

{ New Theory }



# The “Risky” Side Of Brand Equity: HOW BRANDS REDUCE CAPITAL COSTS

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Whereas it is widely accepted that strong brands are associated with superior product-marketplace and firm financial performance, their influence on firm risk is less clear. However, recent studies from the marketing-finance interface have started to unveil the impact that marketing activities have on the firm’s financial risk, above and beyond its impact on financial returns. In this study, the association between brand equity and firm risk are investigated. The findings indicate that a firm’s consumer-based brand equity (i.e., strong brands) is associated with decreased debtholder and shareholder risk and also reduces the capital costs for the company. Furthermore, brand equity is particularly relevant in protecting firms’ equity holders during down-market periods. As a consequence, firms should consider brand management within the firm’s risk management strategy and maintain or even increase consumer-based brand equity investments during periods of economic uncertainty.

## What Strong Brands Can Offer

Strong brands create value for the firms that own them: their products or services command higher prices and more market share than comparable products with less reputable or no brand names. Strong brands have been shown to be effective strategies for achieving sustainable profits and returns. Furthermore, strong brands also demonstrably enhance shareholder wealth via higher firm stock returns. The strength of a brand can be estimated by calculating its *consumer based brand equity (CBBE)* which is the monetary value resulting from various factors like higher awareness, consideration, quality perception or willingness to pay.

Managers can create shareholder wealth by increasing the level of the firm’s profits and cash flows, and also by reducing the risks associated with those cash flows. Market-based assets – such as brands – may enable firms to increase returns while simultaneously lowering the risks associated with these returns. Both aspects increase the value of the firm.

This duality suggests that it would be both appropriate and interesting to investigate the “risk-relevance” of consumer-based brand equity in explaining debtholder and equity holder risk. What is the nature – if any – of the association between a firms’ CBBE and its level of debtholder and equity holders risk? To what extent can CBBE provide incremental information to widely used financial accounting measures in predicting firm risk? This study attempts to answer these pertinent, yet very relevant, questions.

## Consumer-Based Brand Equity and Firm Risk

As indicated above, brand equity concerns the value added to a product or service by its association with a brand name and/or a symbol. The value of a brand’s equity results from value that the brand delivers to consumers. Brands with high consumer-based brand equity (CBBE) are those that have high levels of consumer awareness and strong, positive and unique associations in consumers’ minds. These constructs have been studied by marketing for more than 40 years.

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Type of Risk	Debt holders	Equity Holders
<b>Variability based Risk</b> Lack of predictability in firm cash flow	Focal Interest	
<b>Vulnerability-based Risk</b> Probability of loss		Focal Interest
<b>Total Risk</b> Can be further decomposed...		<b>Systematic Risk</b> Risk common with the entire market
		<b>Unsystematic Risk</b> firm-specific / idiosyncratic risk independent of the market

TABLE 1:  
Classification of  
Firm-Level Risk

However, risk is a seminal construct primarily investigated by finance, insurance and accounting. Firm risk can be classified by the type of risk and by the stakeholder(s) involved. Table 1 gives an overview of levels of risk and their relevance for the different stakeholders.

First and foremost, variability in future cash flows creates uncertainty. Uncertainty causes investors to require higher rates of return to compensate for lower predictability, which translates into lower stock prices and higher debt costs. Second, firms' cash flows are assessed in terms of the likelihood that they will be sufficient to meet the firm's financial needs and obligations. This vulnerability aspect of risk is analogous to the notion of "probability of loss".

» Brand equity has a stronger impact in lowering unsystematic rather than systematic. «

From a debtholder perspective, the vulnerability of the firm's future cash flows is the primary aspect of risk, since this determines the firm's ability to service its existing debt, its capacity to take on and service new debt, and avoid bankruptcy. From an equity holder perspective, total risk can be characterized as the variability of a firm's stock returns, which can be further decomposed into "systematic" equity risk – the extent to which a firm's stock return variability is associated to that of the rest of the stock market, and "unsystematic" equity risk, which is firm-specific and unrelated to the market as a whole. While systematic risk may be difficult – if not impossible – for managers to influence, firm-specific characteristics and events, and the unsystematic risk they produce are usually posited to be under more direct control of managers.

**What is the Expected Association between Brand Equity and Risk?**

Overall, higher levels of brand equity should be associated with reduced levels of firm risk. However, we also expect brand equity to impact the various types of risks differently.

Since *systematic risk* concerns the variability in a firm's stock returns that is common with the entire economy or market, firms that are able to cushion themselves from the impact of market fluctuations and deliver consistent cash flows should enjoy lower systematic risk. Consumer-based brand equity should contribute to lowering the firms' systematic risk by increasing customer commitment and brand loyalty, which in turn should decrease the vulnerability (i.e., risk) of the firm's cash flows to market-level shocks.

