# The Utility of Brand Value Estimates in Forecasting Financial Performance

## by

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Brands are assets that affect the financial performance of their parent firm. This paper examines the predictive powers of brand value estimates in forecasting fiscal performance. We find that the fluctuation of these values do, in fact, mirror future sales revenue, but do not highly correlate with future levels of net income, suggesting deficiencies in their abilities to capture the cost advantages of strong brands. Furthermore, we investigate the potential value of these brand value estimates as tools for analysts in forecasting earnings-per-share for brands' parent firms, and find that they may well provide previously overlooked insight which would help analysts more accurately predict EPS. We suggest that there may be room for a more comprehensive brand valuation method, but show that corporate executives and investors alike would do well to pay attention even to some of the methods that are currently available. Finally, we draw a direct link between brand-building activity and firm financial performance, thus adding to the literature which quantifies marketers' role in the company's value chain.

**Introduction**

Strong brands can be valuable assets to any firm. They increase the profitability of a firm by both reducing costs and increasing revenues (Aaker 1991, Keller 1993). On one hand, customers are more likely to buy and are willing to pay more for a product whose brand they trust. On the other hand, new products can be introduced at lower cost as extensions of easily recognized brands. As such, some authors have viewed brands along the same lines as physical assets, which are valued both by their replacement costs and by a discounted model of future cash flows and cost savings that accrue from their performance (Simon and Sullivan 1993, Kerin and Sethuraman 1998). As a consequence, both scholars and managers harbor considerable interest in quantifying brand value.

The academic work on brand value measurement has generally taken one of two approaches – measuring customer-based brand equity or measuring financial brand value (Kerin and Sethuraman 1998). The customer-based brand equity approach tries to measure brands' impact on purchasers' behavior (Keller 1993, Lassar et al 1995), while the financial brand value approach attempts to measure brands' impact on firms' accounting statements (Simon and Sullivan 1993, Barth et al 1998, Madden et al 2006). An important distinction between the two approaches may be their relevance to different audiences – customer-based brand equity may be more informative to brand managers and marketers, while financial brand value may be more helpful to investors.

However, value estimates of brand equity of both the customer-based and financial variety have historically been ignored or dismissed by groups and individuals interested in the fiscal performance of a firm (Simon and Sullivan 1993). To a large degree, this is because such estimates are barred by U.S. Generally Accepted Accounting Principals (GAAP) from appearing in firms' financial statements, due to perceived unreliability and unavailability (Barth et al 1998). Though emerging research (Barth et al 1998, Kerin and Sethuraman 1998, Verbeeten and Vijn 2006, Madden et al 2006) purports to exhibit the robustness of both customer-based and financial-value estimates and calls for a reevaluation of GAAP statutes, no changes have yet been made to award brands the same recognition as physical assets. Marketers, therefore, continue to have difficulty showing the direct financial returns on their branding investments (Madden et al 2006), and often rely on trade-wide assumptions about the future payoff of branding expenditures (Verbeeten and Vijn 2006). The translatability of financial brand value into terms corporate officers and investors understand would make it an invaluable tool in reconciling the oft ambiguous role that marketing investments play in creating value for the firm. For that reason, it is the focus of this paper.

In an attempt to build on the literature that quantifies such payoff and strengthens this potential tool, we begin with the question, Does empirical evidence back up intuition that brand-building activities yield increased profits down the line? In other words, do systems used for estimating brand values conform with the understanding of a brand as a forward-looking generator of both

future cash flows and future savings? To the best of my knowledge, no one has explored whether this is so for the most popular method of calculating financial brand values, namely, that developed by the London-based consulting firm Interbrand and published in widely regarded business publications such as *Business Week* and *Financial World*. Furthermore, if, indeed, Interbrand's system does corroborate this widespread understanding of a brand, what might the implications be for top executives, investors, or other individuals concerned with future financial performance?

The remainder of this paper attempts to answer these questions in four parts. The first explores in more depth the academic literature that provides the bases for these questions and develops the general hypotheses that Interbrand's valuations provide a significant but heretofore overlooked indication of future sales (but not profits). The second part describes the data and methodology that are used to investigate these hypotheses. The third part reports our findings, namely, that the Interbrand estimates do, in fact, accurately predict next-period sales but that investors do not appropriately take advantage of this information. The fourth part sums up and discusses both implications of and limitations to the findings in order to place them in their proper context. We also propose areas for future research.

**Literature Review and Hypothesis Development**

Many researchers have contributed to the current understanding of brands and financial brand value. Most cite from the numerous seminal publications of

Aaker (1990, 1991, etc.) or Keller (1990, 1993, etc.) and the outlines these works provide regarding the various advantages that can be realized by companies who own strong brands. These benefits are primarily based on two underlying factors. First, customers are willing to increase the frequency with which they purchase, as well as the price at which they purchase products that have strong brand name relative to those products that do not. Brands therefore increase revenues. Second, customers (both consumers, and, where appropriate, retailers) are more likely and are quicker to accept new products that are developed as line extensions under previously known brand names than they are unbranded versions of the same products. This means that manufacturers do not have to spend the same amount of money distributing and marketing such new products. Strong brands therefore decrease costs.

It is readily apparent why the quantification of such increases in revenues and decreases in costs would serve as valuable knowledge to the firm. Hence, methods to measure brand value have emerged in the academic and commercial worlds, as researchers and consulting firms such as Interbrand (see Appendix A for a description of Interbrand's methodology) have developed detailed valuation systems. Attempts have been made, as well, to merge the academic and commercial understandings of brand value. In particular, multiple authors have undertaken to empirically demonstrate Interbrand's estimates' place in accounting documentation and in the larger scheme of brand theory.

