55.8	54.8
Average	46.2%	48.1%	51.9%	50.5%	50.2%
Median	51.1%	51.6%	55.3%	53.9%	53.7%

Summary Statistics by Industry

In Table 5, the percentage of companies with goodwill that recorded a goodwill impairment in each of 10 industries is shown over time (the largest percentage in each year is indicated in gray).

It is important to note that Table 5 is the percentage of companies *with goodwill* that recorded a goodwill impairment, while Table 3 was the percentage of companies that recorded impaired goodwill out the *complete group of 5,175 companies included in the study*.

In 2009, 21.4 percent of companies in the Financial sector with goodwill impaired it. Over all periods, the highest percentage of companies impairing goodwill was in Consumer Discretionary during 2008.

Table 5: Percentage of U.S. Companies with Goodwill that Recorded a Goodwill Impairment by Industry
2005–2009

	2005	2006	2007	2008	2009
Energy	0.0%	1.0%	3.3%	23.9%	6.9%
Materials	3.8	3.5	8.1	24.8	9.1
Industrials	4.3	2.5	5.2	19.7	15.2
Consumer Discretionary	2.0	3.6	8.5	27.2	12.2
Consumer Staples	1.0	3.0	4.7	7.4	9.4
Healthcare	1.4	4.8	3.9	12.2	6.8
Financials	2.3	2.6	5.6	19.2	21.4
Information Technology	4.2	2.8	7.4	24.8	11.6
Telecomm. Services	2.9	2.8	10.3	18.9	7.7
Utilities	3.7	5.7	1.8	6.9	8.8
Average	2.6%	3.2%	5.9%	18.5%	10.9%
Median	2.6%	2.9%	5.4%	19.4%	9.3%

Summary Statistics by Industry

Key Ratios for Goodwill Impairments

Using the 5,175 U.S. companies included in the study, the ratios summarized in Table 6 were measured.

Table 6: Key Ratios for Goodwill Impairments

		Intensity Measure	How?	Why?
Goodwill Intensity	Which industries had/have the most goodwill on their balance sheets?	GW/TA	Goodwill as a percentage of total assets, measured at year end 2005–2009	Indicates how significant an industry's goodwill is in relation to total assets.
Loss Intensity	Which industries' balance sheets got hit hardest by the impairments?	I/TA	Goodwill impairment loss in Year t as a percentage of total assets in Year t-1	Indicates how impairments impacted each industry's total assets.
Loss Intensity	Which industries' goodwill got hit hardest by the impairments?	I/GW	Goodwill impairment loss in Year t as a percentage of total goodwill in Year t-1	Indicates how impairments impacted each industry's goodwill.

The percentage of assets impaired (I/TA) combines the other two ratios used in this analysis:

(GW/TA)		(I/GW)		(I/TA)
$\frac{\text{Goodwill}}{\text{Total Assets}}$	x	$\frac{\text{Impairments}}{\text{Goodwill}}$	=	$\frac{\text{Impairments}}{\text{Total Assets}}$

Accordingly, goodwill impairments to total assets is a more comprehensive measure of loss intensity than the ratio of goodwill impairments divided by goodwill. Goodwill impairments to total assets can be called "the bigger they are the harder they fall" ratio, because companies with the greatest goodwill intensity will take the biggest balance sheet hit when recording goodwill impairments.

Summary Statistics by Industry

Goodwill Intensity (Goodwill to Total Assets)

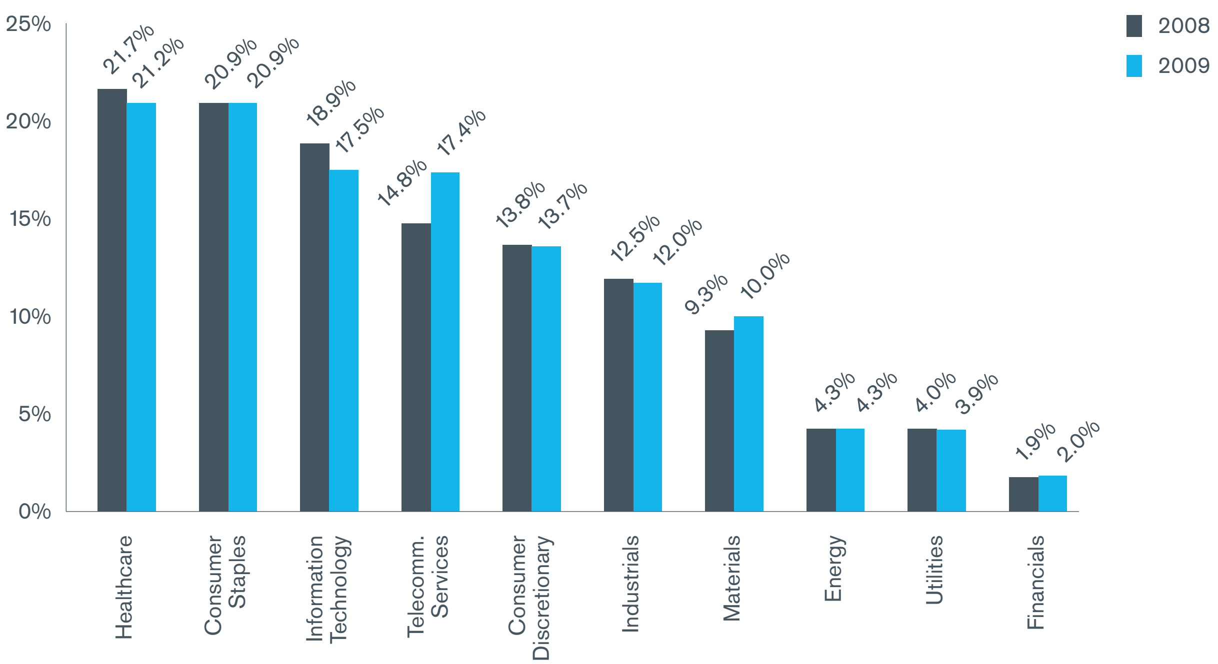
Goodwill intensity is goodwill as a percentage of total assets, and indicates how significant an industry's goodwill is in relation to total assets. Because goodwill is recorded in a business combination, goodwill intensity is the greatest in industry sectors with significant mergers and acquisition activity in recent years.

While aggregate goodwill as a percentage of total assets for U.S. companies (across all industries) was approximately 6 percent in each year over the 2005–2009 period, this ratio can vary significantly among industries, as illustrated in Graph 6.

In 2008 and 2009, Healthcare had the highest goodwill intensity (GW/TA) at 21.7 and 21.2 percent, respectively. One factor contributing to this is that goodwill tends to be a significant component of the purchase price in healthcare industry transactions.

After Healthcare, goodwill intensity was highest in Consumer Staples and Information Technology in 2008 and 2009. Energy, Utilities and Financials (in that order) had the lowest goodwill intensity over all periods studied (2005–2009).

Graph 6: Goodwill Intensity, as Measured by Goodwill to Total Assets (GW/TA), by Industry (in %)
2008–2009



Summary Statistics by Industry

Table 7 lists each of the 10 industry's goodwill intensity over time, as measured by goodwill to total assets (GW/TA), with 2009 sorted from highest to lowest (the largest percentage in each year is indicated in gray).

Although goodwill intensity was fairly stable between 2008 and 2009, this does not imply that the goodwill to total asset (GW/TA) ratio of any one industry is always stable over a longer period of time. For example Telecommunications Services registered a GW/TA ratio of 7.6 percent in 2005; by 2009, this had increased to 17.4 percent, as shown in Table 7.

Table 7: Goodwill Intensity, as Measured by Goodwill to Total Assets (GW/TA), by Industry (in %)
2005–2009

	2005	2006	2007	2008	2009
Healthcare	18.1%	18.6%	21.5%	21.7%	21.2%
Consumer Staples	18.8	21.5	21.4	20.9	20.9
Information Technology	16.3	17.4	18.6	18.9	17.5
Telecomm. Services	7.6	11.9	14.5	14.8	17.4
Consumer Discretionary	13.6	15.1	14.3	13.8	13.7
Industrials	12.5	14.7	12.2	12.5	12.0
Materials	10.1	10.7	11.0	9.3	10.0
Energy	5.5	6.4	6.1	4.3	4.3
Utilities	4.5	4.9	4.5	4.0	3.9
Financials	1.7	2.0	2.0	1.9	2.0
Average	10.9%	12.3%	12.6%	12.2%	12.3%
Median	11.3%	13.3%	13.2%	13.1%	12.8%

Summary Statistics by Industry

Loss Intensity

Two measures for evaluating loss intensity by industry are presented: (i) goodwill impairment to goodwill; and (ii) goodwill impairment to total assets.[18]

Goodwill impairment to goodwill (I/GW) is a measure of the magnitude of goodwill impairments; in other words, it measures the percent of an industry's goodwill that was impaired.

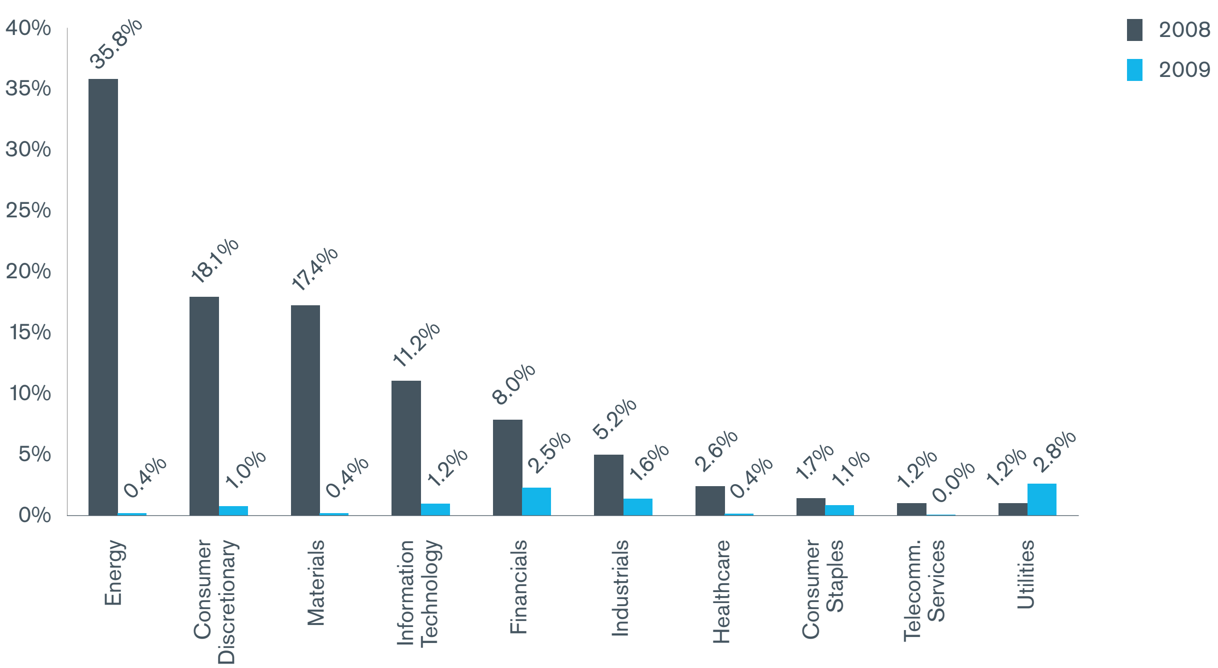
Goodwill impairment to total assets (I/TA) is a measure of the impact of goodwill impairments on an industry's average balance sheet. In other words, it measures the percent of an industry's total asset base that was impaired.