*Unsystematic risk* concerns stock return variability that is firm-specific and is generally considered to play a bigger role in explaining firms' total firm risk than systematic risk. Marketing investments directed at enhancing CBBE are akin to creating a market-based asset that differs significantly from those owned by competitors. Therefore, brand equity should also be associated with decreased unsystematic risk. Specifically, the impact of CBBE may be stronger on firms' unsystematic than systematic risk, since brands are rare and valuable assets, difficult to imitate or substitute and therefore likely to generate substantial financial value. In fact, the more unique a brand's perceptions, the stronger the "cushion" effect it should command in decreasing firm-specific unsystematic risk, as compared to its effect on systematic risk.

{ Box 1 }

## TESTING THE EFFECTS OF BRAND EQUITY ON FIRM RISK

The data on **brand equity** was supplied by *HarrisInteractive EquiTrend*® database, which collects annual data on brand knowledge and perceptions from a representative sample of US consumers of more than 1,000 large brands across 35 categories. The CBBE measure is composed of consumer ratings on brand familiarity, perceived quality, purchase consideration and distinctiveness.

**Firm risk** was measured using two indicators: **credit ratings** and **total equity risk**. Credit ratings are reported on the COMPUSTAT database. These rating are widely used by debtholders and provide an assessment of firms' cash flow vulnerability. Credit ratings range from AAA to CCC (and D for default). These categories were transformed into ordinal and reversed measures ranging from 0 to 25 so that a higher number corresponds to a better credit rating.

**Total equity risk** was measured by following widely accepted practices in financial research and calculating – for each firm year – daily stock returns over the 252 trading days prior to fiscal year-end and using the standard deviation of these daily returns as the measure of total equity risk. The mean annualized total equity risk for our sample was 35.54 %, with a median of 30.18 % and a standard deviation of 19.04 %. Also following standard practices in finance, we decomposed total equity risk into its two components: *systematic equity risk* and *unsystematic equity risk*.

For our sample, annualized *systematic equity risk* has a mean of 15.06 %, with a median of 12.64 % and a standard deviation of 9.67 %, while annualized *unsystematic equity risk* has a mean of 31.40 %, a median of 26.41 % and a standard deviation of 17.50 %.

The final dataset contained a total of 1,096 firm-year observations, representing 252 different firms, over a 7-year period (2000 to 2006), spanning all risk levels. Privately-held companies and non-profit organizations had to be removed because the secondary financial accounting data required for analyses was not available. Financial firms were excluded since their capital and risk requirements are heavily regulated and atypical. Factors that were known to be relevant from previous research, like firm size, financial leverage, return-on-assets, and firm age and industry, were controlled in the study and used to calibrate the extent to which brand equity contributes new information in explaining firm risk.

### Estimation Procedure

For estimating the effects an ordered logit regression was applied to assess the relationship between firms' CBBE and debtholder risk (ordinal credit rating measure). Standard linear regression was applied to estimate the relationship between firms' CBBE and equity holder risk, since these risk metrics are continuous.



