
BRAND VALUE AND THE REPRESENTATIONAL FAITHFULNESS OF BALANCE SHEETS

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ABSTRACT

This study examines the impact of brand value on the representational faithfulness of balance sheets. The results of this research reveal that brand value is significant in explaining variations in the price to book value ratios over and above the explanatory power of variables that are typically thought to be related to price to book value differentials. These results suggest that assets of firms with significant brand value may be underreported on the firms' balance sheets. Accordingly, if the representational faithfulness of balance sheets is to be enhanced, accounting standards should consider including reliable measures of intangible assets (especially for high brand value firms) in balance sheets.

BACKGROUND

Little and Coffee (2000) found that the balance sheets of knowledge and service based companies are less representationally faithful than the balance sheets of more traditional firms because they systematically under-report assets. They suggest that one reason for this may be that the assets of knowledge and service based companies include more soft, intangible assets as opposed to the comparatively hard, tangible assets of more traditional business enterprises like heavy manufacturing and traditional wholesaling/ retailing.

Knowledge and service based companies are not, however, the only kinds of companies that may have significant intangible assets. It is well established that brands like Nike, Coca-Cola, Disney and McDonald's are assets that have a separately identifiable economic value (Kallapur and Kwan, 2004; Kerin and Sethuraman, 1998). Fernandez (2002) reports the Marketing Science Institute definition of brand value as the "strong, sustainable, and differentiated advantage with respect to competitors that leads to a higher volume or a higher margin for the company compared with the situation it would have without the brand." Interbrand (2001) estimates that brand value accounts for a significant percentage of the market value of the top 100 global brand companies.

The Financial Accounting Standards Board recognizes the potential economic value of brands with respect to intangibles acquired as part of a business combination. FASB Statement No.

141: Business Combinations (FAS 141), requires the use of the purchase method of accounting for business combinations. Under this method, the acquiring company will be treated as though it purchased the target company's net assets at their fair market value on the date of acquisition. Net present value is deemed to be the best method for determining fair market value. The use of the purchase method requires that goodwill be recognized as an asset. Furthermore, other intangibles should be recognized as assets separate and apart from goodwill if these other intangibles either arise from contractual or legal rights or are capable of being transferred from the acquired entity. FAS 141 in paragraph 16A identifies brand as a general marketing term typically used to refer to a group of complementary assets such as the trademarks or service marks and their related trade names, formulas, recipes, and technological expertise which may or may not be patented. The statement does not preclude an entity from recognizing, as a single asset apart from goodwill, a group of complementary intangible assets commonly referred to as a brand if the assets that make up that group have similar useful lives.

Accordingly, brand value is not exclusive to knowledge and service based companies. For the last several years, Interbrand Corporation has estimated the value of the 100 top global brands and published the results in Business Week. The 2002 list includes knowledge based companies like Microsoft, IBM and Intel, as well as more traditional retail companies like Coca-Cola, Nike, and Gap and manufacturing companies like Ford, Honda, Toyota and GE. Interbrand estimates that each of the top 100 brands has a value in excess of \$1 billion. The brand with the highest value in 2002, Coca-Cola, had an estimated value of nearly \$70 billion. The representational faithfulness problem linked to knowledge and service based companies may extend to more traditional companies if brand value comprises a significant unrecorded asset.

BOOK VALUE VERSUS MARKET VALUE

Little and Coffee (2000) used the ratio of book value to market value per share of common stock as a measure of the representational faithfulness of the balance sheet. Book value per share of common stock measures the amount each share of common stock would receive if all assets on the balance sheet were sold at an amount equal to the balance sheet carrying (book) value, all liabilities were retired at their carrying (book) value, preferred stockholders were paid according to the liquidation provisions of the preferred stock (usually call value), and the common shareholders received the remaining cash in a pro-rata distribution. The book value per share of common stock can therefore be viewed as a measure of the net assets attributable to each share of common stock, as these net assets are recognized and measured in accordance with generally accepted accounting principles.