Goodwill Impairment to Goodwill

Graph 7 presents (I/GW) observed for 10 industries in 2008 and 2009.

An unprecedented aggregate dollar amount of goodwill was impaired by the 5,175 U.S. companies included in the study in calendar year 2008, followed by a steep aggregate drop in 2009 (see Graph 4); it is, therefore, not surprising to see a corresponding decrease in goodwill impairment at the industry level as well. The only industry experiencing an increase in goodwill loss intensity (as measured by goodwill impairment to goodwill) from 2008 to 2009 was Utilities, which increased from 1.2 percent to 2.8 percent (see Graph 7).

Graph 7: Goodwill Loss Intensity, as Measured by Goodwill Impairment to Goodwill (I/GW), by Industry (in %)
2008–2009



[18] Loss intensity is measured by impairments taken in Year t divided by either total assets (in the case of I/TA) or goodwill (in the case of I/GW) in Year t-1.

Summary Statistics by Industry

Table 8 lists each of the 10 industry's loss intensity over time, as measured by goodwill impairment to goodwill (I/GW), with 2009 sorted from highest to lowest (the largest percentage in each year is indicated in gray).

2008 clearly provided record levels of goodwill impairment in the U.S. when compared to other years, due in good part to the financial crisis of late 2008 and early 2009.

For example, in 2008 Energy impaired almost 36 percent of its aggregate goodwill. A notable exception in this trend is the Telecommunications Services industry, which impaired an astonishing 46.3 percent of its aggregate goodwill in 2007. As noted earlier, this was primarily due to Sprint Nextel's write-off of nearly $30 billion, attributable to its acquisition of Nextel in 2005.

Table 8: Goodwill Loss Intensity, as Measured by Goodwill Impairment to Goodwill (I/GW), by Industry (in %)
2005–2009

	2005	2006	2007	2008	2009
Utilities	0.2%	1.8%	0.0%	1.2%	2.8%
Financials	0.0	0.0	0.3	8.0	2.5
Industrials	0.2	0.1	0.8	5.2	1.6
Information Technology	0.8	1.1	3.0	11.2	1.2
Consumer Staples	0.0	0.0	0.0	1.7	1.1
Consumer Discretionary	0.0	0.3	2.9	18.1	1.0
Materials	0.4	1.3	2.3	17.4	0.4
Energy	0.0	0.0	5.6	35.8	0.4
Healthcare	0.0	0.9	0.2	2.6	0.4
Telecomm. Services	0.0	0.0	46.3	1.2	0.0
Average	0.2%	0.6%	6.1%	10.2%	1.2%
Median	0.0%	0.2%	1.6%	6.6%	1.0%

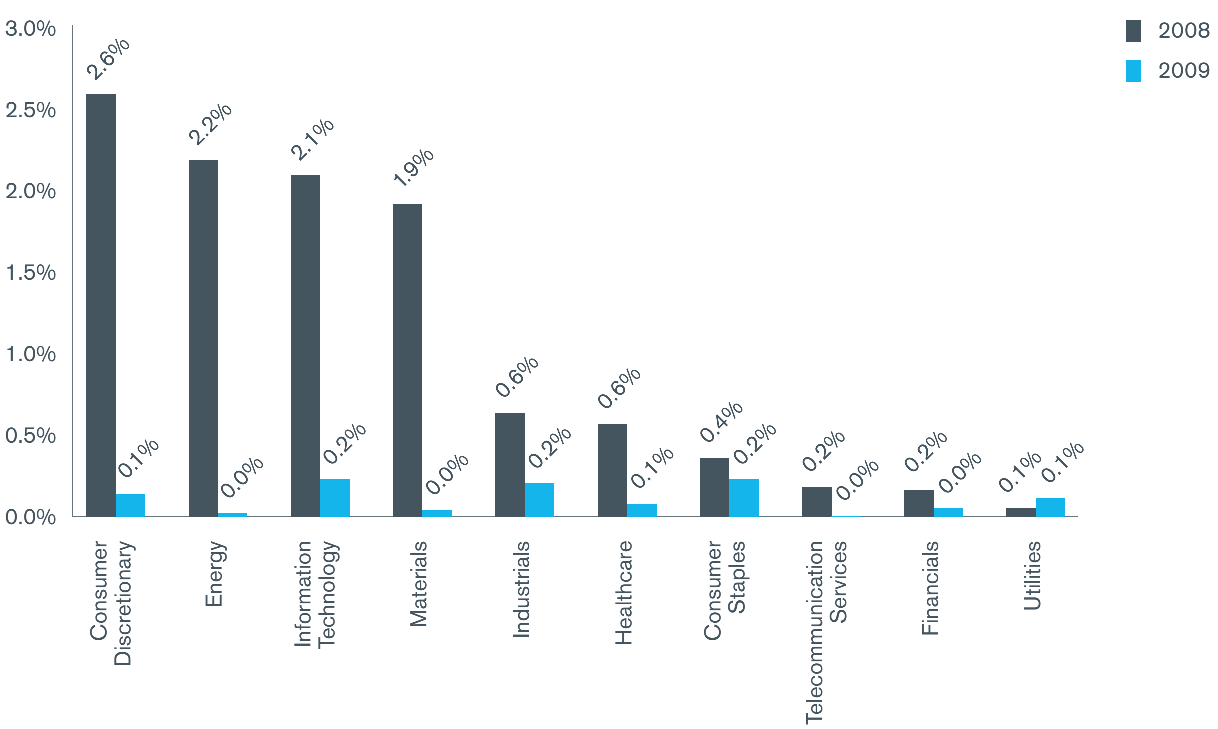
Summary Statistics by Industry

Goodwill Impairments to Total Assets

Graph 8 depicts goodwill impairment to total assets for 10 industries in 2008 and 2009. Goodwill impairment to total assets (I/TA) is a measure of which industries' balance sheets were most impacted by impairments.

Again, it is not surprising to see a significant decrease in goodwill impairment at the industry level from 2008 to 2009, owing to the dramatic decrease in aggregate impairments from 2008 to 2009. For example, the aggregate amount of goodwill that Consumer Discretionary impaired in 2008 was 2.6 percent of the industry's aggregate assets, but in 2009, represented only 0.1 percent of the industry's aggregate assets.

Graph 8: Goodwill Loss Intensity, as Measured by Goodwill Impairment to Total Assets (I/TA), by Industry (in %)
2008–2009



Summary Statistics by Industry

Table 9 lists each of the 10 industry's loss intensity over time, as measured by goodwill impairment to total assets (I/TA), with 2009 sorted from highest to lowest (the largest percentage in each year is indicated in gray).

Table 9: Goodwill Loss Intensity, as Measured by Goodwill Impairment to Total Assets (I/TA), by Industry (in %)
2005–2009

	2005	2006	2007	2008	2009
Consumer Staples	0.0%	0.0%	0.0%	0.4%	0.2%
Information Technology	0.1	0.2	0.5	2.1	0.2
Industrials	0.0	0.0	0.1	0.6	0.2
Consumer Discretionary	0.0	0.0	0.4	2.6	0.1
Utilities	0.0	0.1	0.0	0.1	0.1
Healthcare	0.0	0.2	0.0	0.6	0.1
Financials	0.0	0.0	0.0	0.2	0.0
Materials	0.0	0.1	0.2	1.9	0.0
Energy	0.0	0.0	0.4	2.2	0.0
Telecomm. Services	0.0	0.0	5.5	0.2	0.0
Average	0.0%	0.1%	0.7%	1.1%	0.1%
Median	0.0%	0.0%	0.2%	0.6%	0.1%

Returns-Based Analysis

Financial and academic studies have analyzed the effect, if any, that goodwill impairment has on stock prices, both before and after goodwill is found to be impaired.

One study (among others) found that "Impairments are associated with low market returns *before* the impairment, indicating that market investors anticipate goodwill impairments"[19] (emphasis added). Another study found that "impairments are negatively associated with corporate performance *after* the impairment"[20] (emphasis added).

Others remark on the amount of time between probable goodwill impairment and the actual accounting entry indicating that the goodwill is impaired. As one study stated, "…we find that goodwill impairments lag deteriorating operating performance and stock returns by at least two years. Furthermore, the announcements of goodwill impairments elicit little market response. The evidence suggests that goodwill impairment decisions by management are not a timely reflection of the changes in estimated future underlying cash flows but rather a delayed response to the almost complete exhaustion of the goodwill."[21]

[19] Alciatore, M., P. Easton, and N. Spear. 2000. "Accounting for the Impairment of Long-Lived Assets: Evidence from the Petroleum Industry," Journal of Accounting and Economics 29: 151-172. Henning, S., B. Lewis, and W. Shaw. 2000. "Valuation of the Components of Purchased Goodwill," Journal of Accounting Research 38: 375-386.Herschey, M., and V. Richardson. 2003. "Investor Underreaction to Goodwill Write-Offs," Financial Analysts Journal, November/December: 75-84.

[20] Li, Z. P. Shroff, R. Venkataraman. 2006. "Goodwill Impairment Loss: Causes and Consequences." University of Minnesota Working Paper.

[21] Kevin K. Li and Richard G Sloan, 2009. "Has Goodwill Accounting Gone Bad?", Haas School of Business, University of California at Berkeley.