Kerin and Sethuraman (1998) show that the Interbrand estimates published in *Financial World* magazine correlate with concurrent market-value-

to-book-value ratios of publicly traded U.S. consumer goods firms. They find that, despite the fact that not all of a firm's sales are necessarily of products carrying the name of their leading brand, companies that own stronger brands (as measured by Interbrand) consistently have higher market-to-book ratios. The authors contend that this confirms the understanding of brands as intangible assets to be valued by players in the equity market even if they do not appear on firms' balance sheets.

Barth et al (1998) continue to build the case for the validity and reliability of Interbrand estimates. They demonstrate a positive relationship between Interbrand brand values and concurrent stock prices of the firms that own those brands. Barth and her co-authors' models reveal that the estimates contain pertinent and significant information incremental to the information contained in other financial metrics such as total assets or net income. Furthermore, they provide evidence of a relationship that Kerin and Sethuraman (1998) investigated but were unable to confirm, namely, that there exists a correlation between year-to-year change in brand value and contemporaneous change in equity price. Lastly, they show, through a system of simultaneous equations, that Interbrand's estimates are not themselves influenced by contemporaneous stock performance, and that the relationships do not, therefore, suffer from simultaneity bias. They conclude that, because the brand value estimates are robustly associated with concurrent equity prices, they are value-relevant and should be reconsidered for inclusion on firms' balance sheets.

Madden et al (2006) explore yet another aspect of the relationship between Interbrand's estimates and contemporaneous fiscal performance. Drawing on the Fama-French model of financial literature, they demonstrate that firms with brands included on Interbrand's list of World's Most Valuable Brands provide greater shareholder return (measured through increased stock price) at a lower level of risk than firms without such brands. They reason that if brand values are intrinsically linked to shareholder values, marketers may finally have their metric for showing the payoff of their investments.

Despite its wide use, Interbrand's methodology is not without detractors. Relatively early in the evolution of the brand value literature, Simon and Sullivan (1993) discuss a number of the valuation systems which had been suggested by that time – some based on acquisition prices, some on price premia commanded, some on consumer behavior, for example – and highlight the advantages and disadvantages of each method. In particular, they single out the Interbrand system as faulty in two regards. First, they claim it fails to account for cost savings that arise from a strong brand. Second, Simon and Sullivan (1993) assert that it is disproportionately based on historical performance rather than on future achievement. Incredibly, none of the aforementioned scholars who assume Interbrand's method to be the best available and who use the consulting firm's estimates in their papers adequately address either of these critiques. Additionally, these authors seem to stray from the basic understandings of brands as forward-looking assets, instead correlating changes in brand value with contemporaneous functions of stock price and market cap. Such articles often assume that stock

prices reflect expectations of future financial performance (Madden et al 2006), but do not investigate as to whether such brand-related expectations are grounded in reality, rather perpetuating the seemingly blind acceptance that estimates of brand values match the accepted notions of brands.

And so there remains an unfilled gap between the understanding of brands as generators of future profits professed in the influential works of Keller (1993) and Aaker (1991) and the subsequent research fixing brand values into the context of accounting theory by assuming Interbrand's system as the premier method for estimating such values. Missing from the literature is an answer to the seemingly simple question, Do Interbrand's brand value estimates reflect the view of brands as *forward-looking* assets? In other words, do the values ascribed to brands indicate anything about future income, from both a revenue- and a cost-based perspective?

Considering the depth and breadth of the research which purports to validate Interbrand's estimates, we would expect to find that a relationship exists between those estimates and future fiscal performance. However, based on the points raised by Simon and Sullivan (1993), we suspect that we may find a stronger relationship between the Interbrand values and future revenues than between the Interbrand values and future income, primarily because of the revenue-based methodology used in calculating these estimates (see Appendix A). Indeed, as we shall show later on, we do find that Interbrand's estimates accurately predict next-period sales incremental to predictive information provided by current-period revenues. This is not so, however, for profits, as

Interbrand's valuations fail to significantly correlate with next-period income after adjusting for current-period profits. As such, an explanation is needed as to how prior literature (Barth et al 1998, Kerin and Sethuraman 1998, Madden et al 2006) has allowed Interbrand's methodology to stand up to authors' tests of validity and financial-data-compatibility while this methodology seems to fail half of our examination of its power as a forward-looking system. One possible rationale resides in previous works' contemporaneous perspective, which more readily highlights the revenue-related benefits of strong brands while underplaying the cost-related benefits.

If, in fact, relationships exist between Interbrand's estimates and future revenue and/or future income, respectively, it would seem that Interbrand's estimates are of use in predicting future financial performance. A second question thus arises: Do executives and investors appropriately incorporate changes in a brand's value into their expectations of such performance? Perhaps interested parties would be wise to pay attention to the Interbrand data that are publicly available or perhaps even contract with the consulting firm to provide estimates that are not. Interestingly, we find that such market players do not adequately account for changes in brand value when forecasting future performance. Despite the Interbrand estimates' failure to correlate with future profits, the brand values nonetheless explain a significant portion of the variation between earnings-per-share (EPS) forecasts and actual EPS, meaning that forecasters' predictions would be more accurate if they were to incorporate Interbrand's estimates into their calculations. In other words, brand value estimates play a role in forecasting fiscal

performance more meaningfully than had previously been realized, a fact that strengthens the argument for their inclusion on firms' financial statements and adds to the understanding of branding as a significant link in companies' value chains.

**Data Selection and Hypothesis Specification**

To measure the relationship between Interbrand's brand value estimates and future financial performance, we obtained three sets of data: the Interbrand values, firm revenues, and firm profits.