FIGURE 1:  
Brand Equity and  
Debtholder Risk Variance

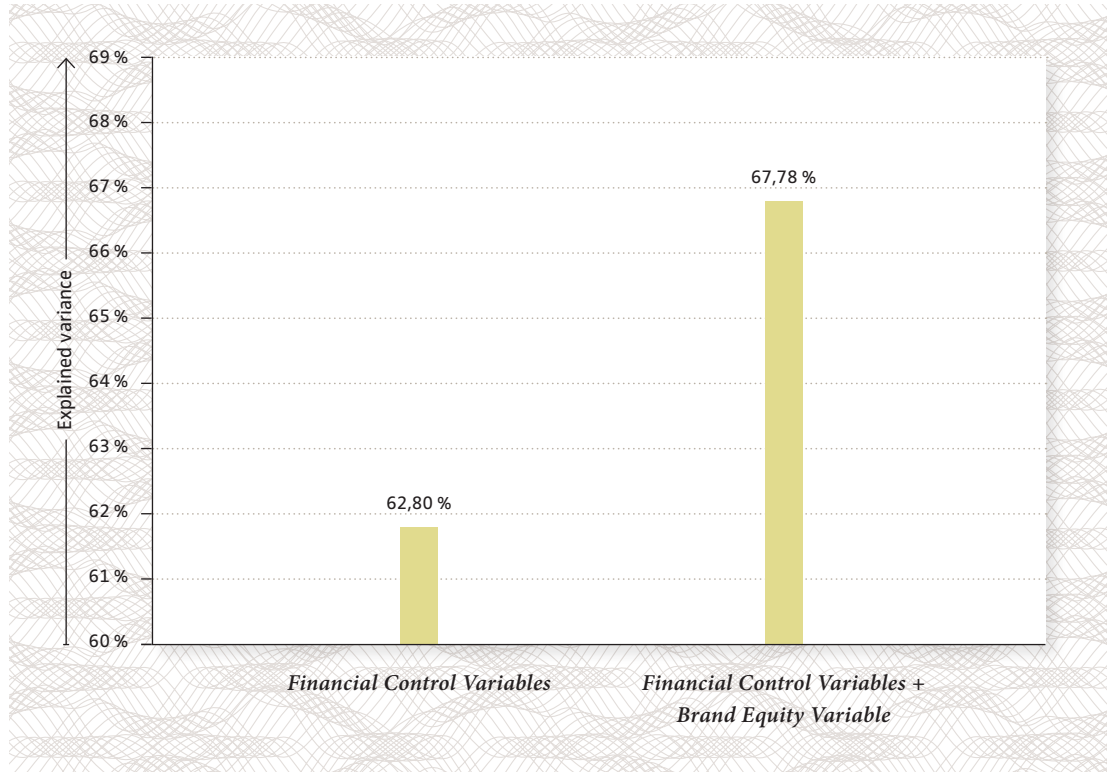
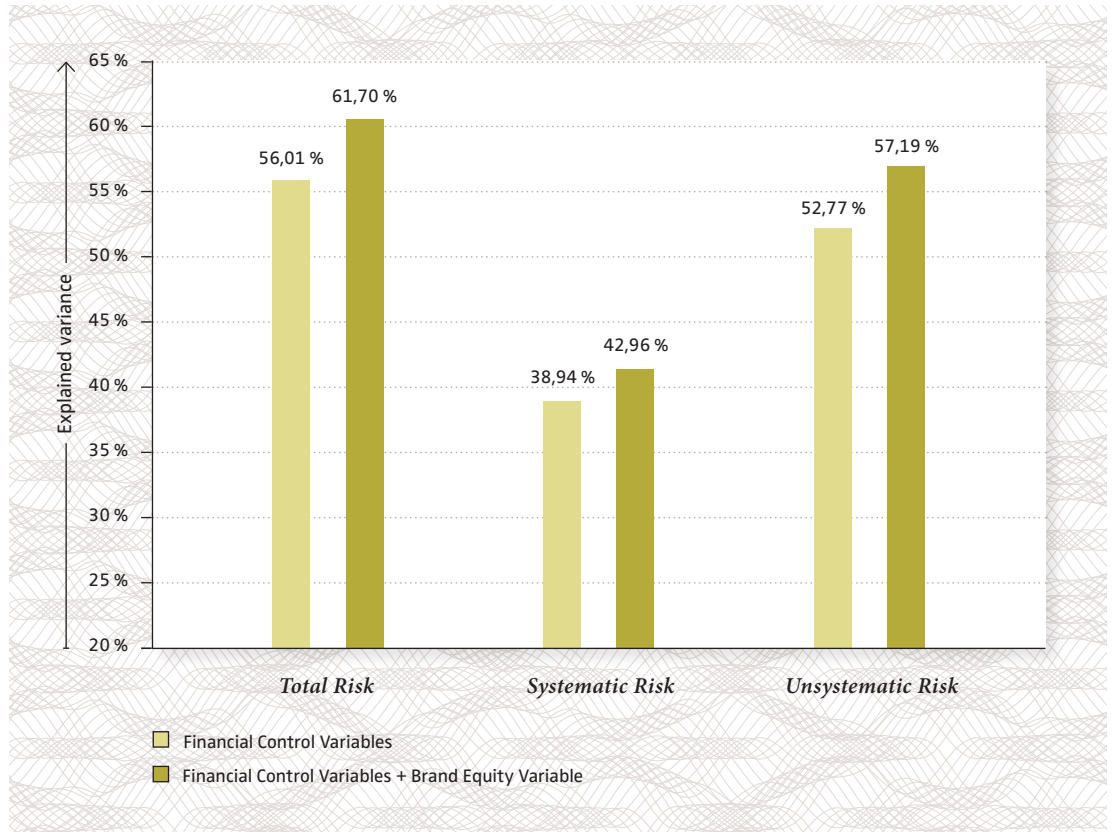