Returns-Based Analysis

Relative Performance by Goodwill Impairment Characteristic

What is the performance of companies that have impaired goodwill relative to the market in general? In order to study this issue, portfolios were created with certain characteristics (see Table 10), and then the relative performance of each was calculated over time.

Market-capitalization-weighted returns for each of the portfolios were calculated, and indices representing the growth of $1 invested at year-end 2004 were constructed for each portfolio and compared to an index representing an investment of $1 in the S&P 500 Index (the "market") over the same period.[22]

It important to note that there is some overlap of characteristics between the S&P 500 Index and the *YES/NO* portfolios and the loss intensity portfolios, since the S&P 500 Index includes some companies that did (and did not) recognize goodwill impairment from 2005 through 2009. Having said that, most companies in the S&P 500 have never impaired goodwill (see Table 11[23]), and the effect of the overlap is mitigated.[24]

Table 10: Market-Capitalization-Weighted Portfolios (by Characteristic)
January 2005–December 2009

A	B	C
YES/NO Portfolios Impairment or No Impairment	**Loss Intensity Portfolios (I/GW)** Impairment to Goodwill High Intensity or Low Intensity	**Loss Intensity Portfolios (I/TA)** Impairment to Total Assets High Intensity or Low Intensity
Goodwill Impairment **(YES)** Companies with goodwill impairment in any period (2005–2009)	Loss Intensity **(HIGH)** Companies with High Goodwill Loss Intensity I/GW	Loss Intensity **(HIGH)** Companies with High Goodwill Loss Intensity I/TA
Goodwill Impairment **(NO)** Companies without goodwill impairment in any period (2005–2009)	Loss Intensity **(LOW)** Companies with Low Goodwill Loss Intensity I/GW	Loss Intensity **(LOW)** Companies with Low Goodwill Loss Intensity I/TA

Table 11: Percentage of S&P 500 Constituent Companies that Recorded a Goodwill Impairment, by Year
2005–2009

2005	2006	2007	2008	2009
1.4%	1.8%	4.8%	14.6%	7.6%

[22] Market-capitalization-weighted returns were calculated at the company level for each of the 60 months in the time horizon studied for each portfolio; the sum of these represents the portfolio return.
[23] Source: Standard & Poor's Research Insight and Capital IQ databases.
[24] The exception is the "NO" portfolios, which will necessarily have significant overlap with the S&P 500 for the characteristic "no impairment".

Returns-Based Analysis

A. YES/NO Portfolios: Companies with Impaired Goodwill vs. Companies without Impaired Goodwill

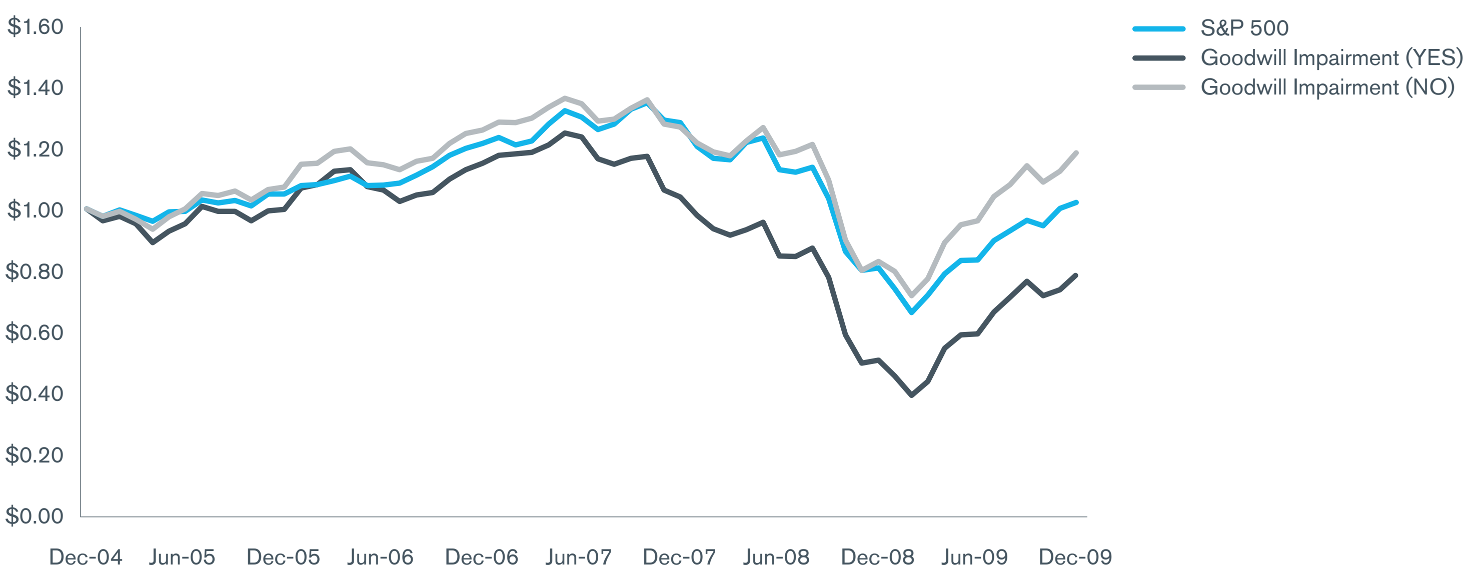
In an attempt to broadly gauge the performance differences between companies that impair goodwill and companies that do not impair goodwill[25], two separate portfolios were constructed by performing the following steps:

- Identified companies that impaired goodwill in any quarter over the period March 2005 through December 2009. This set of companies made up the "Goodwill Impairment (YES)" portfolios.
- Identified companies that did not impair goodwill in any quarter over the period March 2005 through December 2009. This set of companies made up the "Goodwill Impairment (NO)" portfolios[26].

The returns of these two portfolios and the S&P 500 are then compared, as presented in Graph 9.

Over the time horizon 2005–2009, companies that *had not* recorded a goodwill impairment outperformed both companies that *had* recorded a goodwill impairment and the S&P 500 index, as illustrated in Graph 9.

Graph 9: Goodwill Impairment (YES) and Goodwill Impairment (NO) Portfolios vs. the S&P 500
Index (Year-End 2004 = $1.00)
January 2005–December 2009



[25] Source: Standard & Poor's Research Insight and Capital IQ databases. Base set: 5,175 U.S.-based, U.S.-traded-firms, excluding funds and ETFs which had monthly returns and market capitalization data over the period January 2005–December 2009. To lessen the impact of any size effects, the companies were bucketed into broad size categories representing Large-Cap (>$5 billion), Mid-Cap ($2 billion to $5 billion), Low-Cap ($500 Million to $2 billion), and Micro-Cap stocks (<$500 million). Companies with market caps less than $10 million were excluded. Portfolios were re-set quarterly.

[26] Since the majority of companies did not impair goodwill over the period studied, the portfolio of companies that had not impaired goodwill was larger than the set of companies that had impaired goodwill.

Returns-Based Analysis

B. Loss Intensity Portfolios (I/GW): Companies with High Goodwill Impairment to Goodwill vs. Companies with Low Goodwill Impairment to Goodwill

This ratio measures the percentage of goodwill written off during any given period.

In an attempt to compare the performance of companies that impair a significant proportion of their goodwill versus companies that impair a smaller proportion of their goodwill, two separate portfolios were constructed by performing the following steps:

- Identified those companies (of the 5,175 companies included in the study) that recorded a goodwill impairment.

Of those, the companies were further segregated in the following manner:

- Identified companies that had impairment to total goodwill (I/GW) ratios greater than the median impairment to goodwill (I/GW) ratio.
- Identified companies that had impairment to total goodwill (I/GW) ratios less than the median impairment to goodwill (I/GW) ratio.[27]

The portfolio comprised of companies with impairment to goodwill (I/GW) ratios less than the median outperformed the portfolio comprised of companies with impairment to goodwill ratios greater than the median over the 2005–2009 period, as illustrated in Graph 10. The S&P 500 outperformed both of these portfolios.

Graph 10: Loss Intensity Portfolios: Goodwill Impairment to Goodwill (I/GW)
Index (Year-End 2004 = $1.00)
January 2005–December 2009

[27] Based on a sample of firms that recorded a goodwill impairment. Source: Standard & Poor's Research Insight and Capital IQ databases. Base set: 5,175 U.S.-based, U.S.-traded-firms, excluding funds and ETFs which had monthly returns and market capitalization data over the period January 2005–December 2009. To lessen the impact of any size effects, the companies were bucketed into broad size categories representing Large-Cap (>$5 billion), Mid-Cap ($2 billion to $5 billion), Low-Cap ($500 Million to $2 billion), and Micro-Cap stocks (<$500 million). Companies with market caps less than $10 million were excluded. Portfolios were re-set quarterly.

Returns-Based Analysis

C. Loss Intensity Portfolios (I/TA): Companies with High Goodwill Impairment to Total Assets vs. Companies with Low Goodwill Impairment to Total Assets

Goodwill impairment to total assets (I/TA) is a measure of which industries' asset bases were most affected by impairments.