Interbrand's brand value estimates were obtained from *Business Week*. Since 2001, *Business Week* has annually published a list of Interbrand's "Top 100 Global Brands". This list provides brand value estimates each August for the current fiscal year, much as a balance sheet would for physical assets. Our data set consists of the brands listed in *Business Week* during the four years from 2001 through 2004, with three categories of exceptions:

i)  Brands whose parent companies are not listed on any of the major US stock exchanges, and whose financial information is therefore less readily available;

ii)  Brands which do not appear in the "Top 100" list in consecutive years, and whose year-to-year change in value, therefore, cannot be measured;

iii)  Brands which do not share the same name as their parent company, and whose parent company financials are therefore

less likely to be tied to the performance of a specific brand (the only exception to this exclusion rule being Budweiser, whose parent company, Anheuser Busch, uses the stock ticker BUD, which indicates just how closely the firm identifies with its primary brand).

Altogether, the number of brand observations (*n*) taken from these four years of lists totals 200 (see Appendix B for a complete list of brand observations). These values range from $70.45 billion (Coca-Cola in 2003) to $1.24 billion (Hilton in 2001), with a mean of $14.1 billion and a median of $8.3 billion. Table 1 provides more detailed descriptive statistics.

Financial information (revenue, net income, and earnings per share) for each of these 200 brand observations was obtained from the Compustat North America Industrial Annual Database for the fiscal years corresponding to those for which the brands appeared on the *Business Week* "Top 100" list, as well as for the year directly following the brand's appearance. For example, if a brand was included in our dataset for its appearance in *Business Week* in 2002, financial information was obtained for 2002 and 2003. This allowed us to examine Interbrand's estimates as forward-looking assets by studying the correlation between an increase or decrease in brand value in year t (the year in which the brand appeared on the list) over year t-1 (one year prior) with an increase or decrease in financial performance in year t+1 (the year immediately following the brand's inclusion on the list) over year t. Table 1 provides descriptive statistics for

the obtained revenues and net incomes for both the year during which the brands

appeared on the "Top 100" list and the year after they appeared on the list.

*Table 1. Descriptive Statistics for Financial Performance Data*

|  | Brand Value Year t* (millions) | Revenue Year t (millions) | Revenue Year t+1* (millions) | Net Income Year t (millions) | Net Income Year t+1 (millions) |
|---|---|---|---|---|---|
| Mean | $ 14,100.20 | $ 37,589.07 | $ 40,372.33 | $ 2,801.66 | $ 3,456.29 |
| Median | $ 8,220.00 | $ 23,142.10 | $ 24,679.50 | $ 1,301.00 | $ 2,029.50 |
| Standard Deviation | 15071.80 | 45566.19 | 48465.72 | 4002.87 | 4448.42 |
| Minimum | $ 1,240.00 | $ 717.42 | $ 953.07 | $ (5,468.00) | $ (3,429.00) |
| Maximum | $ 70,450.00 | $285,059.00 | $285,059.00 | $17,782.00 | $ 24,521.00 |
| Count (*n*) | 200 | 200 | 200 | 200 | 200 |

* Year t = year that brand appeared on "Top 100" list

** Year t+1 = year after which brand appeared on "Top 100" list

To test whether Interbrand's brand value estimates provide a meaningful

indicator of future financial performance, we examine models for revenue and net

income. The first model investigates change in sales revenue in year t+1 over

revenue in year t as a function of both the change in Interbrand's valuation in year

t relative to the brand's estimate in year t-1 and the firm's sales in year t (thus

factoring in the possibility that smaller firms' performances are more volatile). In

order to account for size differences between firms, we measure both variables

involving change as percentages of the previous year's total rather than as

absolutes. This proposed relationship can be written as the expression

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$$(1) \qquad \% \, \Delta \, R_{t+1} \approx a + b1 \cdot R_t + b2 \cdot \% \, \Delta \, BV_t$$

where $\% \, \Delta \, R_{t+1}$ is the percent change in revenue in year t+1 relative to revenue in year t, $R_t$ equals sales revenue in year t, and $\% \, \Delta \, BV_t$ is the percent change in Interbrand's brand value estimate in year t compared to the estimate in year t-1. If Interbrand's values do, as we hypothesize, provide a valid indication of future revenues that the firm might expect, we would observe a positive coefficient in front of the variable $\% \, \Delta \, BV_t$.

The second model examines change in net income in year t+1 over net income in year t as a function of both the change in Interbrand's valuation in year t relative to the brand's estimate in year t-1 and the firm's net income in year t. In order to account for size differences between firms, we again measure both variables of change as percentages of the previous year's total rather than as absolutes. This proposed relationship can be summarized as the expression

$$(2) \qquad \% \, \Delta \, NI_{t+1} \approx a + b1 \cdot NI_t + b2 \cdot \% \, \Delta \, BV_t$$

where $\% \, \Delta \, NI_{t+1}$ is the percent change in net income in year t+1 relative to net income in year t, $NI_t$ equals net income in year t, and $\% \, \Delta \, BV_t$ is the percent change in Interbrand's brand value estimate in year t compared to the estimate in year t-1. If Interbrand's values provide reliable predictions of future profits that firms might enjoy, we would observe a positive coefficient for $\% \, \Delta \, BV_t$.

As explained above, however, we expect Interbrand's brand value estimates to be more strongly correlated with revenue than with net income due to the method by which they are calculated (see Appendix A). This would be exposed by the finding of an appreciably more significant coefficient before $\% \, \Delta$

$BV_t$ in the revenue model compared to the net income model. If this outcome proved true, our findings would corroborate Simon and Sullivan's (1993) contentions against Interbrand's methodology as the premier brand valuation system and lead us to theorize about a better system.