Market value per share of common stock is essentially the capital market's collective measure of the perceived present value of the future cash flows of a share of common stock, with both the amounts and timing of the future cash flows and the discount rate being in the eyes of the capital

market. When the market value is above book value this indicates the capital market's recognition of valuation not represented on the balance sheet. This could be the result of assets reported on the balance sheet (usually at historical cost) at less than their market value, or it could indicate the existence of separately identifiable (usually intangible) assets which are not recognized on the balance sheet. For companies with very high brand values, nearly all of the difference between market and book value could be captured in unrecognized brand value. In fact, advocates of brand value accounting suggest that for many companies brand value may be the single most important asset. Chris Pearce, CFO of Rentokil, maintains that brand assets should be recorded on the balance sheet because they have real value and are sold between companies on a regular basis (Fernandez, 2002).

Aaker (1991) and Morris (1996) assert that successful, established brand names are corporate assets that have an economic value. Kerin and Sethuraman (1998) were among the first to test for the possibility that the capital markets attribute an economic value to brands. Their basic model was a simple, bivariate model that examined the functional relationship between brand value and the market to book ratio for a sample of top-100 brand companies. They used Financial World's estimates of brand value rather than Interbrand's estimates. The bivariate relationship examined by Kerin and Sethuraman (1998) was a Log-Log model (log market to book ratio and log brand value). A positive and significant relationship was found between brand value and the book to market ratio. The Log-Log model had an explanatory value of (Adj. R²= .40).

Kerin and Sethuraman (1998) suggested that a simple, bivariate model may be insufficient to explain the observed association between brand value and the market to book ratio. To test this possibility, they added sales as a variable in their model. Sales did not alter the results, but Kerin and Sethuraman suggested that future research should introduce other variables to determine whether additional variables might "attenuate or amplify the observed association and functional form...."

Also, there are other variables that might affect market/book ratios and the association between them and brand value. Little and Coffee (2000) found significant relationships between market/book ratios and risk, size (sales or assets), growth (projected 5-year earnings per share growth) and asset intensity (ratio of plant assets to total assets). They based their model in part on prior studies that reported that growth companies have higher market to book ratios after controlling for risk (Stickney and Brown, 1999) and that larger companies have higher market/book ratios (Fama and French, 1992).

OBJECTIVES OF THIS STUDY

Are high brand values an indicator of balance sheets with poor representational faithfulness? One would presume so, as brand values are not captured as assets under GAAP, unless a company has been acquired in a transaction using the purchase method of accounting following FAS 141

guidelines. How do high brand value companies compare to low brand value companies in the representational faithfulness of their balance sheets? If there is a strong connection with high brand value and representational faithfulness, then this is evidence that balance sheet problems are not limited to knowledge and service based companies but extend to many companies in traditional manufacturing, retailing, and other areas. If true, this suggests that accounting standards should examine the concept of capturing some measurement of brand value to improve the representational faithfulness of balance sheets.

RESEARCH METHODOLOGY

Brand value data were obtained from Business Week's 2003 Top 100 Global Brand Scoreboard. Of the one hundred companies, sixty one companies were selected whose brand name defines the company itself. For example, the brand name Coke defines the Coca-Cola company but Marlboro does not define the Philip Morris company.

Brand values for the year 2003 were derived by Business Week using Interbrand's method which project's net future earnings for the brand over and above the cost of owning tangible assets. The resulting "Economic Value Added" of the brand is discounted using a discount rate that is adjusted for the risk of the projected earnings based on the assessed strength of the brand. While it is true that Interbrand's estimate of future earnings from the brand and the risk factor based on brand strength is somewhat subjective, the credibility of Interbrand's brand value estimates is enhanced by the use of respected financial analysts, market research, and interviews with industry executives.