Once again, to compare the performance of companies that impaired a significant proportion of their asset base versus companies that impaired a smaller proportion of their assets, two separate portfolios were constructed by performing the following steps:

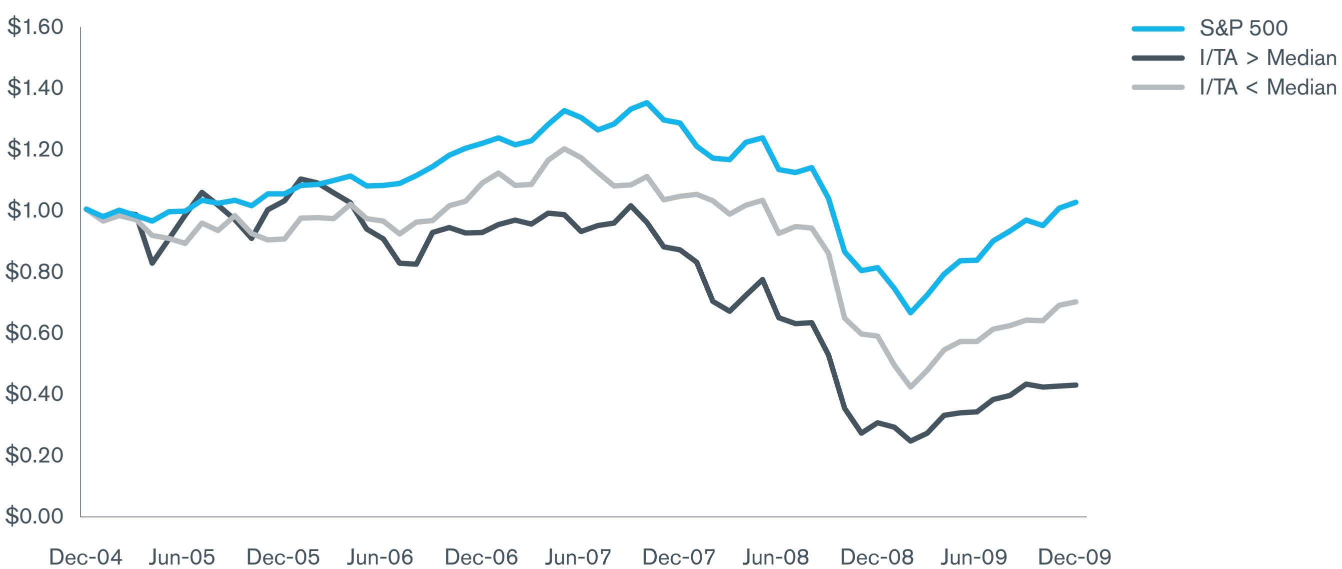
- Identified those companies (of the 5,175 companies included in the study) that recorded a goodwill impairment.

Of those, the companies were further segregated in the following manner:

- Identified companies that had impairment to total assets (I/TA) ratios greater than the median impairment to total assets (I/TA) ratio.
- Identified companies that had impairment to total assets (I/TA) ratios less than the median impairment to total asset ratio (I/TA)[28].

The portfolio comprised of companies with impairment to total assets ratios (I/TA) less than the median impairment to total assets ratio outperformed the portfolio comprised of companies with I/TA ratios greater than the median over the 2005–2009 period. The S&P 500 outperformed both of these portfolios.

Graph 11: Loss Intensity Portfolios: Goodwill Impairment to Total Assets (I/TA)
Index (Year-End 2004 = $1.00)
January 2005–December 2009



[28] Based on a sample of firms that recorded a goodwill impairment. Source: Standard & Poor's Research Insight and Capital IQ databases. Base set: 5,175 U.S.-based, U.S.-traded-firms, excluding funds and ETFs which had monthly returns and market capitalization data over the period January 2005–December 2009. To lessen the impact of any size effects, the companies were bucketed into broad size categories representing Large-Cap (>$5 billion), Mid-Cap ($2 billion to $5 billion), Low-Cap ($500 Million to $2 billion), and Micro-Cap stocks (<$500 million). Companies with market caps less than $10 million were excluded. Portfolios were re-set quarterly.

Returns-Based Analysis

Relative Performance Before and After Goodwill is Impaired

As noted in the *2009 Study*:

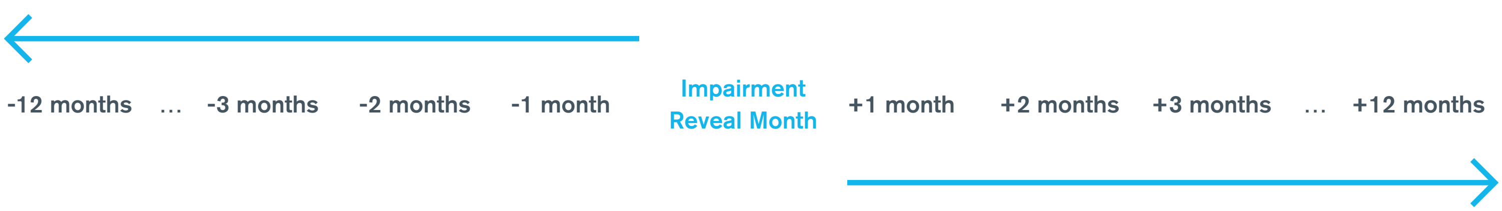
"Impairments are associated with low market returns before the impairment, indicating that market investors anticipate goodwill impairments[29]. Impairments are negatively associated with corporate performance after the impairment, indicating that goodwill, once written off, does not continue to produce operating income[30]."

The *2010 Study* takes a closer look at performance of companies before and after goodwill is impaired, relative to the market in general[31].

To do this, all (quarterly) occurrences of goodwill impairment over the 2005–2009 period were first mapped to the month that they were made public (i.e. the "reveal" month), using the filing date of the financial statement in which the impairment was originally announced as a proxy for the reveal month.[32]

Then, for all companies revealing impairments in each month from January 2005 to December 2008, market-capitalization weighted portfolio returns were calculated for the 12 months before the impairment reveal month, and for the 12 months after the impairment reveal month, as shown in Figure 1.

Figure 1



[29] Alciatore, M., P. Easton, and N. Spear. 2000. "Accounting for the Impairment of Long-Lived Assets: Evidence from the Petroleum Industry," Journal of Accounting and Economics 29: 151-172. Henning, S., B. Lewis, and W. Shaw. 2000. "Valuation of the Components of Purchased Goodwill," Journal of Accounting Research 38: 375-386.Herschey, M., and V. Richardson. 2003. "Investor Underreaction to Goodwill Write-Offs," Financial Analysts Journal, November/December: 75-84.

[30] Li, Z. P. Shroff, R. Venkataraman. 2006. "Goodwill Impairment Loss: Causes and Consequences." University of Minnesota Working Paper.

[31] The "market" is defined here at the S&P 500 Index.

[32] This was a simplification in the sense that some companies may announce the magnitude of goodwill impairment prior to filing their financial statements with the SEC.

Returns-Based Analysis

Example: For all companies that revealed goodwill impairment in January of 2005, a portfolio was formed and market-capitalization-weighted returns were calculated for each of the 12 months *before* (January 2004–December 2004), and each of the 12 months *after* (February 2005–January 2006). Then, for all companies that revealed goodwill impairment in February of 2005, the same calculations were made; then March 2005, and so on. The last reveal month was December 2008, for which returns were calculated from December 2007–November 2008, and from January 2009–December 2009.

These calculations analyzed 889 individual impairment events and involved the creation of 1,152 individual sets of market-capitalization-weighted returns over the January 2005 to December 2008 period[33]. A sample of the results of these calculations is provided in Table 12[34].

Example: The portfolio made up of companies that "revealed" goodwill impairment as of December 2008 had a return of -8.4 percent in the second month *after* the reveal month, and a return of -1.7 percent 12 months *before* the reveal month (see Table 12).

Table 12: "Reveal Portfolio" Returns Before and After Each Impairment Reveal Month (in %)
Reveal Months: January 2005 –December 2008

"Reveal Portfolio" Returns										
-12 months	…	-3 months	-2 months	-1 month	Reveal Month	+1 month	+2 months	+3 months	…	+12 months
-1.7%		-10.5%	-29.7%	-21.0%	Dec-08	0.4%	-8.4%	15.7%		8.5%
-4.9		-6.1	-28.6	-27.1	Nov-08	0.8	-13.7	-12.6		5.6
-8.3		-0.7	5.6	-15.3	Oct-08	-3.2	-1.8	5.6		-0.9
–		–	–	–		–	–	–		–
–		–	–	–		–	–	–		–
-1.5		-6.4	8.9	-6.2	Feb-05	-12.7	-13.6	-32.0		23.1
4.8		-7.4	2.9	22.5	Jan-05	1.1	-15.4	-8.5		-10.0

[33] January 2005 to December 2008 is a 48-month period. For each month within this period, 12 sets of market-capitalization-weighted portfolio returns were calculated going forward, and 12 sets of market-capitalization-weighted portfolio returns were calculated going back, totaling 1,152 individual sets of returns (48 x 12 x 2).

[34] In the interest of space, Tables 12 and 13 are abbreviated, and do not show all 48 reveal months.

Returns-Based Analysis

The "before impairment" and "after impairment" returns compiled in Table 12 can be compared to the returns of the market (the S&P 500). To do so, it is necessary to first construct an equivalent table of market returns in the exact same fashion as the portfolio returns in Table 12. A sample of the equivalent market returns is compiled in Table 13.

Table 13: Market Returns Before and After Each Impairment Reveal Month (in %)
January 2005 –December 2008

				Market Returns				
-12 months …	-3 months	-2 months	-1 month	Reveal Month	+1 month	+2 months	+3 months …	+12 months
-0.7%	-8.9%	-16.8%	-7.2%	Dec-08	-8.4%	-10.6%	8.8%	1.9%
-4.2	1.4	-8.9	-16.8	Nov-08	1.1	-8.4	-10.6	6.0
1.6	-0.8	1.4	-8.9	Oct-08	-7.2	1.1	-8.4	-1.9
–	–	–	–		–	–	–	–
–	–	–	–		–	–	–	–
1.4	4.0	3.4	-2.4	Feb-05	-1.8	-1.9	3.2	0.3
1.8	1.5	4.0	3.4	Jan-05	2.1	-1.8	-1.9	2.6

Returns were then calculated for both the Reveal Portfolios and the S&P 500 (as of each reveal month) over the following periods:

Before:	Before:	After:	After:
Months -7 to -12	Months -1 to -6	Months +1 to +6	Months +7 to +12

Finally, the S&P 500 performance over each of these periods was geometrically subtracted from the performance of the Reveal Portfolios over each equivalent period. This computation enabled the analysis of the portfolios comprised of impairment companies relative to the market over these periods[35].

[35] The number of companies reporting goodwill impairment has increased in more recent years. Whereas in the first 24 reveal months (January 2005–December 2006) there were 360 companies with impaired goodwill, in the second 24 reveal months (January 2007–December 2008) there were 529 companies with impaired goodwill. The average portfolio across all periods had 18 companies; the median (typical) portfolio had 13 companies. 12 of the 48 company sets had fewer than 5 companies. The largest company set had 71 companies.