If we are able to establish that there is a connection between Interbrand's brand value estimates and future financial performance, we will test whether investors and executives adequately incorporate such knowledge into their expectations. To best capture such parties' current expectations, we obtained forecasts made by financial analysts (the best proxy available for market players' general beliefs) from the I/B/E/S database. Because forecasts of other financial performance variables are sparse, we collected earnings-per-share (EPS) forecasts for all firms in our dataset for year t+1. Financial valuation literature (Levin and Olsson 2000) tells us that analysts often assume constant growth rates for large firms' revenues while adjusting their annual forecasts based on changes in cost structure. This provides the reasoning behind the hypothesis that, although there may not be a strong correlation between Interbrand's brand value estimates in year t and net income in year t+1, Interbrand's estimates may nonetheless provide a useful and previously overlooked tool in predicting EPS in year t+1. If Interbrand's values more accurately predict future sales numbers than do constant growth models, analysts would be prudent to incorporate them into their earnings forecasts.

In order to best quantify analysts' expectations for EPS in year t+1 without encountering bias due to information that becomes available over the

course of the year, only forecasts for year t+1 that are published in response to the EPS announcement of year t were considered. The cutoff date for such publications was set at three days following the company's announcement, as the number of full-year-in-advance forecasts consistently drops off significantly after three days' time. For example, Hewlett-Packard concludes their fiscal year at the end of October. If they announced their end-of-year EPS on November 16th one year, only forecasts for the following year published on November 16th, 17th, and 18th would be considered. These forecasts were then averaged together to obtain a mean market expectation for each brand observation. Forecasts for five brand observations were unavailable, so the number of brands and mean market expectations used in our study (*n*) was 195. Descriptive statistics for both forecast EPS in year t+1 and actual EPS in year t+1 can be found in Table 2.

*Table 2. Descriptive Statistics for Forecast and Actual EPS*

|  | Forecast EPS for Year t+1 | Actual EPS Year t+1 |
| --- | --- | --- |
| Mean | $ 1.85 | $ 1.90 |
| Median | $ 1.63 | $ 1.61 |
| Standard Deviation | 1.359 | 1.790 |
| Minimum | $ (0.23) | $ (5.05) |
| Maximum | $ 8.71 | $ 11.21 |
| Count (*n*) | 195 | 195 |

To test whether analysts properly incorporate the predictive content of Interbrand's estimates into their forecasts, we examine actual EPS in year t+1 as a

function of both forecast EPS for year t+1 and the change in Interbrand's valuation in year t relative to the brand's estimate in year t-1. Such an analysis will show us whether the change in brand value estimates might be helpful in more accurately predicting future EPS above and beyond those factors currently taken into account. Once again, we measure change as a percentage of the previous year's total rather than as an absolute. This proposed relationship can be written as the expression

$$\textbf{(3)} \qquad \text{Actual EPS}_{t+1} \approx a + b1 \cdot \text{Forecast EPS}_{t+1} + b2 \cdot \% \, \Delta \, \text{BV}_t$$

where Actual EPS$_{t+1}$ is reported EPS for year t+1, Forecast EPS$_{t+1}$ is the mean of analysts' full year forecasts for year t+1, and $\% \, \Delta \, \text{BV}_t$ is the percent change in Interbrand's brand value estimate in year t compared to the estimate in year t-1. If Interbrand's values provide reliable predictions of future financial performance that are not being appropriately considered by analysts, we would observe a positive coefficient in front of the $\% \, \Delta \, \text{BV}_t$ variable. In other words, brand value estimates would thus be capable of decreasing the difference, or surprise, between actual EPS and forecast EPS in year t+1. Such a finding would imply that brand value estimates could play a more meaningful role in forecasting fiscal performance than had previously been realized, thus strengthening the argument for brands' inclusion in firms' financial statements and adding to the understanding of branding as a significant step in companies' value chains.

**Findings**

When we tested for the relationship between change in Interbrand's estimates in year t and change in sales revenue in year t+1 after appropriately accounting for the size of the respective firm (equation (**1**) above), the results confirmed what we previously believed: Interbrand's methodology yields brand value estimates that, in line with at least half of the accepted understanding of brands, are positively related to future revenues. Running equation (**1**) as a regression yielded a coefficient for the $\% \Delta \, BV_t$ variable of .364 with a t-Stat level of 3.611 (p-Value = 0.000). See Exhibit 1 for the complete output.

*Exhibit 1. Equation (**1**) Regression Output*

| Equation (1) Regression Statistics | |
| --- | --- |
| Multiple R | 0.28196236 |
| R Square | 0.079502773 |
| Adjusted R Square | 0.070157623 |
| Standard Error | 0.158399309 |
| Observations | 200 |

| ANOVA | | | | | |
| --- | --- | --- | --- | --- | --- |
| | df | SS | MS | F | Significance F |
| Regression | 2 | 0.426906317 | 0.213453 | 8.507384 | 0.0002859 |
| Residual | 197 | 4.942797181 | 0.02509 | | |
| Total | 199 | 5.369703498 | | | |

| | Coefficients | Standard Error | t Stat | P-value |
| --- | --- | --- | --- | --- |
| Intercept | 0.12348582 | 0.014575746 | 8.472007 | 5.56E-15 |

| | | | | |
|---|---|---|---|---|
| % Change BV Year t | 0.36449811 | 0.100950491 | 3.610662 | 0.000387 |
| Revenue Year t (Mil) | -4.88583E-07 | 2.46426E-07 | -1.98268 | 0.048793 |

The regression for equation **(2)** yields very different results. Testing for a relationship between change in Interbrand's estimates in year t and change in net income in year t+1 after appropriately accounting for the size of the respective firm showed little to no significant relationship. The regression yielded a directionally expected coefficient for the $\% \Delta BV_t$ variable of 1.534 but a t-Stat of only 0.428 (p-Value = 0.669). See Exhibit 2 for the complete output. This, along with the results from equation **(1)**, is consistent with what we suspected about Interbrand's valuation system, namely, that it fails to take costs into account despite the widely acknowledged notion that strong brands are sources of sizable cost savings. In other words, *Interbrand's methodology for valuating brands only partially aligns with the universal understanding of what a brand is!*