FIGURE 2:  
Brand Equity and  
Shareholder Risk Variance



Standardized Estimates	Total Risk		Systematic Risk		Unsystematic Risk	
	Financial Control Variables	+ Brand Equity Variable	Financial Control Variables	+ Brand Equity Variable	Financial Control Variables	+ Brand Equity Variable
ROA <sub>t</sub>	-0.320 <sup>a</sup>	-0.313 <sup>a</sup>	-0.143 <sup>a</sup>	-0.141 <sup>a</sup>	-0.339 <sup>a</sup>	-0.332 <sup>a</sup>
ROA Variability <sub>t</sub>	0.011 <sup>ns</sup>	0.010 <sup>ns</sup>	0.020 <sup>ns</sup>	0.020 <sup>ns</sup>	0.011 <sup>ns</sup>	0.009 <sup>ns</sup>
Market-to-Book Ratio <sub>t</sub>	-0.054 <sup>b</sup>	-0.048 <sup>b</sup>	-0.009 <sup>ns</sup>	-0.007 <sup>ns</sup>	-0.062 <sup>a</sup>	-0.055 <sup>a</sup>
Size (in Assets) <sub>t</sub>	-0.241 <sup>a</sup>	-0.239 <sup>a</sup>	0.028 <sup>ns</sup>	0.029 <sup>ns</sup>	-0.295 <sup>a</sup>	-0.293 <sup>a</sup>
Leverage <sub>t</sub>	0.119 <sup>a</sup>	0.116 <sup>a</sup>	0.010 <sup>ns</sup>	0.009 <sup>ns</sup>	0.140 <sup>a</sup>	0.136 <sup>a</sup>
Diversification <sub>t</sub>	-0.012 <sup>ns</sup>	-0.009 <sup>ns</sup>	-0.006 <sup>ns</sup>	-0.004 <sup>ns</sup>	-0.012 <sup>ns</sup>	-0.008 <sup>ns</sup>
Age <sub>t</sub>	-0.122 <sup>a</sup>	-0.114 <sup>a</sup>	-0.106 <sup>a</sup>	-0.104 <sup>a</sup>	-	-0.103 <sup>a</sup>
Consumer-Based Brand Equity <sub>t</sub>	-	-0.095 <sup>a</sup>	-	-0.060 <sup>b</sup>	-	-0.106 <sup>a</sup>
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	56.01 %	61.70 %	38.94 %	42.96 %	52.77 %	57.19 %
Incremental R <sup>2</sup> test p-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Risk<sub>t+1</sub> = β<sub>0</sub> + β<sub>1</sub>·ROA<sub>t</sub> + β<sub>2</sub>·ROA Variability<sub>t</sub> + β<sub>3</sub>·Market-to-Book Ratio<sub>t</sub> + β<sub>4</sub>·ln(Assets)<sub>t</sub> + β<sub>5</sub>·Leverage<sub>t</sub> + β<sub>6</sub>·Diversification<sub>t</sub> + β<sub>7</sub>·Age<sub>t</sub> + β<sub>8</sub>·CBBE<sub>t</sub> + β<sub>9</sub>

Note: a – significant at p<0.01; b – significant at p<0.05; c – significant at p<0.10; ns – not significant.

### Brand Equity Influences the Level of Firm Risk

The estimation procedures used to predict debtholder risk explains almost 62.8 % of the variance in credit ratings (see Figure 1). This level of predictive power is very similar to those reported in similar financial studies. When CBBE is added to the equation the explained variance (R<sup>2</sup>) increases by 5 %. Overall, this result indicates that financial markets view CBBE as a strong predictor of firms' ability to take on and service debt capital.

Figure 2 reveals a similar pattern regarding the incremental explanatory power that brand equity has in determining variance in *total*, *systematic*, and *unsystematic* equity risk.

Table 2 summarizes estimates for our empirical models of equity holder risk, comprising estimates for all predictors, including customer-based brand equity, and separated by total, systematic and unsystematic risk.

All regression models exhibit strong predictive power, which is further increased by the inclusion of brand equity as a predictor. R<sup>2</sup> values reported for the total, systematic and unsystematic risk models (without CBBE) are consistent with those reported in existing financial studies. The inclusion of the brand equity variable significantly increases the R<sup>2</sup> by between 4 % and almost 6 %, further confirming that CBBE contains risk-relevant information for the financial markets. As

expected, brand equity has a stronger impact in lowering unsystematic rather than systematic risk, as indicated by the estimated coefficient of -0.106 vs. -0.060.

In order to gain a more detailed understanding of the influence of brand equity on risk, we also examined – and contrasted – the strength of this association in down market and up markets. Our findings indicate that brand equity is particularly helpful in protecting the firm's returns from turmoil at economy and market level during equity market downturns. This finding supplies some empirical rationale for the widely observed phenomenon of investors seeking to invest in the stock of companies with strong brands operating in consumer markets during periods of economic uncertainty.