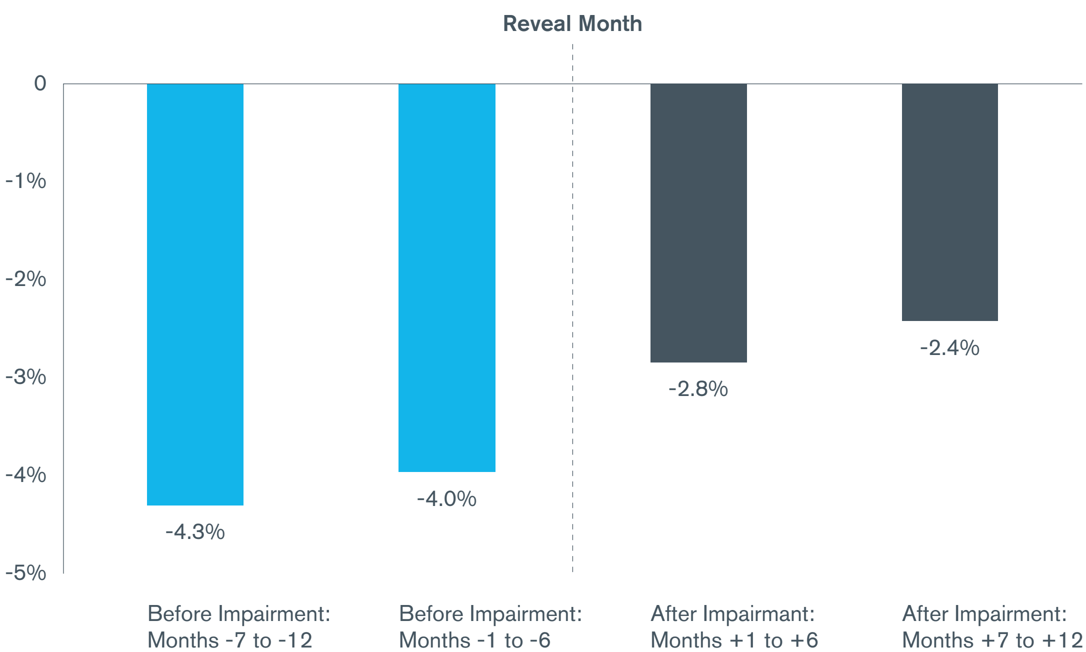
Returns-Based Analysis

The average of these values represents the average relative performance of the Reveal Portfolios versus the market in each of the 6-month periods studied (see Graph 12). For example, the average relative performance of the Reveal Portfolios in the first six months after impairment (for all 48 reveal months) was -2.8 percent.

The overall results are quite illuminating:

- Companies with goodwill impairments underperform the market both before and after the impairment of goodwill.
- Most of the underperformance occurs prior to the actual impairment date, indicating that in general, investors are aware of the issues that may lead to a subsequent impairment long before the actual impairment is taken.
- As time goes on, the underperformance relative to the market tends to diminish.

Graph 12: Performance Relative to the S&P 500 Before and After Goodwill is Impaired (in %)
Goodwill Impairment "Reveal" Months January 2005–December 2008



Survey Results

During the summer of 2010, an electronic survey on goodwill impairments was taken using a sample of FEI members associated with publicly-held companies.

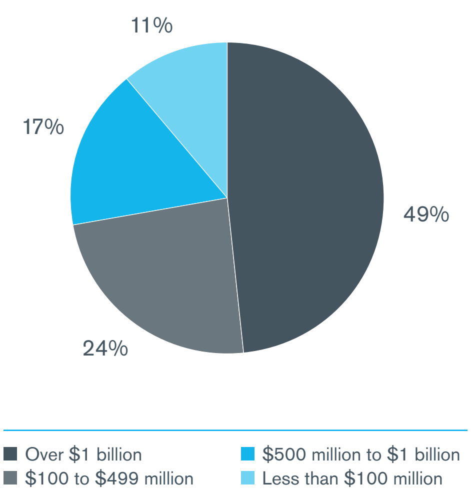
Members were asked to respond to the survey if they had impaired goodwill or other assets during 2008, 2009, or 2010. Nearly two-thirds (62.8 percent) of the respondents indicated that their companies had recognized an impairment, and about one-third (37.2 percent) said that their companies had not.

This survey was done to better understand the reasons for goodwill impairments and the valuation techniques that were used. Percentages in these tables reflect the percentages of total responses[36].

Question 1: What is your company's Industry?

Industry	% of Total	Industry	% of Total
Manufacturing	18%	Professional Services	3%
Banking/Financial Services	13%	Real Estate	3%
Technology	7%	Electronic	2%
Insurance	6%	Food/Restaurant	2%
Medical/Pharmaceutical	5%	Retail	2%
High-Tech or Software	5%	Telecommunications	2%
Aerospace/Defense	4%	Advertising	1%
Energy/Utilities/Oil & Gas	4%	Metals	1%
Consumer Goods	3%	Transportation	1%
Distribution	3%	Automotive	1%
Service	3%	Computer Services	1%
Arts/Entertainment/Media	3%	Education	1%
Chemicals/Plastics	3%	Hotel/Motel	1%
Healthcare Services	3%	Mineral/Mining	1%

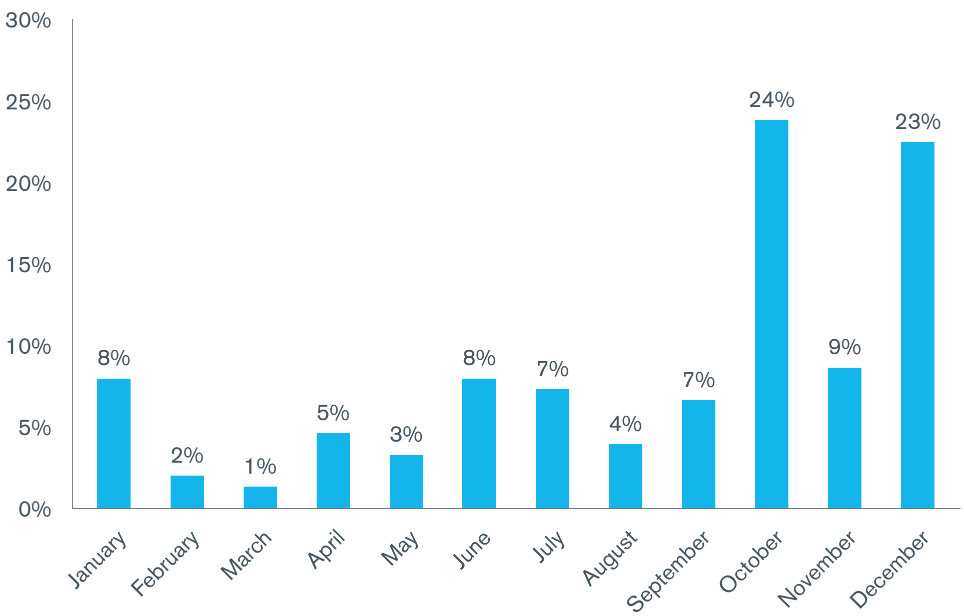
Question 2: What is the revenue for your company?



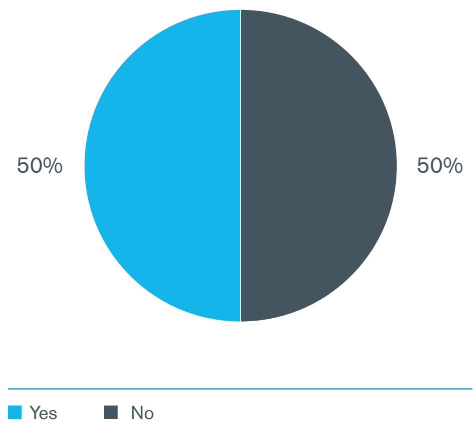
[36] Some totals may not add up to 100% due to rounding.

Survey Results

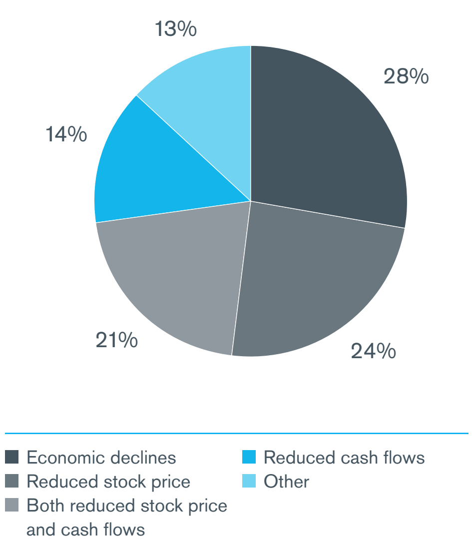
Question 3: In what month do you do your annual impairment testing?



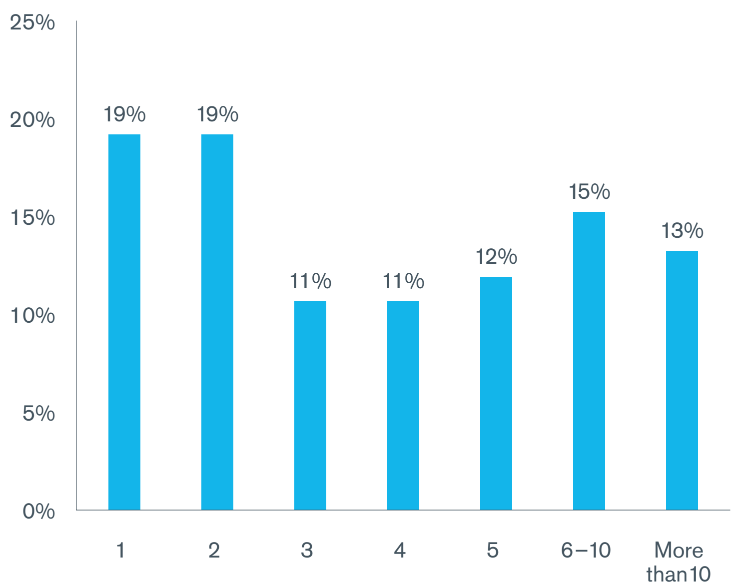
Question 4: During 2009 or 2010, did you perform an interim goodwill impairment test?



Question 5: If you answered Yes to question 4, what was the nature of the triggering event?



Question 6: How many reporting units do you have?

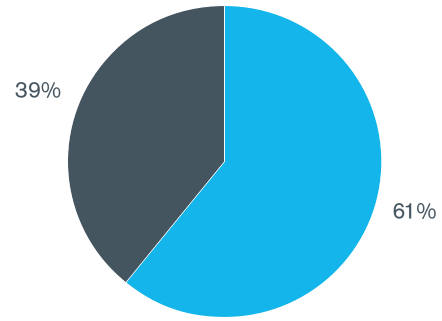


Survey Results

Question 7: In the most recent impairment test, which valuation techniques were applied when estimating the fair value of reporting units?