*Exhibit 2. Equation (2) Regression Output*

| Equation **(2)** Regression Statistics | |
|---|---|
| Multiple R | 0.046240701 |
| R Square | 0.002138202 |
| Adjusted R Square | -0.007992374 |
| Standard Error | 5.474502946 |
| Observations | 200 |

ANOVA

|  | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 2 | 12.65126762 | 6.325633812 | 0.211064241 | 0.809904912 |
| Residual | 197 | 5904.125954 | 29.97018251 |  |  |
| Total | 199 | 5916.777222 |  |  |  |

|  | Coefficients | Standard Error | t Stat | P-value |
|---|---|---|---|---|
| Intercept | -0.124513197 | 0.48396702 | -0.257276202 | 0.797234087 |
| % Change BV Year t | 1.533884292 | 3.581592282 | 0.428268818 | 0.668923279 |
| Net Income Year t (Mil) | 3.77377E-05 | 9.95235E-05 | 0.37918397 | 0.704959643 |

Despite the shortcomings of the Interbrand methodology, which we shall revisit, the fact remains that Interbrand's estimates do provide reliable indicators of some measures of future performance (namely, sales revenues). There is, therefore, reason to proceed with testing equation (3) to investigate whether these estimates may be of some value in improving analysts' forecasts.

The results from testing equation (3) as a regression also fell in line with our expectations. It seems analysts do not take proper advantage of brand value estimates as a tool that would help them better predict earnings per share for the upcoming year. Testing whether change in Interbrand's estimates in year t help explain the surprise between forecasted and actual EPS in year t+1 yielded a coefficient for the $\% \Delta BV_t$ variable of 2.011 and a t-Stat of 3.154 (p-Value = 0.002). See exhibit 3 for the complete output.

*Exhibit 3. Equation (3) Regression Output*

| Equation (3) Regression Statistics | |
|---|---|
| Multiple R | 0.848946251 |
| R Square | 0.720709738 |
| Adjusted R Square | 0.717800464 |
| Standard Error | 0.950936052 |
| Observations | 195 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| | df | SS | MS | F | Significance F |
| Regression | 2 | 448.0313976 | 224.0156988 | 247.7284177 | 6.6276E-54 |
| Residual | 192 | 173.6216401 | 0.904279375 | | |
| Total | 194 | 621.6530377 | | | |

| | Coefficients | Standard Error | t Stat | P-value |
|---|---|---|---|---|
| Intercept | -0.030023697 | 0.120462865 | -0.249236116 | 0.803444569 |
| % Change BV Year t | 2.010859967 | 0.637559637 | 3.153995092 | 0.001869512 |
| EPS Forecast for Year t+1 | 1.058455814 | 0.052540621 | 20.14547601 | 3.07279E-49 |

**Analysis and Discussion**

Our findings confirm our expectations. The output from our statistical tests corroborate our three hypotheses: First, there is a notable relationship between annual change in Interbrand's brand value estimates in year t and change in sales revenues in year t+1.  Secondly, this relationship between Interbrand's estimates and future revenue is stronger than the one between Interbrand's

estimates and future income. Thirdly, this relationship appears to be inadequately utilized by analysts when they write up their annual forecasts.

It seems that Interbrand's valuation methodology does not fit entirely with the universally accepted definition of brands; whereas brands are understood to provide both increased revenues and decreased costs in future periods, Interbrand's estimates accurately forecast changes in sales revenues but do not contain any information about potential changes in company costs. This is not surprising given the Interbrand system's heavy reliance on sales data in tabulating brand value estimates (see Appendix A). However, these findings underscore an opening that seems to exist in both the academic literature and professional marketplace for a better system of estimating brand value. Such a methodology would likely draw on the best features of the Interbrand system – comparing financial data of a brand to its competitors and using a brand strength multiplier – but take these features one step further and apply them to brand cost structures in addition to their current use on revenue streams.

If Interbrand's methodology is indeed flawed, however, the question may be raised as to how the estimates' supposed robustness and reliability has been demonstrated in previous academic works (Barth et al 1998, Kerin and Sethuraman 1998, Madden et al 2006). The answer to this may lie in the concurrent nature of these authors' investigations, as compared to the forward-looking nature of our investigation. Of revenue gains and cost savings, the two sets of advantages which accrue to strong brands, it is understandable that revenue gains are realized first. A strong brand will lead to an increased willingness on

behalf of the consumer to purchase more frequently and/or at a higher price (the source of increased revenue) more quickly than the firm can mobilize the numerous functions of R&D, manufacturing, and distribution in order to introduce a new product line extension (the source of decreased costs). Pepall and Richards (2002) further note that brand extensions will only occur once a company sees that they have a powerful brand on their hands, as evidenced by the sales advantages the brand commands over its competitors. In other words, while increased revenue due to the strength of a brand may be realized in the current period, the decreased costs often must wait for future periods to be realized. Thus, it is not unexpected that investigations testing Interbrand's methodology (which accurately reflects brands' revenue benefits) against contemporaneous metrics would work nicely; the deficiencies in Interbrand's system (its failure to account for cost savings) would only appear in a study that examines the brand value estimates against future measurements. The forward-looking nature of our investigation reveals this flaw in Interbrand's methodology that was not and, in fact, could not be exposed by previous authors' work.

It seems from our findings that one of Simon and Sullivan's (1993) two arguments deriding Interbrand's methodology holds true. Our results suggest that Interbrand's system does not account for cost savings. Simon and Sullivan's (1993) contention that Interbrand's calculations are too heavily dependant on past performance, however, seems inaccurate. While the brand value estimates may be calculated based on data from the past few years, the predictive power of Interbrand's values with regard to future revenues suggests that the other factor in

calculating the values, namely, the brand strength multiplier (see Appendix A), properly adjusts for future performance of the brand asset.

