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Stock price reactions to brand value announcements: Magnitude and moderators

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ABSTRACT

While several studies find a positive impact of brand value on firm value, we still know very little on the variables moderating the brand value–firm value relation. In this study, we address this gap in the literature by developing and testing a new framework on the contingencies affecting the impact of brand value changes on stock returns. Drawing from branding theory, we hypothesize that stock price reactions to brand value changes are more positive for firms with high cash flow vulnerability, valuable growth opportunities, and high potential for further product or service price increases. We empirically examine the importance of these three moderators through an event study analysis of 503 brand value announcements derived from Interbrand's Best Global Brands lists from 2001 to 2012. We obtain evidence of significant abnormal stock returns on brand value announcement dates, with a brand to firm value conversion rate of approximately 4%. Cross-sectional regression analyses of announcement day abnormal stock returns suggest that shareholders mainly value the potential of brands to reduce cash flow vulnerability to adverse shocks. We obtain only mixed evidence on the importance of brands in generating growth, and no evidence for their role in allowing firms to set higher prices. Our results, which hold under a range of sensitivity tests, yield clear managerial guidelines regarding the types of firms for which strong brands matter most.

1. Introduction

A brand is a distinctive name for which the consumer has a higher willingness to pay than for otherwise similar products (Keller, 2012). A well-established literature documents that there is a positive association between brand value and stock returns (e.g., Barth, Clement, Foster, & Kasznik, 1998; Madden, Fehle, & Fournier, 2006; Mizik & Jacobson, 2008, 2009). However, research has yet to investigate the mechanisms driving the effect of brand value on firm value (Hsu, Fournier, & Srinivasan, 2012).

This study fills this gap in the literature by examining the firm-specific and macroeconomic moderators affecting the brand to firm value relation. We use theoretical perspectives on the cash flow implications of strong brands to derive the following three hypotheses. Several studies argue that strong brands can insulate firms' cash flows from the harmful effects of competitive actions (Keller, 2012; Zinkhan & Pereira, 1994) and adverse business conditions (Hsu et al., 2012; Johansson, Dimofte, & Mazvancheryl, 2012), thereby increasing firm value. Our *Vulnerability* hypothesis therefore predicts that brand value has a stronger impact on firm value for firms with high cash flow vulnerability, and during periods in which investors are more risk averse. Strong brands can also enable firms to exploit untapped growth opportunities through well-chosen brand extensions, and as such increase firm value (Gronlund, 2013; Hsu, Fournier, & Srinivasan, 2011). Our *Growth* hypothesis therefore predicts that brand value has a stronger impact on firm value for firms with larger potential for growth through brand extensions. A last important benefit of strong brands is that they can reduce the price elasticity of demand for the firm's products or services. As such, strong brands may allow firms to set higher prices without adversely affecting their sales volumes (Hsu et al., 2012; Png, 2012). This feature generates our *Price* hypothesis stating that brands have a stronger impact on firm value for firms with a higher potential for further product or service price increases.

We test the importance of these three hypotheses through an event study analysis of the stock price impact of 503 brand value announcements for 80 U.S. firms over the period of 2001 to 2012. U.S. firms are not allowed to recognize the value of internally-developed brands on their balance sheets. We therefore rely on brand value estimates provided by an organization external to the firm, i.e., the brand consultancy firm Interbrand. Each year, Interbrand releases a ranking of the world's 100 most-valued brands. It derives its brand value estimates from a combination of publicly available data and proprietary information and assessment methods.

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Our results indicate that the release of Interbrand's brand value estimates results in immediate, significant abnormal stock returns. As predicted, the announcement day stock price impact is increasing in the change in the brand value estimate with respect to the value from the previous-year's list.

To test the three contingency hypotheses, we construct a range of proxy variables suggested by the literature. We then run cross-sectional regressions of abnormal stock returns on brand value changes interacted with these proxy variables. Consistent with the Vulnerability hypothesis, stock price reactions are more positive for firms facing lower cash levels and fiercer industry competition. Also consistent with this hypothesis, shareholders react more positively to brand value increases during times of higher investor risk aversion. In line with the Growth hypothesis, brand value has a stronger impact on stock returns for firms with larger unrealized growth opportunities, as captured by a higher market to book ratio. However, we do not find a significant impact of brand portfolio strategy on stock price reactions, as predicted by this hypothesis. Inconsistent with the Price hypothesis, brand value increases do not generate more favorable stock price reactions for firms with lower industry-adjusted profit margins. All of our test results are robust to controlling for investor anticipation of brand value changes, and hold under a range of sensitivity tests.

