

Magnitude of Goodwill in U.S. Corporate Financial Statements

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In U.S. corporate financial statements, goodwill arises when the purchase price of the net assets acquired (e.g., in a business combination accounted for as a purchase rather than a pooling) exceeds the fair market value of other net assets acquired. This accounting definition of goodwill, of course, differs from non-accountants' perception of goodwill as some kind of a special, identifiable asset that is either internally developed by a firm or acquired in a transaction. In addition to being poorly understood, goodwill is also difficult to obtain from balance sheet disclosures. Goodwill is often not reported as a separate balance sheet item but is reported as part of other intangible assets or "other assets". Hence, financial statement users typically need to examine footnote disclosures to determine the amount of goodwill in a balance sheet, and the sources of goodwill. The nature and magnitude of goodwill in financial statements are thus not obvious from a cursory examination of the corporate balance sheet.

The above disclosure treatment for goodwill might have been sufficient during an era when goodwill was a small part of total assets and when business combinations, buyouts, and corporate takeovers were much less frequent and on a much smaller scale. Until recent years, corporate balance sheets were dominated mainly by *physical* assets such as inventory and property, plant and equipment, or *financial* assets such as investments or long-term receivables. Because such assets are easier to value and easier to replace, acquisition values of these assets in a merger typically did not carry a large premium over the fair market value. Hence, accounting goodwill arising from the acquisition of such companies was small.

In recent years, however, the growth of the service and "knowledge" sectors in the economy has changed the nature and extent of goodwill amounts created by merger and acquisition transactions. Firms increasingly derive their value from the ability to create and exploit intellectual rights (such as software, motion pictures, and multimedia applications) and human resources (such as consultants and technical specialists) rather than from ownership of physical or financial assets. Compared to physical or financial assets, the estimate of intrinsic value of intellectual properties and human resources is much more subjective, and is also much more dependent on who the owner is. In addition, goodwill with respect to intellectual properties does not arise from the properties themselves (which would be classified as intangible assets other than goodwill) but from the ability to create and exploit them. These unique characteristics of intellectual properties, combined with the recent increase in the size of merger and acquisition transactions,¹ have resulted in the reporting of much greater magnitudes of goodwill in recent corporate financial statements.

To illustrate the extent of goodwill in corporate reports, Table 1 lists companies in the U.S. with the largest goodwill-to-total-asset percentage. For brevity, the list includes only firms with goodwill in excess of \$1 billion. Not surprisingly, the companies that top the list in Table 1 have all gone through major business combinations in the past several years. For example, Worldcom Inc., a long-distance telephone company, has grown through mergers or acquisitions, including a 1994 merger with IDB Communications.

¹ Additional discussion of the growth of mergers and acquisitions can be found in Stephen A. Zeff and Bala G. Dharan, "The Continuing Relevance of Constant Dollar and Current Value Accounting," in Chapter 13 of this book.

Similarly, the largest dollar amount for goodwill, shown by RJR Nabisco Holdings, is a result of the leveraged buyout of RJR Nabisco, which was itself a result of the merger of R J Reynolds (a tobacco company) and Nabisco (a food products company).

Despite the increased reporting of goodwill in financial statements, very little attention seems to be paid to the role of goodwill in financial statement analysis. For example, should goodwill be included with total assets (and hence shareholders' equity) in computing financial ratios such as return on total assets, leverage, market-to-book, and return on shareholders' equity? Some analysts and publications, such as Dun & Bradstreet, subtract goodwill from both total assets and shareholders' equity in computing ratios such as leverage. Owing to the role of goodwill, these and other financial ratios are likely to be very different for companies that grow through business combinations (using purchase accounting) and others that do not.

For example, consider how goodwill can affect the computed value of the market-to-book ratio of a company. This ratio is widely popular among financial analysts, and is an integral part of many stock trading and stock selection rules. When a company undergoes a merger or acquisition using purchase accounting and reports a large goodwill amount on its balance sheet as a result of the transaction, its shareholders' equity or book value is also increased relative to a similar transaction accounted for using the pooling method. The increased book value of the company makes it more likely that its book value more closely reflects its market value. The market-to-book ratio of such companies, therefore, is likely to be smaller than those of companies that have very little goodwill on their balance sheets. Support for this reasoning can be seen in the data presented in Table 2. The table lists the market-to-book ratio and several other ratios for all U.S. companies with sales revenue over \$1 billion and a market-to-book ratio in excess of five. Compared to companies in Table 1, one can see that companies with the largest market-to-book ratio generally have very little goodwill on their balance sheets just as the above reasoning on the role of goodwill on the market-to-book ratio would indicate.

The presence of goodwill on financial statements also distorts the computation and interpretation of performance ratios such as return on assets and return on equity. For illustration, these ratios are listed in Table 2 for the companies with the largest market-to-book ratios. It can be seen that the return on assets and return on equity for such companies are very large. The average return on equity for the companies in Table 2 is 69%, and the average return on assets is 15%. While these large ratios partly reflect the successful performance of the companies, the small goodwill on the balance sheets (as seen from the low goodwill-to-total assets percentages) also clearly helped by keeping the total assets and the shareholders' equity amounts smaller. More generally, goodwill negatively impacts on the performance ratios such as the return on assets and return on equity in two ways: first, goodwill increases the denominator of these ratios (total assets and shareholders' equity); second, goodwill amortization decreases the numerator (net income). Hence, one should expect to see an inverse relationship between the amount of goodwill shown on the balance sheet and the return on asset or return on equity ratio.

Given the various adverse effects of goodwill on financial ratios, it is no wonder that companies seem to prefer to avoid using purchase accounting in mergers. However, it is an open question as to whether financial markets properly adjust for the role of goodwill in comparing companies such as those in Tables 1 and 2. Until accounting rules provide a more uniform treatment of internally generated and externally acquired goodwill, financial analysts and investors will need to be vigilant when analyzing financial ratios that are potentially affected by goodwill.