Analysts inevitably under- or over-shoot actual $EPS_{t+1}$ when making predictions a full year in advance. Our data suggest that if they took changes in brand value into account when calculating their forecasts, they would arrive at figures closer to the EPS levels actually realized.

However, a seeming inconsistency in our findings needs to be addressed: How can Interbrand's estimates be useful in forecasting EPS (defined simply as net income divided by the number of outstanding shares) if they do not accurately predict net income? The explanation for this phenomenon may be based on the method analysts use to arrive at their forecasts. EPS, like net income, is a function of revenues and costs that a company accrues during a given period. Oftentimes, when tabulating earnings forecasts for large and relatively stable firms, analysts will assume that revenues for that period will grow at a rate consistent with average growth rates during the last few periods (Levin and Olsson 2000), and any change anticipated in earnings is the result of changing cost structures. If this is the case, it makes sense that Interbrand's brand value estimates could serve as a useful tool for forecasting; by consistently predicting revenues more accurately than the currently-used constant-growth assumption model, Interbrand's estimates can help analysts consider both the cost and revenue pieces of the earnings formula and therefore better forecast EPS.

There are several implications that emerge from our findings. First, in answer to our original question as to whether brand-building activities yield

improved financial performance in future periods, the answer seems to be a qualified yes. What we demonstrate is that the popular Interbrand method of measuring brand-brand building does, in fact, suggest that growth in brand value leads to growth in sales revenue, and we further argue that to the extent that Interbrand's estimates do not correlate with future bottom line financial performance, it is due to the failure of Interbrand's system to properly incorporate future cost savings.

Our second implication follows from the first, namely, that, as noted above, there seems to be a need for a better method of valuating brands based on both the future increased revenues and decreased costs that strong brands secure for their parent companies. This opportunity for the development and dissemination of a better valuation system exists in both the academic and commercial worlds, although these respective gaps may, in fact, be filled by a single model of brand valuation. It is possible that such a model already exists, but, as we shall discuss later, further research and testing would be necessary if multiple systems are to jockey for popular recognition.

Third, as also discussed above, financial analysts or other market observers may do well to incorporate brand value estimates (as provided by Interbrand or by another system) into their forecasts of financial performance. This paper does not discuss the degree to which analysts' forecasts are used by various market players, but, to the extent that these published predictions do influence behavior, they may more accurately reflect actual future performance by properly accounting for changes in brand value.

Fourth, our evidence suggests that corporate executives may wish to consider measures of their brands' equity (as assessed by Interbrand's methodology or by another technique) when planning their budgets for the upcoming period, as these measures seem to provide accurate indications of future cash flows that might be available. Proper attention should be paid to increases or decreases in estimates of brand value, as such measurements seem to consistently indicate fluctuations in future fiscal performance.

Lastly, and perhaps most importantly, it appears that, by exposing the correlation between brand value and financial performance, our findings add to the growing body of literature (Madden et al 2006, Verbeeten and Vijn 2006, etc.) which quantifies the value contribution of branding activities. Our study, like those of other authors on related topics, helps translate the accomplishments of marketers into terms understood by the entire gamut of chief executives by relating branding investments to fiscal returns. At the very least, then, our paper has, in some way, augmented the understanding of and respect for marketers' contribution to a firm's value chain.

Of course, there are numerous areas for further research which emerge from our investigation, including further analysis of the limitations and possible noise factors which pollute our results. It is possible that our findings are biased because of our brand selection – the use of only large brands, the use of brands names like their firms, or other selection criteria may have yielded skewed results. Additionally, while we remain confident in our method of analysis and have done our best to explain why we used the regression models we chose, it is possible

that there are flaws inherent in our study such as the omission of particular variables which would alter our findings. Furthermore, it is possible that underlying factors, such as firms' growth trends, account for both change in brand value estimates in year t and change in sales or net income in year t+1, and that the correlation between these variables are due to such common underlying factors.

If a fully comprehensive model of brand valuation is to be developed, an in-depth examination is needed to determine with greater precision the effects of brand strength on the cost structure of a company. A study of other proposed brand valuation systems would be necessary to determine if any currently available methods satisfy the requirements we outline above. A test which compared earnings forecasts made with brand value information available against forecasts made without such information available may further demonstrate the usefulness of brand value estimates in indicating future fiscal metrics. Our examination simply lays the foundation for such further research by establishing precedence for believing that brand value estimates can and should be useful tools for those interested in predicting financial performance. Most importantly, however, we believe that our study adds to the body of work which helps define the important role of brand management within a firm.

## Appendix A

## Calculation of Interbrand Brand Valuations

**Methodology**

Interbrand bases its brand value estimates on two factors: brand-related net profits and brand strength multipliers.

Brand-related net profits are tabulated as the after-tax income of a brand minus the profits that could be achieved by a generic version of the same product line. Global after-tax income of a brand is estimated through segment analysis and extensive discussion with executives within the parent firm. Generic-brand profits are assumed to be 5% in return on the dollar capital estimated to be needed to produce the brand in question's sales levels.

Brand strength multipliers are calculated by adding point values from each of seven categories:

Leadership (max 25 points): The brand's ability to influence its market by setting prices, command distribution and controlling a significant market share.

Stability (max 15 points): The brand's longevity and track record, which help instill significant brand loyalty

Market (max 10 points): The stability and turnover of players in the sector in which the brand operates.

Internationality (max 25 points): The acceptance and appeal of a brand across geographical borders and cultures.

Trend (max 10 points): The overall change in the role that the brand plays

within its industry from year to year.