Other financial data were obtained from the 2003 Value Line database for fifty four of the sixty one "brand value" companies for which data were available. In addition, a sample of fifty four companies from 'zero brand value" companies was selected. It was assumed that companies from the Utility industry would best represent those which have little or no brand value. Because of the dichotomous grouping of companies, the total sample of "brand value" and "zero brand value" companies allow for tests of the representational faithfulness of balance sheets, as represented by variations in price to book value ratios.

Fernandez (2002) postulates that a firm's price to book value relationship can be expressed as,

$$PRBV = (ROE-g)/(Ke-g)$$

Where, *PRBV* = Market Value to book Value

ROE = Return on Shareholders' Equity

g = Projected Growth Rate of Earnings

Ke = Cost of Equity Capital

This relationship is supported by Little and Coffee (2000) who found that risk (Beta) and projected earnings per share growth were significant in explaining variations in PRBV.

Also, Fama and French (1992) reported that size, as measured by the natural log of sales, was a significant variable in explaining variations in PRBV. Given the findings of Kerin and Sethuraman (1998), a variable representing brand value should add to the explanatory power of a model that includes the aforementioned variables.

Thus, the variables selected for the statistical tests in the study are, as follows:

Dependent Variable: PRBV (Natural Log of PRBV)
Independent Variables: RISK (Beta)
 PEPSG (Projected 5 Year EPS Growth)
 SIZE (Natural Log of Sales)
 BRAND (Brand Value Categorical)
 1 = Brand Value Firms
 0 = Zero Brand Value Firms

In the following presentation of the results of this research, sample statistics are presented along with the results of the regression analysis using the aforementioned model. Appendix A reports the "Brand Value" and "Zero Brand Value" companies used in this research.

RESULTS OF THE RESEARCH

Table one reports statistics for the variables used in the regression model for companies in the "Brand Value" and "Zero Brand Value" samples.

Table One: Sample Statistics					
Brand Value					
	n	Mean	Std. Dev.	Max.	Min.
PRB	54	1.39	0.75	3.48	-0.20
PISK	54	1.11	0.35	1.90	0.55
PEPSG	54	1.67	1.15	8.67	1.08
SIZE	54	10.17	1.39	14.34	7.39
Zero Brand Value					
PRBV	54	0.47	0.21	0.95	0.09
RISK	54	0.80	0.17	1.55	0.50
PEPSG	54	1.13	1.12	3.18	-6.67
SIZE	54	7.93	1.22	10.02	5.36

As expected, due to the fact that brand values are not recorded as assets on the balance sheet, the PRBV mean for the "Brand Value" firms are close to three times of the PRBV mean for the "Zero Brand Value" firms. Also, the "Brand Value" firms have a higher cost of equity capital (as reflected by the higher Beta mean), a higher projected growth of earnings, and are larger in size.

Table two reports the statistics of the regression model using the variables shown in table one:

Independent Variable	Parameter Estimate	Standard Error	Prob >T
RISK	-0.664	0.182	0.0004
PEPSG	0.025	0.044	0.5662
SIZE	-0.113	0.038	0.0036
BRAND	1.364	0.136	0.0001

Note: R2 = 0.535; Adjusted R2 = 0.517

As expected, RISK, SIZE, and BRAND have a high degree of statistical significance in explaining the variations in PRBV. However, PEPSG was not statistically significant as it was in prior research. It is possible that brand value adds explanatory value that captures both the future earnings potential of "Brand Value" companies as well as differentials in the representational faithfulness of balance sheets.

Another important finding from the results of the regression is that the adjusted R2 of the model is 0.517 which is considerably higher than the 0.40 reported by Kerin and Sethuraman (1998) using only a brand value variable. The adjusted R2 of the regression model in their study, using only the BRAND variable, is 0.409. This finding suggests that brand value is important (and, perhaps most important) in explaining variations in PRBV, but that other variables do add significantly to the explanatory power of the model.

