Explaining variation in market to book ratios: do corporate reputation ratings add explanatory power over and above brand values?

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Abstract

This study examines the importance of brand and corporate reputations in explaining variations in market-to-book value relationships. Using the 2006 *Corebrand* database of 500 companies with identifiable brand values and the 2006 Annual Survey of Corporate Reputation conducted by *Fortune* magazine and Hay Group, the study concludes that companies with high relative brand value and high relative corporate reputation ratings have significantly higher market-to-book ratios than companies with low relative brand value and low relative corporate reputation ratings. The results indicate that corporate reputation adds incremental explanatory value in explaining high book-to-market ratios.

KEYWORDS: Market-to-book ratios, corporate reputation, brand value, financial reporting

Introduction

The Financial Accounting Standards Board (FASB), in its conceptual framework, has asserted that financial reporting should provide information that is useful to present and potential investors and creditors and others in making rational investment, credit and similar decisions (Con1, par 34). Financial reporting should include information about the economic resources of an enterprise, the claims to those resources (i.e. the balance sheet) and the effects of transactions, events, and circumstances that change resources and claims to those resources (i.e., the income statement) (Con1, par. 40).

Generally accepted accounting principles are under increasing criticism for their failure to recognize and measure intangible assets. The result is balance sheet information which is not representationally faithful. Arthur Levitt, Chairman of the Securities and Exchange Commission (SEC) (1993-2001) stated, "As intangible assets grow in size and scope, more and more people are questioning whether their value and the drivers of that value are being reflected in a timely manner in publicly available disclosures." Steve Wallman, a Commissioner of the SEC, stated, "…the inability to recognize at all as assets on the balance sheet some of the new and most significant building blocks of business has resulted in balance sheets that bear little resemblance to the true financial position of firms they are supposed to describe." Wallman concluded that "we are assigning the balance sheet to the status of an antique and ignoring the needs of a broad array of financial statement users, including users such as creditors who increasingly are lending on soft assets." (Wallman, 1995)

Beginning in the 1980's, market values of companies began to go up faster than the book values, and market value began to be less and less related to earnings (Creelman & Ulrich, 2005). Reibstein (2005) reports that fifty years ago, nearly 80% of a typical firm's value was based on tangible assets, whereas today it is more likely to be about 50%. These phenomena are often attributed to intangibles (Creelman & Ulrich, 2005). Two often-examined intangibles are corporate reputation and brand value.

In a 2007 study, Little, Coffee, and Lirely found that companies with high brand value relative to recorded tangible assets have significantly higher market-to-book ratios than companies with low relative brand value. If one accepts the premise that high market-to-book values are sometimes indicative of the systematic under-reporting of assets, then their findings suggest that the balance sheets of companies with high relative brand values may not be representationally faithful.

The purpose of this study is to explore another intangible asset not recognized in financial reporting, corporate reputation. Two important questions are addressed:
1. Are brand value and corporate reputation two separate measures or one measure?
2. Does corporate reputation add explanatory value in explaining variations in market-to-book ratios over and above that explained by brand value alone?

Relevance of Corporate Reputation

Forbrum (1996) defines corporate reputation as "a perceptual representation of a company's past actions and future prospects that describes the firm's overall appeal to all of its key constituents when compared to other leading rivals" (p. 72). Reputations reflect the multiple social and economic contributions of firms.

Research has demonstrated the impact of corporate reputation on organizational outcomes. Positive corporate reputations have been shown to allow firms to charge premium prices for their products or services, attract better job applicants, incur lower costs of capital, achieve persistent profitability, enjoy enhanced competitive status and have higher price-earnings ratios (Alsop, 1999; Beatty & Ritter, 1986; Caminiti, 1992; Fombrun & Shanley, 1990; Roberts & Dowling, 2000; Little & Little. 2000).

The most widely-recognized measure of corporate reputation is the annual survey conducted by *Fortune* magazine and Hay Group (Fisher 2006). The Fortune 1000 companies are sorted into 65 industry lists. Executives, outside directors and corporate analysts are asked to rate the ten largest firms in their industry on a scale of zero (poor) to ten (excellent) on eight attributes:

- Quality of management
- Quality of good and services
- Innovativeness
- Long term investment value
- Financial soundness
- Ability to attract, develop and keep talented people
- Wise use of corporate assets
- Community and environmental responsibility.

Fombrun and Shanley's (1990) factor analysis demonstrated that the scores on the dimensions are intercorrelated, and that all the dimensions load on one factor, which is strongly related to financial performance. They also report a reliability statistic of .97, indicating strong internal consistency of the measure. Given this, the overall reputation measure is a more sound variable that is any single dimension.