Table 1: Companies with Large Goodwill Assets

This table lists U.S. companies that disclosed data on goodwill (excess of costs over net assets of acquisitions) in footnotes to financial statements for the 1994 fiscal year. The table includes companies with a goodwill amount in excess of \$1 billion and a ratio of goodwill to total assets of at least 15%.

| | Goodwill (\$ million) | Total Assets (\$ million) | Goodwill-to Assets % |
|------------------------------|----------------------------------|--------------------------------------|---------------------------------|
| Worldcom Inc. | 2,071 | 3,430 | 60 |
| First Financial Mgmt Corp. | 1,741 | 3,136 | 56 |
| Dow Jones & Co Inc. | 1,305 | 2,446 | 53 |
| FHP International Corp. | 1,074 | 2,169 | 50 |
| American Home Products Corp. | 9,181 | 21,675 | 42 |
| Black & Decker Corp. | 2,293 | 5,434 | 42 |
| Gannett Co. | 1,472 | 3,707 | 40 |
| RJR Nabisco Holdings Corp. | 12,681 | 31,408 | 40 |
| American Standard Co Inc. | 1,053 | 3,156 | 33 |
| Capital Cities/ABC Inc. | 1,999 | 6,768 | 30 |
| Time Warner Inc. | 4,630 | 16,716 | 28 |
| Loral Corp. | 1,266 | 4,810 | 26 |
| American Stores Co. | 1,771 | 7,032 | 25 |
| Crown Cork & Seal Co Inc. | 1,122 | 4,781 | 23 |
| Emerson Electric Co. | 1,863 | 8,215 | 23 |
| Northrop Grumman Corp. | 1,359 | 6,047 | 22 |
| Dun & Bradstreet Corp. | 1,150 | 5,464 | 21 |
| Baxter International Inc. | 1,990 | 10,002 | 20 |
| Owens-Illinois Inc. | 1,049 | 5,318 | 20 |
| Merck & Co. | 4,100 | 21,857 | 19 |
| Thomson Corp. | 1,665 | 9,358 | 18 |
| Hoechst Celanese Corp. | 1,489 | 8,110 | 18 |
| Georgia-Pacific Corp. | 1,773 | 10,728 | 17 |
| Dow Chemical Co. | 4,365 | 26,545 | 16 |
| Lockheed Martin Corp. | 2,831 | 18,049 | 16 |
| Unisys Corp. | 1,142 | 7,324 | 16 |

Source: Data were obtained using Standard & Poor's Compustat PC Plus.

Table 2: Companies with Large Market-to-Book Ratios

This table lists U.S. companies with sales revenue over \$1 billion and a market-to-book ratio (the ratio of market price per share to book value per share) in excess of 5. The table also includes goodwill to total assets, return on total assets (ROA) and return on shareholders' equity (ROE).

| | Market-to- Book Ratio | Goodwill-to- Assets % | ROA % | ROE % |
|------------------------------|----------------------------------|----------------------------------|------------------|------------------|
| Vastar Resources Inc. | 83.4 | 0 | 9 | 514 |
| Turner Broadcasting | 40.5 | 7 | 1 | 55 |
| Lyondell Petrochemical | 32.9 | 0 | 13 | 354 |
| Avon Products | 22.2 | 0 | 13 | 143 |
| UST Inc. | 15.1 | 1 | 52 | 107 |
| Oracle Corp. | 13.2 | 0 | 18 | 38 |
| Coca-Cola Co. | 12.6 | 0 | 18 | 49 |
| CBS Inc. | 12.2 | 12 | 13 | 102 |
| Ralston Purina Group | 12.2 | 14 | 6 | 68 |
| Penn Traffic Co. | 12.1 | 25 | 1 | 67 |
| Quaker Oats Co. | 10.5 | 16 | 8 | 52 |
| Manpower Inc. | 10.3 | 0 | 7 | 41 |
| 3Com Corp. | 9.5 | 0 | 15 | 27 |
| CUC International Inc. | 8.9 | 20 | 15 | 27 |
| Schering-Plough | 8.7 | 2 | 21 | 59 |
| Gillette Co. | 8.4 | 0 | 13 | 36 |
| Wrigley (Wm) Jr Co. | 8.3 | 0 | 24 | 33 |
| General Mills Inc. | 7.5 | 0 | 9 | 41 |
| U S Healthcare Inc. | 7.3 | 0 | 27 | 43 |
| Kellogg Co. | 7.1 | 0 | 16 | 39 |
| Dun & Bradstreet Corp. | 7.1 | 21 | 12 | 48 |
| Autozone Inc. | 6.8 | 2 | 13 | 22 |
| Microsoft Corp. | 6.7 | 0 | 21 | 26 |
| Health Systems International | 6.6 | 13 | 10 | 39 |
| Abbott Laboratories | 6.5 | 0 | 18 | 37 |
| Medtronic Inc. | 6.4 | 14 | 15 | 22 |
| Cisco Systems Inc. | 6.4 | 0 | 30 | 37 |
| H & R Block Inc. | 6.4 | 6 | 15 | 23 |
| Readers Digest Association | 6.2 | 0 | 13 | 36 |
| Home Depot Inc. | 6.2 | 2 | 10 | 18 |
| Cytec Industries Inc. | 6.2 | 0 | 5 | 67 |
| Amgen Inc. | 6.1 | 0 | 16 | 25 |
| Computer Associates Intl. | 6.0 | 9 | 13 | 27 |
| EMC Corp. | 6.0 | 1 | 19 | 34 |

Source: Data were obtained using Standard & Poor's Compustat PC Plus.