Valuation Technique Used	% of Total
Discounted cash flow	39%
Market comparable approach	3%
Both discounted cash flow and market comparable approach	53%
Market capitalization far exceeded carrying value, therefore no valuation was performed	5%

Question 8: Do you use a valuation consultant?



Yes No

Question 9: If a reconciliation to market capitalization (equity) was performed, which of these were considered? (To the extent that you concluded the market capitalization on the testing date was not appropriate.)

Choices (select all that apply):

(1) Historical market capitalization levels

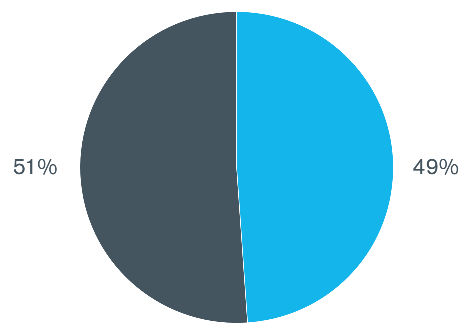
(2) Estimates of future share prices from analysts

(3) Recent share price trends from comparable companies and for the company as a whole

	Historical	Future	Recent Trends
Selected individually or with others*	62%	18%	60%
Selected individually	34%	3%	31%
Two Selections:			
Historical and Future	3%		
Historical and Trends	18%		
Trends and Future	4%		
All Three Selections	7%		

* Total exceeds 100% due to multiple selections

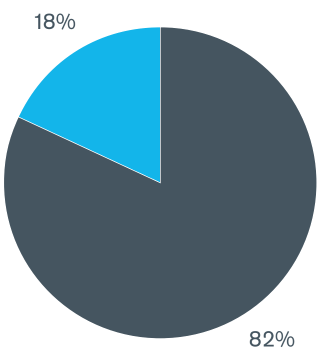
Question 10: Did the reconciliation to the current market capitalization play a significant role in the impairment assessment?



Yes No

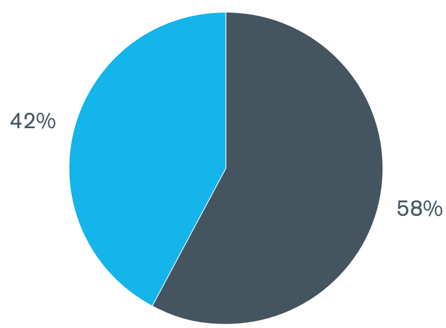
Survey Results

Question 11: Do you anticipate additional goodwill or other asset impairments during an upcoming interim or annual test?



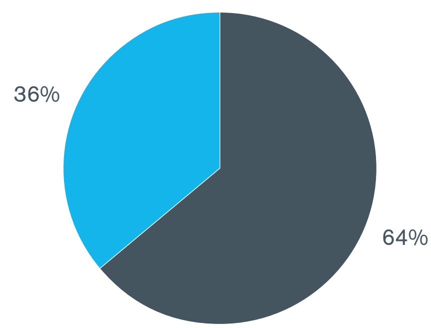
■ Yes ■ No

Question 12: Was the Step 1 test of the goodwill impairment test performed by comparing the fair value of the Equity or Enterprise Value to their respective carrying amounts?



■ Equity Value ■ Enterprise Value

Question 13: To the extent that a reconciliation to the market capitalization was performed, was the fair value or book value of debt used in the reconciliation?



■ Fair Value of Debt ■ Book Value of Debt

Question 14: If the fair value of debt was used, how was it estimated?

Choices (select all that apply):

(1) Based on the current market value (if traded).

(2) By considering the debt covenants and other factors, assuming the reporting unit is sold.

(3) By discounting the future interest payments and principal at current market yields.

	Current Market Value	Debt Covenants	Future Payments — Market Yield
Selected individually or with others*	56%	2%	49%
Selected individually	49%	2%	42%
Two Selections:			
Current Market Value and Debt Covenants	0%		
Current Market Value and Future Payments	7%		
Future Payments and Debt Covenants	0%		
All Three Selections	0%		

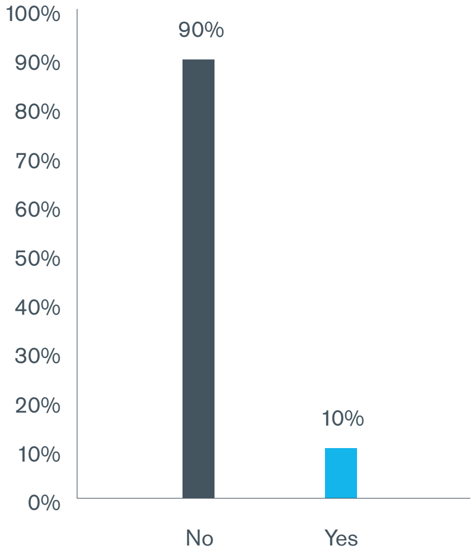
* Total exceeds 100% due to multiple selections

Survey Results

Question 15: If control premiums were considered in the analysis, which approach was used?

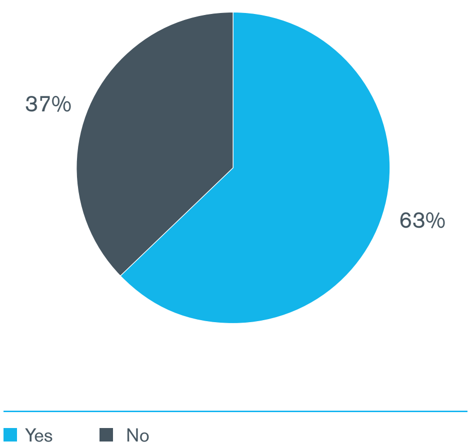
Approach used for Control Premium	% of Total
A general control premium was derived from market-based studies	77%
A specific analysis of incremental cash flows derived from improving current operations	2%
A specific analysis of incremental cash flows available by combining the operations of the reporting unit with the buyer	0%
A combination of (all choices)	21%

Question 16: In preparing the expected cash flow projections, did you consider distress scenarios (e.g., such as liquidation)?



Question 17: Has your company recognized goodwill or other asset impairments in 2008, 2009 or 2010?

(If yes, please proceed to Question 18. Otherwise, proceed to Question 27)



Question 18: When did you recognize the impairment?

Choices (select all that apply):
( ) 2008
( ) 2009
( ) 2010

	2008	2009	2010
Selected individually or with others*	62%	72%	17%
Selected individually	23%	29%	4%
Two Selections:			
2008 and 2009	31%		
2008 and 2010	1%		
2009 and 2010	4%		
All Three Selections	7%		

* Total exceeds 100% due to multiple selections

Survey Results

Question 19: What types of assets did you impair?

Choices (select all that apply):

( ) Goodwill

( ) Long-lived assets

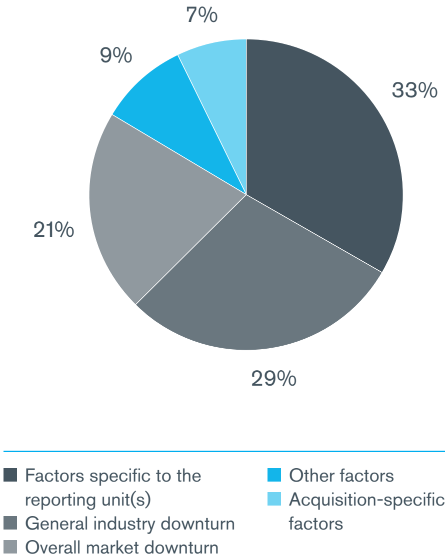
( ) Indefinite-lived assets

( ) Financial assets

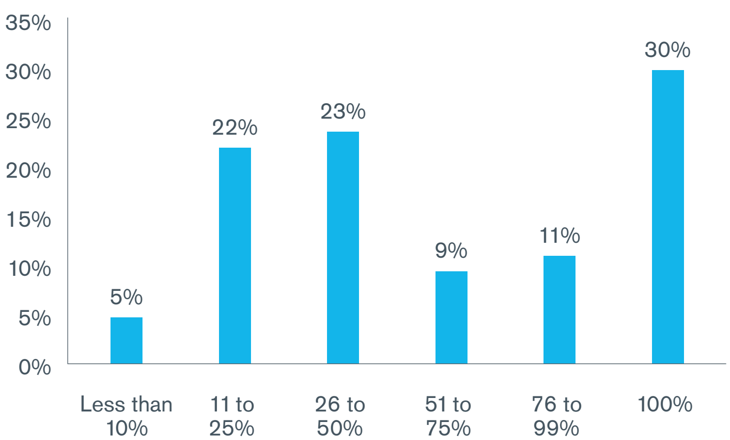
	Goodwill	Indefinite Lived	Long Lived	Financial
Selected individually or with others*	71%	29%	48%	7%
Selected individually	29%	5%	18%	3%
Two Selections:				
Goodwill and Indefinite	13%			
Goodwill and Long-Lived	17%			
Goodwill and Financial	1%			
Indefinite and Long-Lived	3%			
Indefinite and Financial	0%			
Long-Lived and Financial	1%			
Three Selections:				
Goodwill and Long-lived and Indefinite	7%			
Goodwill and Indefinite and Financial	0%			
Long-Lived and Indefinite and Financial	0%			
Financial and Long-lived and Goodwill	1%			
All Four Selections	1%			

* Total exceeds 100% due to multiple selections

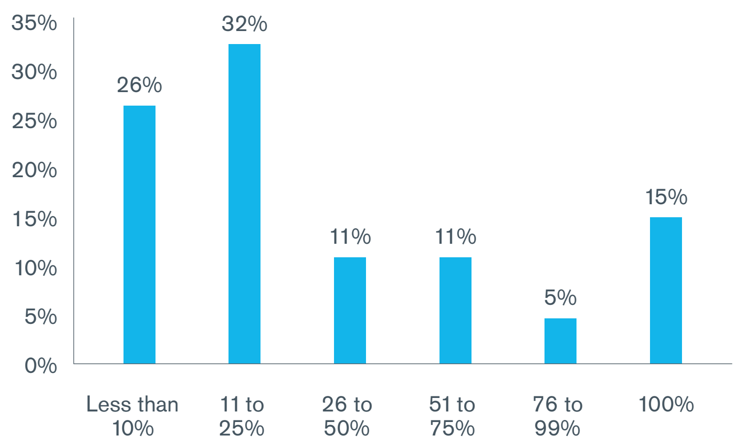
Question 20: What was the reason for the most recent impairment?