### Brand Assets Clearly Matter for Risk Management

Overall, our findings provided new insights for understanding the influence that brand assets have on firm risk and indicate that market-based assets, such as strong brands, impact not only firms' returns, but also on their risk level. More specifically, brands can enhance firm value by providing firms with increased loyalty or allowing them to charge higher prices, and also by reducing the firm's risk. This is a critical component in linking marketing with firm value, because when firm risk is reduced, the net present value of the firm's discounted future cash flow increases, even if their level remains exactly the same.

TABLE 2:  
Shareholder Risk Cluster  
Adjusted Robust Regression  
Dependent Variables:  
Total, Systematic and  
Unsystematic Risk

» A one standard deviation increase in brand equity corresponds to a full two category improvement in the firm's credit rating. This translates into savings of almost USD 40 million per year in debt service alone. «

Our findings also demonstrate that brands influence both the *vulnerability* of cash flows, as reflected in evaluations of the risk to debt repayments, and the *variability* of cash flows, as reflected in stock return variations. While brand equity is strongly related to the firm's (*total*) equity risk, its effect on *unsystematic* risk is greater than its effect on *systematic* risk. This suggests that the idiosyncratic firm-specific risk-reducing effect of CBBE is stronger than its effect on insulating the firm from economy-level shocks.

#### Capital Cost Reductions Resulting from Brand Equity are Substantial

Interestingly, the estimates summarized on Table 2 can be used to calibrate the impact of brand equity on the cost of capital. Since Table 2 reports standardized estimates, our results indicate that a standard deviation increase in CBBE results on a 0.095 of a standard deviation decrease in *total risk* (or 5.1 % decrease), a 0.060 of a standard deviation decrease in *systematic risk* (or

3.9 % decrease) and 0.106 of a standard deviation decrease in *unsystematic risk* (or 5.9 % decrease). Using cost of capital data from Stern Stewart, comparing firms on the top and bottom 10 % of our CBBE data, we estimate a significant difference of almost 60 basis points (7.43 % vs. 8.00 %) on their respective capital costs.

#### Managerial Implications

##### > *Include capital cost reductions in pay-back calculations for brand building*

Capital cost reductions from brand assets should be included in brand building decisions. Investments in the firm's brand assets lead to reductions in the firm's cost of capital. Such savings should be included in pay-back calculations for brand-building investments. For instance, for the average firm on our study, a one standard deviation increase in brand equity (roughly 8 points on a 100-point scale) corresponds to a full two category improvement in the firm's credit rating. The average firm in our sample has USD 10 billion in long-term debt; a two category credit rating improvement (from the sample average of BBB+) corresponds to a 40 basis point reduction in the cost of capital. This translates into savings of almost USD 40 million per year in debt service alone.

##### > *Point capital cost savings of CBBE out in negotiations for brand-building budgets*

When marketers attempt to persuade chief financial officers and others of the value of investments in the firm's brand assets, they should include reductions in the firm's cost of capital in their payback calculations and emphasize this "added value" of brand equity.

##### > *Include CBBE information in financial reporting*

In addition, our findings have important implications for financial reporting regulations. Accounting principles suggest that firms' financial statements should contain all possible information that may be valuable to investors. The results show very clearly that information concerning firms' CBBE has risk-relevance above and beyond the value of financial accounting information contained in firms' balance sheets and income statements. Therefore, firms may want to voluntarily disclose brand equity information, such as the results of consumer brand equity tracking studies.

> **Support the development of standardized measurement systems for brand assets**

To advance the integration of CBBE information in financial reporting, accounting regulators may want to consider the development of standardized reporting requirements regarding firms' intangible assets to help analysts and investors more accurately value firms' stock and debt. Marketing researchers can play an important role in the development of standardized measurement systems for assessing firms' brand assets.

> **Include brand management in risk management strategies**

Finally, investments in creating and maintaining consumer-based brand equity are a direct way for managers to reduce risks that are idiosyncratic to the firm. Therefore, strategic brand management should be viewed as an additional tool when planning and executing firms' risk-assessment and management strategies. Our findings reveal that brand equity has a particularly strong role in reducing firm risk during stock market downturns. This has important implications for brand-building and maintenance expenditures during periods of economic contraction. In particular, it suggests that simply reducing brand-related expenditures during a recession (as is too often the reaction) will likely contribute to increasing, rather than decreasing, the firm's risk. •



## FURTHER READING

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### KEYWORDS:

Consumer-Based Brand Equity,  
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