Support (max 10 points): The quantity and quality of promotional

expenditure by the parent company on behalf of the brand

Protection (max 10 points): The strength of the brand's legal properties

such as trademarks or copyrights.

The sum of these seven categories (potentially ranging from 0 to 100, but more often from about 1 to about 25) is then multiplied by the brand-related net profits to yield a brand value estimate.

**Example**

In 1995, Gillette sold $2.6 billion in blades and razors for operating income of $961 million. Based on industry averages of $0.38 of capital for $1 of sales, Gillette's revenue could be have been achieved with capital of $988 million. A generic firm would have achieved a 5% return on this capital, realizing profits of $49 million. Gillette, which earned $961 million, thus had brand-related operating income of $912 million. After taxes are deducted according to the location of the company's headquarters (35% in the US for Gillette), Gillette's after-tax brand-related profits amounted to $575 million.

This $575 million was then multiplied by Gillette's brand strength multiplier, assessed by Interbrand's analysts in 1995-1996 to be 17.9. This brought the brand value estimate to $10.3 billion, the number that was published in *Financial World*'s list of Top Global Brands in 1996. (sources: Barth et al 1998, Kerin and Sethuraman 1998)

# Appendix B

## Brand Observations Included in Dataset

| Brand Name | Year | Brand Value (Millions) | Brand Name | Year | Brand Value (Millions) |
|---|---|---|---|---|---|
| Coca-Cola | 2003 | $ 70,450 | Citibank | 2002 | $ 18,070 |
| Coca-Cola | 2002 | $ 69,640 | Hewlett-Packard | 2001 | $ 17,980 |
| Coca-Cola | 2001 | $ 68,950 | American Express | 2004 | $ 17,683 |
| Coca-Cola | 2004 | $ 67,394 | Cisco Systems | 2001 | $ 17,210 |
| Microsoft | 2003 | $ 65,170 | Ford | 2003 | $ 17,070 |
| Microsoft | 2001 | $ 65,070 | American Express | 2001 | $ 16,920 |
| Microsoft | 2002 | $ 64,090 | American Express | 2003 | $ 16,830 |
| Microsoft | 2004 | $ 61,372 | Hewlett-Packard | 2002 | $ 16,780 |
| IBM | 2004 | $ 53,791 | American Express | 2002 | $ 16,290 |
| IBM | 2001 | $ 52,750 | Cisco Systems | 2002 | $ 16,220 |
| IBM | 2003 | $ 51,770 | AT&T | 2002 | $ 16,060 |
| IBM | 2002 | $ 51,190 | Gillette | 2003 | $ 15,980 |
| GE | 2004 | $ 44,111 | Cisco Systems | 2003 | $ 15,790 |
| GE | 2001 | $ 42,400 | Cisco Systems | 2004 | $ 15,789 |
| GE | 2003 | $ 42,340 | Honda | 2003 | $ 15,630 |
| GE | 2002 | $ 41,310 | Gillette | 2001 | $ 15,300 |
| Nokia | 2001 | $ 35,040 | Honda | 2002 | $ 15,060 |
| Intel | 2001 | $ 34,670 | Sony | 2001 | $ 15,010 |
| Intel | 2004 | $ 33,499 | Gillette | 2002 | $ 14,960 |
| Disney | 2001 | $ 32,590 | Honda | 2004 | $ 14,874 |
| Intel | 2003 | $ 31,110 | Honda | 2001 | $ 14,640 |
| Intel | 2002 | $ 30,860 | Ford | 2004 | $ 14,475 |
| Ford | 2001 | $ 30,090 | Sony | 2002 | $ 13,900 |
| Nokia | 2002 | $ 29,970 | Sony | 2003 | $ 13,150 |
| Nokia | 2003 | $ 29,440 | Sony | 2004 | $ 12,759 |
| Disney | 2002 | $ 29,260 | Pepsi | 2004 | $ 12,066 |
| Disney | 2003 | $ 28,040 | Budweiser | 2003 | $ 11,890 |
| Disney | 2004 | $ 27,113 | Budweiser | 2004 | $ 11,846 |
| McDonald's | 2002 | $ 26,380 | Pepsi | 2003 | $ 11,780 |
| McDonald's | 2001 | $ 25,290 | Oracle | 2002 | $ 11,510 |
| McDonald's | 2004 | $ 25,001 | Dell | 2004 | $ 11,500 |
| McDonald's | 2003 | $ 24,700 | Merrill Lynch | 2004 | $ 11,499 |
| Nokia | 2004 | $ 24,041 | Morgan Stanley | 2004 | $ 11,498 |
| AT&T | 2001 | $ 22,830 | Busdweiser | 2002 | $ 11,350 |
| Toyota | 2004 | $ 22,673 | Oracle | 2003 | $ 11,260 |
| Hewlett-Packard | 2004 | $ 20,978 | Merrill Lynch | 2002 | $ 11,230 |
| Toyota | 2003 | $ 20,780 | Oracle | 2004 | $ 10,935 |
| Ford | 2002 | $ 20,400 | Budweiser | 2001 | $ 10,840 |
| Citibank | 2004 | $ 19,971 | Kodak | 2001 | $ 10,800 |
| Hewlett-Packard | 2003 | $ 19,860 | Morgan Stanley | 2003 | $ 10,690 |
| Toyota | 2002 | $ 19,450 | Pfizer | 2004 | $ 10,635 |
| Citibank | 2001 | $ 19,010 | Merrill Lynch | 2003 | $ 10,520 |
| Toyota | 2001 | $ 18,580 | Pfizer | 2003 | $ 10,460 |
| Citibank | 2003 | $ 18,570 | Dell | 2003 | $ 10,370 |