Relevance of Brand Values

Low and Kalafut (2002) report in their book on how "intangibles are driving business performance" that there are twelve intangibles that drive business performance in what they refer to as the "intangibles economy." They list intangible factors such as leadership, technology, intellectual capital, and networks. One of the twelve intangible factors is what they call "brand equity." In the book, they provide a statement from Walter Wriston, the former CEO of Citicorp, that intangible assets such as brand equity are extremely important in the success of postindustrial enterprises but that current accounting practices do not recognize their value.

Courtesy News Canada defines brand as "the image a company has created in consumers' minds which creates loyalty for a product or service." (Brooks, 2004). Similarly, Fernandez (2002) defines brand as "a product's additional value (for its customers) compared to what would be the value of another identical product without the brand." (p. 559).

One of the leading companies involved in the measurement and management of brand values is *Corebrand*. *CoreBrand* has been involved in measuring brand value for more than 16 years. In his address to the FASB in January of 2007, James Gregory, President of *Corebrand*, argued that evaluating profitability and performance by return on investment (ROI), return on assets (ROA), and return on equity (ROE) measures is seriously flawed since the value of a firm's intangible assets are not accounted for on a fair value basis. Similarly, he argues that

measures of relative pricing, such as price-to-book relationships, are misleading without accounting for intangibles (Gregory, Siciliano, and Robinson, 2007).

It is recognized that established brands such as Nike, Coca-Cola, Disney and McDonald's, while intangible assets, have separately identifiable economic value (Kallapur & Kwan, 2004; Kerin & Sethuraman, 1998). A number of studies have provided evidence of the relevance of brand values. For example, Kallapur and Kwan (2004) examined the market value relevance of brand assets that were reported for the first time in the balance sheets of 33 United Kingdom companies. They found a positive abnormal stock price reaction during a 21 day period surrounding the release of the brand asset information. Similarly, studies by Kerin and Sethurman (1998) and Little, Coffee, and Lirely (2005) suggested that brand value has capital market relevance to firms.

Reputation vs. Brand

The concepts of reputation and brand have some commonalities. Both must identify aspects that allow stakeholders to view the company positively and communicate those aspects. Both concepts also infer promises/expectations to stakeholder groups. Both concepts also must be actively managed by the corporation, through public relations and marketing activities (Frost & Cooke, 1999).

Despite their overlaps, the difference between the intangible assets of reputation and brand is real. Frost and Cooke (1999) make the following distinctions.

Brand is mainly concerned with the consumer and is the purview of marketing departments. It generally deals not only with product features, but also with the overall experience a consumer has had with a company's products and services.

Reputation is the opinion about the company held by the entire stakeholder group for the company, not just consumers. Reputation is a more encompassing term, reflecting a larger audience who make judgments on more dimensions of the company, such as its values. Reputation is usually managed by public relations departments (p. 23).

Low and Kalafut ((2002) make a similar distinction between the concepts:

Brand refers to the cluster of attributes and emotions customers associate with a particular product or set of products, including those products' value and functionality.

Reputation refers to what a variety of stakeholders – not just customers but suppliers, other businesses, investors, employees, regulators and the community at large – think of the company (p110).

If Low and Kalafut (2002) are correct in stating that "intangibles are driving business performance" in an "intangible economy," and if two intangibles, brand value and corporate reputation, are separate measures, then each measure should add explanatory power in explaining variances in market-to-book ratios.

Objectives of this study

The objective of this study is to examine the importance of brand value and corporate reputation in explaining variation in market-to-book relationships. We use as a relative brand value measure the ratio of brand value (as estimated by *CoreBrand*) to book value. We use the 2006 *CoreBrand* database of 500 companies with identifiable brand values.

The *CoreBrand* database is selected for this study primarily because it estimates brand value for 500 companies as opposed to 100 companies estimated by the other leading brand valuation company, *Interbrand*. *CoreBrand* computes estimates of brand value using a "Corporate Branding Index" developed from surveys of 1,000 companies in more than 40 industries. *CoreBrand's* valuation model links corporate brands to financial and stock performance as well as to the familiarity and favorability of a company's name and products in the product market place. In contrast, *Interbrand's* technique of brand valuation is more closely tied to product market and customer perceptions. We consider *CoreBrand's* database more appropriate for our research.

We use the 2006 corporate reputation overall rating scores from the annual survey conducted by *Fortune* magazine and Hay Group. Reputation rating scores from a total of 303 companies were reported in the 2006 *Most Admired Companies List*.

Research Method

To begin our research, we combined companies from the *CoreBrand* database of 500 companies with the 303 companies from the 2006 *Most Admired Companies List* as reported by *Fortune* magazine. Financial accounting data for fiscal years ending on or near December, 2006 were obtained from the *Value Line* Database.