The signs of the coefficients of the variables were as expected and consistent with the findings of other research. The coefficients of both the RISK and SIZE variables were negative. This suggests that firms with higher betas and larger companies tend to have lower PRBV's regardless of the value of the firms' brands. Collinearity diagnostics, Belsley, Kuh, and Welsch (1980), reveal that the model is well-conditioned.

Given that the regression model's R2 is 0.535, it is obvious that there are other important variables that enhance the explanation of variances in PRBV. For example, Roos, Roos, Edvinsson, and Dragonnetti (1997) theorize that the difference between a firm's market value and its book value is represented by "intellectual capital."

This "intellectual capital" may consist of "human capital", representing the quality of a firm's management and the skill and knowledge of its key employees, and "structural capital" which includes factors such as brand value and the replacement value of a firm's assets. Thus, further research is needed to explore these added dimensions.

CONCLUSIONS

Our study shows that companies with high brand value have significantly higher price to book ratios than companies with little or no brand value. If one accepts the premise that high price to book value ratios are sometimes indicative of the systematic under-reporting of assets, then our findings suggest that the balance sheets of companies with high brand value may not be representationally faithful due to the omission of some measure of brand value.

The problem of the representational faithfulness of traditional balance sheets, previously found to be associated with knowledge and service based companies, may extend to more traditional manufacturing and wholes/retail business if systematic under-reporting is prevalent. Accounting standards may need to consider including reliable measures of intangible assets, like brand value, to enhance the representational faithfulness of balance sheets.

REFERENCES

- Aaker (1996), *Building Strong Brands*, New York: Free Press.
- Anonymous (2003), "The 100 top brands," *Business Week* (August 4, 2003)
- Belsley, Kuh, and Welsch (1980), *Regression Diagnostics*, New York: John Wiley & Sons, Inc.
- Fama & French (1992), "The effect of the set of comparable firms on the accuracy of the price earning valuation method," *Journal of Accounting Research*, Spring, 94-108.
- Financial Accounting Standards Board. (2001). *Business Combinations*. Stamford, CT: Statement of Financial Accounting Concepts No. 141, June.
- Fernandez (2002), *Valuation Methods and Shareholder Value Creation*, London: Academic Press.
- Interbrand (2003), "FASB Statements No. 141 & 142: The impact on intangible assets, including brands," <http://www.interbrand.com>.
- Kallapur and Kwan (2004), "The value relevance and reliability of brand assets recognized by U.K. firms," *The Accounting Review*, Vol. 79, No.1: 151-172.
- Kerin and Sethuraman (1998), "Exploring the brand value-shareholder value nexus for consumer goods companies," *Academy of Marketing Science Journal*, Vol. 26, No. 4: 260-273.

Little and Coffee (2000), "Representational faithfulness of the balance sheet in the new business paradigm," *Academy of Accounting and Financial Studies Journal*, Vol. 4, No. 1: 10-18.

Morris (1996), "The brand's the thing," *Fortune*, March 4: 72-76.

Roos, Roos, Edvonsson, and Dragonnetti (1997), *Intellectual Capital: Navigating in the New Business Landscape*, New York: Macmillan.

Stickney and Brown (1999), *Financial Reporting and Statement Analysis*, Orlando: Dryden Press.

Value Line Investment Survey: 2003, New York: Value Line Publishing, Inc.