Question 21: If goodwill was impaired, what was the percentage write-down?

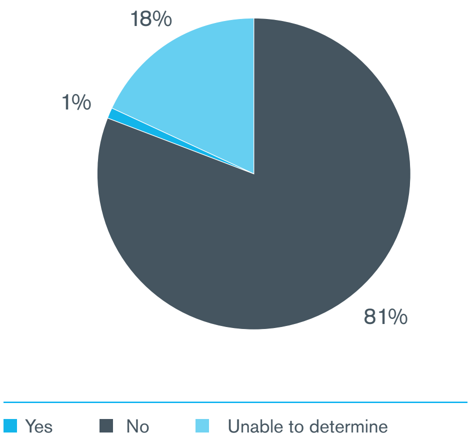


Question 22: If assets other than goodwill were impaired, what was the percentage write-down?

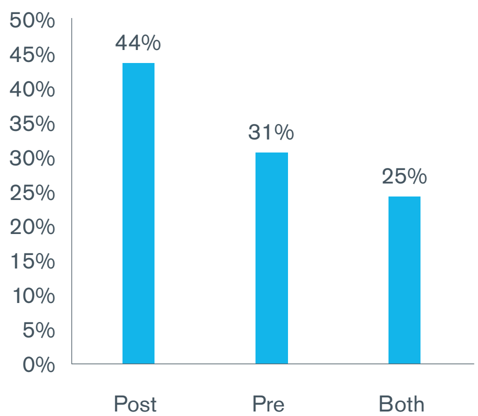


Survey Results

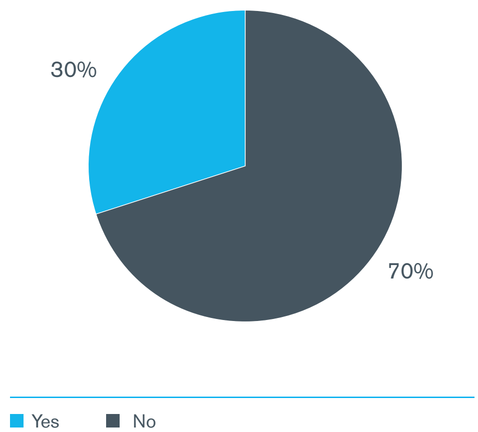
Question 23: Did the impairment have an effect on your company´s stock price?



Question 24: Was the impairment taken pre or post the implementation of ASC Topic 805 (formerly FAS 141R)?



Question 25: Did the provisions under ASC Topic 805 (formerly FAS 141R) impact your Step II Test?



Question 26: What was the biggest challenge you faced in the most recent impairment? (Open ended question)

Responses were grouped as follows:

Auditor issues:

- "Getting auditors comfortable with projections and assumptions."
- "Making sure our independent auditors were satisfied with the backup and the analysis presented to them."
- "Getting agreement with the auditors."

Lack of comparables:

- "Obtaining comparable market data."
- "Valuation of non-traded equity interest."
- "Determining the FMV of land held for sale without comparable transactions in the marketplace."

Process Issues:

- "Understanding the process and information needed..."
- "Reviewing the different requirements of local versus U.S. GAAP."
- "The SEC required the use of a new valuation methodology. The biggest challenge was adopting this new methodology and the technical valuation nuances it presented."

Risk premia/valuation issues:

- "Arriving at a cost of capital percentage"
- "Reconciliation of company derived enterprise FV to Equity Price (e.g. control premium issues)."
- "Stock volatility in assigning a control premium."
- "…adjusting the WACC…"
- Calculating a fair value of the impaired asset.
- Determining the market value of debt provided by parent.

Reporting unit issues:

- "Understanding the market segments fully."
- "Attributing corporate level (ie, generally unallocated) assets and liabilities to the individual reporting units to arrive a NBV (ie, carrying value) of the units."

Stock price issues:

- "Continuing decline in stock price…one reporting unit was partially impaired for several consecutive quarters."
- "…depressed stock prices."

Appendix A

Goodwill Intensity:

- Goodwill to Total Assets (GW/TA)

Loss Intensity:

- Goodwill Impairment to Total Assets (I/TA)
- Goodwill Impairment to Goodwill (I/GW)

List of Industries by Sector, as defined by Global Industry Classification Standard (GICS)

GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Energy				**$ 310 (sector total)**		
10102040	Oil and Gas Storage and Transportation	41	3.81%	4.28%	$ 48	0.03%	0.68%
10102020	Oil and Gas Exploration and Production	133	4.46%	4.75%	$ 1	0.00%	0.01%
10102030	Oil and Gas Refining and Marketing	15	1.76%	1.67%	–	–	–
10102050	Coal and Consumable Fuels	21	0.33%	0.58%	–	–	–
10101020	Oil and Gas Equipment and Services	51	14.47%	14.91%	$ 246	0.15%	1.03%
10102010	Integrated Oil and Gas	12	1.56%	1.46%	–	–	–
10101010	Oil and Gas Drilling	12	11.59%	10.95%	$ 15	0.02%	0.16%
	Materials				**$ 328 (sector total)**		
15104020	Diversified Metals and Mining	46	0.58%	0.63%	$ 9	0.02%	3.30%
15101050	Specialty Chemicals	49	19.53%	19.65%	$ 54	0.09%	0.48%
15104010	Aluminum	4	12.49%	12.51%	–	–	–
15101010	Commodity Chemicals	19	2.89%	2.85%	–	–	–
15104030	Gold	32	8.67%	7.34%	$ 255	0.29%	3.37%
15103010	Metal and Glass Containers	9	25.42%	26.91%	–	–	–
15101040	Industrial Gases	5	12.99%	12.92%	–	–	–
15104050	Steel	26	10.86%	12.11%	$ 3	0.00%	0.04%
15101030	Fertilizers and Agricultural Chemicals	12	12.09%	11.97%	–	–	–
15101020	Diversified Chemicals	12	9.32%	14.90%	$ 7	0.01%	0.06%
15102010	Construction Materials	13	2.79%	2.22%	–	–	–
15105020	Paper Products	9	7.16%	7.99%	–	–	–
15103020	Paper Packaging	11	21.31%	20.71%	–	–	–
15105010	Forest Products	5	0.22%	0.22%	–	–	–
15104040	Precious Metals and Minerals	12	1.16%	–	–	–	–

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GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Industrials				**$ 5,270 (sector total)**		
20201050	Environmental and Facilities Services	45	35.07%	35.02%	$ 23	0.04%	0.12%
20106020	Industrial Machinery	92	30.49%	31.06%	$ 995	0.64%	2.11%
20105010	Industrial Conglomerates	12	7.60%	5.37%	$ 31	0.00%	0.05%
20104020	Heavy Electrical Equipment	9	10.74%	9.74%	–	–	–
20104010	Electrical Components and Equipment	64	28.97%	31.01%	$ 34	0.05%	0.17%
20102010	Building Products	22	21.78%	20.11%	$ 933	3.65%	16.77%
20101010	Aerospace and Defense	71	29.62%	29.28%	$ 61	0.02%	0.06%
20202020	Research and Consulting Services	28	41.33%	42.70%	$ 69	0.52%	1.26%
20103010	Construction and Engineering	28	13.81%	13.32%	–	–	–
20201070	Diversified Support Services	31	30.92%	29.02%	$ 238	1.24%	4.03%
20201060	Office Services and Supplies	21	20.75%	20.06%	$ 832	3.57%	17.18%
20106010	Construction and Farm Machinery and Heavy Trucks	37	6.43%	5.70%	$ 1,304	0.58%	9.03%
20107010	Trading Companies and Distributors	27	3.41%	3.72%	$ 54	0.01%	0.37%
20202010	Human Resource and Employment Services	23	17.46%	18.88%	$ 87	0.59%	3.41%
20305030	Marine Ports and Services	0	NA	NA	NA	NA	NA
20301010	Air Freight and Logistics	18	9.50%	8.25%	$ 208	0.30%	3.16%
20302010	Airlines	15	0.17%	0.15%	$ 13	0.02%	9.63%
20303010	Marine	8	2.76%	2.74%	$ 2	0.02%	0.83%
20304020	Trucking	24	2.55%	2.16%	$ 289	0.70%	27.42%
20201080	Security and Alarm Services	7	2.85%	3.81%	–	–	–
20305010	Airport Services	2	23.13%	22.11%	$ 71	2.80%	12.10%
20201010	Commercial Printing	14	29.56%	29.19%	$ 25	0.13%	0.44%
20304010	Railroads	7	0.35%	0.33%	–	–	–
20305020	Highways and Railtracks	0	–	–	–	–	–

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GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Consumer Discretionary				**$ 2,313 (sector total)**		
25502020	Internet Retail	16	8.18%	9.66%	$ 8	0.07%	0.82%
25401030	Movies and Entertainment	39	30.26%	34.41%	$ 28	0.01%	0.04%
25503020	General Merchandise Stores	8	–	0.24%	–	–	NA
25401040	Publishing	24	40.55%	40.40%	$ 496	0.67%	1.65%
25504040	Specialty Stores	37	10.28%	10.73%	$ 1	0.00%	0.01%
25504060	Home Furnishing Retail	8	1.98%	1.98%	–	–	–
25504010	Apparel Retail	40	5.34%	4.38%	–	–	–
25401010	Advertising	21	35.57%	36.54%	–	–	–
25401020	Broadcasting	19	28.69%	29.30%	$ 260	0.62%	2.18%
25201050	Housewares and Specialties	15	27.91%	28.20%	$ 23	0.08%	0.28%
25202010	Leisure Products	31	13.81%	12.00%	$ 423	2.48%	17.96%
25504050	Automotive Retail	19	11.30%	12.68%	$ 2	0.01%	0.04%
25101010	Auto Parts and Equipment	40	16.96%	17.25%	–	–	–
25301040	Restaurants	48	8.57%	8.52%	$ 26	0.04%	0.43%
25301030	Leisure Facilities	16	6.61%	7.61%	$ 12	0.11%	1.71%
25501010	Distributors	20	14.61%	14.29%	–	–	–
25203010	Apparel, Accessories and Luxury Goods	40	14.01%	12.15%	$ 123	0.36%	2.61%
25301020	Hotels, Resorts and Cruise Lines	17	9.02%	8.61%	$ 103	0.13%	1.49%
25201020	Home Furnishings	13	20.08%	20.99%	$ 32	0.25%	1.23%
25201030	Homebuilding	21	0.30%	2.16%	$ 570	1.28%	NA
25302010	Education Services	17	17.61%	20.27%	–	–	–
25301010	Casinos and Gaming	45	6.17%	5.73%	$ 142	0.19%	3.06%
25101020	Tires and Rubber	3	4.48%	4.90%	–	–	–
25401025	Cable and Satellite	11	14.54%	14.35%	–	–	–
25203030	Textiles	6	1.75%	0.86%	–	–	–
25203020	Footwear	12	3.53%	2.53%	$ 3	0.02%	0.47%
25504020	Computer and Electronics Retail	7	16.81%	17.48%	$ 11	0.04%	0.22%
25302020	Specialized Consumer Services	21	17.62%	17.57%	$ 7	0.03%	0.16%
25503010	Department Stores	9	10.85%	5.68%	–	–	–
25202020	Photographic Products	1	9.76%	11.79%	–	–	–