The sample we use in the statistical tests is reduced from the 500 CoreBrand companies to 326 companies because financial data were not available in the *Value Line* database or the company's fiscal year end was not on or near December, 2006. Likewise, the 303 companies in the 2006 *Most Admired Companies List* were reduced to 201 companies for the same reasons. We then eliminated all companies that did not have both a reported brand value in *Corebrand* and a reported reputation rating score from *Fortune*, leaving a final sample of 125 companies.

From the remaining companies, a sample of the 40 highest market-to-book values and the 40 lowest market-to-book values was selected. A regression analysis was performed to test how well brand values and reputation rating scores explain variations in the market-to-book values according to the following model:

Dependent Variable: LOGMBV (Natural Log of Market-To-Book Value)

Independent Variables:

1. BRDBV (Brand-Value to Book Value)
2. REPSCORE (Reputation Rating Score)

The authors hypothesize that the measures of relative brand value and corporate reputation rating scores will be significant in explaining the variation in market to book values for the companies in our sample, and that the corporate reputation rating scores will add

explanatory power over and above the relative brand value measure. If our hypothesis is valid, this provides evidence that balance sheets of companies with high relative brand values and high corporate reputation rating scores may not be representationally faithful.

Results of the Research

Table 1 reports sample statistics for the variables used in the regression model:

Table 1—Sample Statistics					
Variable	**Firms**	**Mean**	**Std. Dev.**	**Max.**	**Min.**
LOGMBV	80	0.561	0.299	1.45	0.060
BRDBV	80	0.529	0.761	5.20	0.003
REPSCORE	80	6.934	0.717	8.54	5.34

The market-to-book value ratios for the sample of 80 firms ranged from a low of 1.15 to a high of 28.11 with a mean of 4.70. The market-to-book value ratios for the sample of 40 low market-to-book value companies ranged from a low of 1.15 to a high of 2.88 with a mean of 2.08. The market-to-book value ratios for the sample of 40 high market-to-book value firms ranged from a low of 4.41 to a high of 28.11 with a mean of 7.31.

For firms in the low market-to-book sample, the mean of brand value to book value was 13.4%. For firms in the high market-to-book sample, the mean of brand value to book value was 92.3%. As expected, due to the possibility that brand values may not recorded as assets on the balance sheet, the mean values for brand value to book value for the high market-to-book firms were close to seven times greater than the means for the low market-to-book firms.

For firms in the low market-to-book sample, the mean of reputation rating scores was 6.58. For firms in the high market-to-book sample, the mean of reputation rating scores was 7.28. As expected, mean values for reputation rating scores for the high market-to-book firms were greater than the means for the low market-to-book firms.

Table 2 reports the statistics of the regression model using the variables shown in Table 1:

Table 2—Regression Model			
Variables	**Parameter Estimate**	**Std. Error**	**Prob > t**
Dependent: LOGMBV			
Independent:			
BRDBV	0.260	0.028	<0.0001
REPSCORE	0.126	0.030	<0.0001

Note: $R^2 = 0.635$ Adjusted $R^2 = 0.625$

As expected, the independent variables BRDBV and REPSCORE have a high degree of statistical significance in explaining the variations in the market-to-book variable. Also, the adjusted R^2 of the model is 0.625 which is considerably higher than the 0.51 reported by Little, Coffee, and Lirely (2005). The signs of the coefficient of the variables were as expected and consistent with the findings of other research. This suggests that firms with higher brand values to book values and higher reputation rating scores have higher market-to-book values. Given

that the regression model's adjusted R^2 is 0.625, there are other important variables that enhance the explanation of variances in market-to-book values. Little, Coffee, and Lirely (2005) report that a firm's risk level, market capitalization, and EPS growth rate add to the explanatory value of a market-to-book value model. Also, as mentioned earlier, Low and Kalafut (2002) report that there are twelve intangibles that drive business performance in what they refer to as the "intangibles economy." Any or all of these intangibles may add to the explanatory value of such a model.

Also as expected, the REPSCORE measure adds additional explanatory power to the model over and above the BRDBV measure. The partial R^2 of the BRDBV measure is 0.55 and the partial R^2 of the REPSCORE measure is 0.084. The C(p) value of the BRDBV measure is 21.87 and the C(p) value of the REPSCORE measure is 5.52.

Conclusions

Our study shows that companies with high relative brand value and high relative corporate reputation rating scores have significantly higher market-to-book ratios than companies with low relative brand value and low relative corporate reputation rating scores. If one accepts the premise that high market-to-book values are sometimes indicative of the systematic under-reporting of assets, then our findings suggest that the balance sheets of companies with high relative brand values and high relative corporate reputation scores may not be representationally faithful.

In addition, our study shows that relative brand value measures and relative corporate reputation rating scores are separate measures, as suggested by Frost and Cooke (1999) and Low and Kalafut ((2002). Statistical results indicate that both measures are significant in explaining variations in market-to-book values, and that the relative corporate reputation rating score measure adds explanatory value over and above the relative brand value measure.

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