APPENDIX A: SAMPLE COMPANIES

"Brand Value"		"Zero Brand Value"	
Company Name	Industry	Company Name	Industry
Amer. Express	FINANCL	Allegheny Energy	UTILEAST
Anheuser-Busch	ALCO-BEV	ALLETE	UTILCENT
AOL Time Warner	ENTRTAIN	Alliant Energy	UTILCENT
Apple Computer	COMPUTER	Amer. Elec. Power	UTILCENT
Boeing	DEFENSE	Amer. States Water	WATER
BP PLC ADR	OILINTEG	Ameren Corp.	UTILCENT
Canon Inc.	ADR ELECFGN	Avista Corp.	UTILWEST
Caterpillar Inc.	MACHINE	Black Hills	UTILWEST
Cisco Systems	TELEQUIP	California Water	WATER
Citigroup Inc.	FINANCL	Cen. Ver Pub. Serv.	UTILEAST
Coca-Cola	BEVERAGE	CH Energy Group	UTILEAST
Colgate-Palmolive	HOUSEPRD	Cinergy Corp.	UTILCENT
DaimlerChrysler	AUTO	Cleco Corp.	UTILCENT
Dell Inc.	COMPUTER	Consol. Edison	UTILEAST
Disney (Walt)	ENTRTAIN	Constellation Energy	UTILEAST
Eastman Kodak	INSTRMNT	Dominion Resources	UTILEAST
Ericsson ADR	TELEFGN	DTE Energy	UTILCENT
Exxon Mobil Corp.	OILINTEG	Duke Energy	UTILEAST
FedEx Corp.	AIRTRANS	Duq Light Hldgs	UTILEAST
Ford Motor	AUTO	Edison Int'l	UTILWEST
Gap (The) Inc.	RETAILSP	El Paso Electric	UTILWEST
Gen'l Electric	ELECEQ	Empire Dist. Elec.	UTILCENT
Gillette	COSMETIC	Energy East Corp.	UTILEAST
Goldman Sachs	BROKERS	Entergy Corp.	UTILCENT
Harley-Davidson	RECREATE	FirstEnergy Corp.	UTILEAST
Heinz (H.J.)	FOODPROC	FPL Group	UTILEAST
Hewlett-Packard	COMPUTER	Green Mountain Pwr.	UTILEAST
Honda Motor ADR	AUTO	G't Plains Energy	UTILCENT

APPENDIX A: SAMPLE COMPANIES (continued)

"Brand Value"		"Zero Brand Value"	
Company Name	Industry	Company Name	Industry
Intel Corp.	SEMICOND	Hawaiian Elec.	UTILWEST
Int'l Business Mach.	COMPUTER	IDACORP Inc.	UTILWEST
Johnson & Johnson	MEDSUPPL	MDU Resources	UTILWEST
JPMorgan Chase	BANK	MGE Energy	UTILCENT
Kellogg	FOODPROC	NiSource Inc.	UTILCENT
McDonald's Corp.	RESTRNT	NSTAR	UTILEAST
Merck & Co.	DRUG	OGE Energy	UTILCENT
Merrill Lynch & Co.	BROKERS	Otter Tail Corp.	UTILCENT
Microsoft Corp.	SOFTWARE	Pepco Holdings	UTILEAST
Morgan Stanley	BROKERS	PG&E Corp.	UTILWEST
Motorola Inc.	SEMICOND	Pinnacle West Cap	UTILWEST
NIKE Inc. 'B'	SHOE	PNM Resources	UTILWEST
Nokia Corp. ADR	TELEFGN	Progress Energy	UTILEAST
Oracle Corp.	SOFTWARE	Public Serv. Enter	UTILEAST
PepsiCo Inc.	BEVERAGE	Puget Energy Inc.	UTILWEST
Pfizer Inc.	DRUG	SCANA Corp.	UTILEAST
Polo Ralph Lau	APPAREL	Sempra Energy	UTILWEST
Reuters ADR	PUBLISH	Southern Co.	UTILEAST
Sony Corp. ADR	ELECFGN	TECO Energy	UTILEAST
Starbucks Corp.	RESTRNT	TXU Corp.	UTILCENT
Sun Microsystems	COMPUTER	UIL Holdings	UTILEAST
Tiffany & Co.	RETAILSP	Vectren Corp.	UTILCENT
Toyota Motor	AUTO	Westar Energy	UTILCENT
Wrigley (Wm.) Jr.	FOODPROC	Wisconsin Energy	UTILCENT
Xerox Corp.	OFFICE	WPS Resources	UTILCENT
Yahoo! Inc.	INTERNET	Xcel Energy Inc.	UTILWEST

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