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GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Consumer Discretionary (cont.)						
25102010	Automobile Manufacturers	8	0.61%	0.09%	–	–	–
25201010	Consumer Electronics	11	3.98%	3.45%	$ 12	0.22%	5.49%
25201040	Household Appliances	8	18.18%	17.87%	$ 1	0.01%	0.03%
25502010	Catalog Retail	2	1.41%	1.81%	$ 2	0.74%	52.75%
25102020	Motorcycle Manufacturers	2	1.77%	0.35%	$ 28	0.36%	20.45%
25504030	Home Improvement Retail	2	1.52%	1.50%	–	–	–
	Consumer Staples				**$ 2,295 (sector total)**		
30202030	Packaged Foods and Meats	65	31.93%	31.66%	$ 570	0.29%	0.91%
30101030	Food Retail	10	13.03%	11.11%	$ 1,526	1.90%	14.59%
30202010	Agricultural Products	13	2.72%	2.72%	$ 125	0.20%	7.53%
30302010	Personal Products	45	9.77%	10.58%	$ 24	0.12%	1.26%
30203010	Tobacco	7	15.78%	21.50%	–	–	–
30101020	Food Distributors	9	13.79%	14.72%	$ 50	0.35%	2.56%
30201020	Distillers and Vintners	5	28.00%	29.47%	–	–	–
30101040	Hypermarkets and Super Centers	4	8.07%	8.14%	–	–	–
30201010	Brewers	2	12.22%	12.02%	–	–	–
30301010	Household Products	12	36.26%	36.93%	–	–	–
30201030	Soft Drinks	14	10.48%	10.72%	–	–	–
30101010	Drug Retail	6	29.75%	28.05%	–	–	–
	Healthcare				**$ 881 (sector total)**		
35103010	Health Care Technology	27	12.27%	12.74%	$ 26	0.60%	4.88%
35201010	Biotechnology	187	17.35%	15.74%	$ 1	0.00%	0.01%
35101010	Healthcare Equipment	139	28.83%	27.28%	$ 114	0.08%	0.27%
35202010	Pharmaceuticals	83	15.46%	16.91%	$ 1	0.00%	0.00%
35203010	Life Sciences Tools and Services	58	33.50%	32.64%	$ 36	0.07%	0.20%
35102020	Healthcare Facilities	34	24.06%	24.29%	–	–	–
35102015	Healthcare Services	61	47.07%	46.00%	$ 266	0.40%	0.85%
35102030	Managed Healthcare	18	22.06%	21.02%	$ 437	0.20%	0.90%
35101020	Healthcare Supplies	41	21.11%	19.78%	–	–	–
35102010	Healthcare Distributors	13	11.22%	14.76%	–	–	–

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GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Financials				**$10,653 (sector total)**		
40101015	Regional Banks	358	2.61%	2.41%	$ 6,443	0.28%	10.63%
40301040	Property and Casualty Insurance	59	4.49%	4.57%	$ 23	0.00%	0.05%
40203020	Investment Banking and Brokerage	40	0.69%	0.96%	$ 12	0.00%	0.10%
40203010	Asset Management and Custody Banks	567	4.47%	4.53%	$ 862	0.12%	2.59%
40102010	Thrifts and Mortgage Finance	148	0.34%	0.33%	$ 383	0.02%	5.32%
40201020	Other Diversified Financial Services	6	2.66%	2.63%	–	–	–
40402060	Retail REITs	29	0.32%	0.21%	–	–	–
40202010	Consumer Finance	24	3.02%	3.32%	$ 53	0.01%	0.32%
40403020	Real Estate Operating Companies	22	–	–	–	–	NA
40301020	Life and Health Insurance	22	0.72%	0.61%	$ 730	0.05%	6.61%
40402040	Office REITs	16	–	–	$ 1	0.00%	NA
40403030	Real Estate Development	14	0.02%	0.01%	–	–	–
40403040	Real Estate Services	6	33.69%	32.59%	$ 30	0.32%	0.96%
40402020	Industrial REITs	6	1.23%	1.36%	$ 164	0.51%	41.04%
40402050	Residential REITs	16	0.19%	0.17%	–	–	–
40402030	Mortgage REITs	21	0.19%	0.19%	$ 9	0.01%	3.23%
40301030	Multi-line Insurance	13	0.83%	0.83%	$ 810	0.06%	6.87%
40201040	Specialized Finance	17	18.36%	24.04%	–	–	–
40301010	Insurance Brokers	14	29.23%	29.64%	$ 1,074	1.72%	5.89%
40301050	Reinsurance	11	0.49%	0.46%	–	–	–
40402070	Specialized REITs	29	0.39%	0.33%	$ 43	0.05%	12.33%
40101010	Diversified Banks	8	1.55%	1.71%	–	–	–
40201030	Multi-Sector Holdings	8	0.23%	0.19%	–	–	–
40403010	Diversified Real Estate Activities	5	–	–	–	–	NA
40402010	Diversified REITs	15	0.01%	0.01%	$ 16	0.03%	NA
40203030	Diversified Capital Markets	1	0.34%	0.49%	–	–	–

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GICS Code	GICS Sub-Industry Name	Number Co's (2009)	GW/TA (2008)	GW/TA (2009)	Goodwill Impairment (2009) (in $millions)	I/TA (2009)	I/GW (2009)
	Information Technology				**$ 3081 (sector total)**		
45202010	Computer Hardware	15	18.16%	17.23%	–	–	–
45101010	Internet Software and Services	119	24.59%	19.39%	$ 1,070	1.16%	4.72%
45102010	IT Consulting and Other Services	61	18.66%	19.78%	$ 77	0.05%	0.28%
45103010	Application Software	121	34.96%	34.22%	$ 31	0.06%	0.17%
45102020	Data Processing and Outsourced Services	33	18.56%	19.29%	$ 13	0.01%	0.07%
45201020	Communications Equipment	111	16.26%	15.53%	$ 957	0.57%	3.50%
45301020	Semiconductors	83	7.86%	7.42%	$ 53	0.03%	0.37%
45202020	Computer Storage and Peripherals	51	17.48%	17.52%	$ 28	0.04%	0.26%
45103030	Home Entertainment Software	8	16.33%	21.82%	$ 15	0.23%	1.42%
45203030	Technology Distributors	22	9.10%	6.74%	$ 104	0.31%	3.43%
45203010	Electronic Equipment and Instruments	86	31.10%	27.07%	$ 25	0.05%	0.16%
45301010	Semiconductor Equipment	45	7.66%	7.74%	$ 274	0.74%	9.61%
45203020	Electronic Manufacturing Services	32	6.23%	4.34%	$ 15	0.05%	0.73%
45103020	Systems Software	52	33.90%	26.85%	$ 289	0.18%	0.53%
45203015	Electronic Components	21	6.94%	7.07%	$ 130	0.43%	6.26%
45204010	Office Electronics	3	14.30%	14.38%	–	–	–
	Telecommunications Services				**$ 45 (sector total)**		
50101010	Alternative Carriers	22	14.62%	14.87%	–	–	–
50101020	Integrated Telecommunication Services	30	16.73%	19.69%	$ 36	0.01%	0.04%
50102010	Wireless Telecommunication Services	17	5.71%	6.04%	$ 9	0.01%	0.14%
	Utilities				**$ 1270 (sector total)**		
55105010	Independent Power Producers and Energy Traders	12	4.00%	3.71%	$ 555	0.59%	14.72%
55102010	Gas Utilities	26	5.64%	5.66%	–	–	–
55101010	Electric Utilities	31	3.89%	3.71%	$ 424	0.08%	2.07%
55103010	Multi-Utilities	24	3.99%	3.82%	$ 291	0.07%	1.87%
55104010	Water Utilities	11	0.72%	0.69%	–	–	–

Appendix B: Quick Accounting Reference Guide

Recognition and Measurement of Goodwill Impairment

The recognition and measurement of a goodwill impairment loss is specified in paragraphs 4 through 13 of FASB's ASC 350-20-35:

Step 1

ASC 350-20-35-4 The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit with its carrying amount, including goodwill.

ASC 350-20-35-5 The guidance in paragraphs 350-20-35-22 through 35-24 shall be considered in determining the fair value of a reporting unit.

ASC 350-20-35-6 If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired, thus the second step of the impairment test is unnecessary.

ASC 350-20-35-7 In determining the carrying amount of a reporting unit, deferred income taxes shall be included in the carrying value of the reporting unit, regardless of whether the fair value of the reporting unit will be determined assuming it would be bought or sold in a taxable or nontaxable transaction.

ASC 350-20-35-8 If the carrying amount of a reporting unit exceeds its fair value, the second step of the goodwill impairment test shall be performed to measure the amount of impairment loss, if any.

Step 2

ASC 350-20-35-9 The second step of the goodwill impairment test, used to measure the amount of impairment loss, compares the implied fair value of reporting unit goodwill with the carrying amount of that goodwill.

ASC 350-20-35-10 The guidance in paragraphs 350-20-35-14 through 35-17 shall be used to estimate the implied fair value of goodwill.

ASC 350-20-35-11 If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss shall be recognized in an amount equal to that excess. The loss recognized cannot exceed the carrying amount of goodwill.

ASC 350-20-35-12 After a goodwill impairment loss is recognized, the adjusted carrying amount of goodwill shall be its new accounting basis.

ASC 350-20-35-13 Subsequent reversal of a previously recognized goodwill impairment loss is prohibited once the measurement of that loss is recognized.

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