| Brand Name | Year | Brand Value (Millions) | Brand Name | Year | Brand Value (Millions) |
|---|---|---|---|---|---|
| JP Morgan | 2004 | $ 9,782 | Wrigley's | 2001 | $ 5,430 |
| Pfizer | 2002 | $ 9,770 | Wrigley's | 2004 | $ 5,424 |
| Kodak | 2002 | $ 9,670 | Apple | 2002 | $ 5,320 |
| Merck | 2003 | $ 9,410 | Xerox | 2002 | $ 5,310 |
| Nike | 2004 | $ 9,260 | Accenture | 2003 | $ 5,300 |
| Dell | 2002 | $ 9,240 | Reuters | 2001 | $ 5,240 |
| Merck | 2002 | $ 9,140 | Kodak | 2004 | $ 5,231 |
| JP Morgan | 2003 | $ 9,120 | Wrigley's | 2003 | $ 5,060 |
| Merck | 2004 | $ 8,811 | Philips | 2001 | $ 4,900 |
| Gap | 2001 | $ 8,750 | Avon | 2004 | $ 4,849 |
| HSBC | 2004 | $ 8,671 | Sun Microsystems | 2002 | $ 4,780 |
| SAP | 2004 | $ 8,323 | Wrigley's | 2002 | $ 4,750 |
| Dell | 2001 | $ 8,270 | Avon | 2003 | $ 4,630 |
| Nike | 2003 | $ 8,170 | Reuters | 2002 | $ 4,610 |
| Canon | 2004 | $ 8,055 | Philips | 2002 | $ 4,560 |
| Kellogg's | 2004 | $ 8,029 | Yahoo! | 2004 | $ 4,545 |
| Goldman Sachs | 2004 | $ 7,954 | Danone | 2004 | $ 4,488 |
| Gap | 2004 | $ 7,873 | Sun Microsystems | 2003 | $ 4,470 |
| Kodak | 2003 | $ 7,830 | Philips | 2003 | $ 4,460 |
| Nike | 2002 | $ 7,720 | Avon | 2002 | $ 4,400 |
| SAP | 2003 | $ 7,710 | Yahoo! | 2001 | $ 4,380 |
| Gap | 2003 | $ 7,690 | Philips | 2004 | $ 4,378 |
| Nike | 2001 | $ 7,590 | Danone | 2003 | $ 4,240 |
| Kellogg's | 2003 | $ 7,440 | Amazon.com | 2004 | $ 4,156 |
| Gap | 2002 | $ 7,410 | Yahoo! | 2003 | $ 3,900 |
| Heinz | 2002 | $ 7,350 | Yahoo! | 2002 | $ 3,860 |
| Kellogg's | 2002 | $ 7,190 | Caterpillar | 2004 | $ 3,801 |
| Goldman Sachs | 2002 | $ 7,190 | Motorola | 2001 | $ 3,760 |
| Canon | 2003 | $ 7,190 | Reuters | 2004 | $ 3,691 |
| Heinz | 2003 | $ 7,100 | BP | 2004 | $ 3,662 |
| Ericsson | 2001 | $ 7,070 | Tiffany | 2004 | $ 3,651 |
| Harley-Davidson | 2004 | $ 7,057 | Ericsson | 2002 | $ 3,590 |
| Goldman Sachs | 2003 | $ 7,040 | BP | 2003 | $ 3,580 |
| Heinz | 2004 | $ 7,026 | Tiffany | 2003 | $ 3,540 |
| Kellogg's | 2001 | $ 7,010 | Motorola | 2004 | $ 3,483 |
| Apple | 2004 | $ 6,871 | Tiffany | 2002 | $ 3,480 |
| SAP | 2002 | $ 6,780 | Motorola | 2002 | $ 3,420 |
| Harley-Davidson | 2003 | $ 6,780 | Amazon.com | 2003 | $ 3,400 |
| Canon | 2002 | $ 6,720 | BP | 2002 | $ 3,390 |
| Pepsi | 2002 | $ 6,390 | Caterpillar | 2003 | $ 3,360 |
| SAP | 2001 | $ 6,310 | Reuters | 2003 | $ 3,300 |
| Harley-Davidson | 2002 | $ 6,270 | BP | 2001 | $ 3,250 |
| Pepsi | 2001 | $ 6,210 | Amazon.com | 2002 | $ 3,180 |
| Xerox | 2001 | $ 6,020 | Ericsson | 2003 | $ 3,150 |
| Accenture | 2004 | $ 5,772 | Amazon.com | 2001 | $ 3,130 |
| Xerox | 2004 | $ 5,696 | Motorola | 2003 | $ 3,100 |
| Xerox | 2003 | $ 5,580 | Boeing | 2002 | $ 2,970 |
| Apple | 2003 | $ 5,550 | Johnson & Johnson | 2004 | $ 2,952 |
| Apple | 2001 | $ 5,460 | Boeing | 2003 | $ 2,860 |

| Brand Name | Year | Brand Value (Millions) |
|---|---|---|
| Nissan | 2004 | $ 2,833 |
| Johnson & Johnson | 2003 | $ 2,710 |
| Boeing | 2004 | $ 2,576 |
| Starbucks | 2004 | $ 2,400 |
| Polo/Ralph Lauren | 2004 | $ 2,147 |
| Starbucks | 2003 | $ 2,140 |
| Polo/Ralph Lauren | 2003 | $ 2,050 |

| Brand Name | Year | Brand Value (Millions) |
|---|---|---|
| FedEx | 2003 | $ 2,030 |
| Starbucks | 2002 | $ 1,960 |
| Polo/Ralph Lauren | 2002 | $ 1,930 |
| FedEx | 2002 | $ 1,920 |
| Polo/Ralph Lauren | 2001 | $ 1,910 |
| Starbucks | 2001 | $ 1,760 |
| Hilton | 2001 | $ 1,240 |

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