Our study provides the following main contributions to the literature. First and foremost, while previous studies focus on the main effect of brand value on firm value, we develop and test a new conceptual framework of the moderators affecting the brand value–firm value relation.[1] Testing the role of moderators in the marketing–finance interface is useful, as it helps scholars to identify boundary conditions under which existing theory holds (Kimbrough & McAlister, 2009).

Second, our paper complements previous studies by using event study methodology rather than stock return response modeling (SRRM) to analyze the brand value–firm value relation. While SRRM involves assessing stock returns as part of a continuous process over time, event studies examine the stock price impact of well-defined, discrete, specific information releases over a short time frame, in our case the trading day on which brand value estimates are released to the market (Mizik & Jacobson, 2008). The quasi-experimental nature of the event study methodology allows us to make powerful, clean inferences on the magnitude of the impact of brand value changes on firm value. We thus obtain the new insight that, for each one-dollar brand value change, approximately four cents are capitalized into firm value. This translates into a market value change of about $29 million for the average company in the sample.

Table 1 summarizes the above key contributions by positioning our work relative to other studies on the relation between brand value and firm value.

On a broader level, our paper also complements several event studies on the stock price impact of marketing-related actions. Johnston (2007) reviews marketing studies using the event study approach. More recent work includes Tipton, Bharadwaj, and Robertson (2009), who examine deceptive marketing, Cao and Sorescu (2013), who study co-branding, and Homburg, Vollmayr, and Hahn (2014), who study distribution channel additions and intensity increases. While these papers examine decisions by brand owners, we focus on brand value announcements by a party external to the firm. Our paper also differs from these other marketing studies in that we focus on brand value in its totality, rather than on individual brand-building actions. As Simon and Sullivan (1993) note, brand value is the only variable that directly measures the economic benefit of a brand to its owner.

Finally, our study contributes to a small body of literature examining the value relevance of intangible asset information provided by parties outside the firm. The few previous studies in this area mainly focus on non-financial intangible asset measures, such as the American Customer Satisfaction Index (Fornell, Mithas, Morgeson, & Krishnan, 2006; Ittner & Larcker, 1998; O'Sullivan, Hutchinson, & O'Connell, 2009), Fortune Magazine's Best 100 Companies to Work for list (Edmans, 2011), and product quality reviews (Tellis & Johnson, 2007). Some of these studies find that the market underreacts to intangible asset information, due to uncertainty or limited attention from analysts. The Interbrand brand value estimates are calculated as net present values of brand-generated incremental profits. They are therefore likely to be more easily interpretable by investors than qualitative information. Consistent with this intuition, a calendar-time portfolio analysis of long-term stock returns following brand value announcements shows no evidence that shareholders underreact to brand value information.

Our findings may help corporate managers in their allocation of corporate resources. In particular, our results suggest that brand-building activities are likely to be most valuable for firms that are highly vulnerable to adverse cash flow shocks. But our results also suggest that the importance of branding fluctuates over time due to factors outside brand owners' control, i.e., changes in investors' attitude towards risk.

The remainder of this paper is structured as follows. Section 2 provides the conceptual framework and develops the research hypotheses. Section 3 describes the research methodology. Section 4 provides the empirical results. Section 5 summarizes the main findings, outlines the implications and limitations of our work, and provides directions for future research.

2. Conceptual framework and testable predictions

This section first outlines and motivates our testable prediction on the main impact of brand value announcements on firm value. We then develop a range of hypotheses on the variables moderating the impact of brand value on firm value.

2.1. Main effect of brand value on firm value

According to the semi-strong form of the efficient market hypothesis, stock prices instantaneously and fully incorporate any public information that changes shareholders' expectations of the net present value (NPV) of firms' future cash flows (Fama, 1970). Thus, to the extent that changes in Interbrand brand value estimates affect shareholders' expectations of discounted future cash flows, these changes will affect stock prices. More formally, the expected NPV of incremental future cash flows generated by brand value changes can be expressed as follows:

$$\mathrm{NPV} = \sum_{t=0}^{N} \frac{\Delta CF_t}{(1+r)^t} \tag{1}$$

with ΔCF_t the expected incremental cash flows at time t resulting from the brand value change, net of any costs incurred to create these cash flows (e.g., advertising and R&D expenses incurred by the firm to sustain its brand value); N the number of years over which shareholders expect corporate cash flows to be affected by the announced brand value change; and r the discount rate reflecting the expected systematic risk associated with these corporate cash flows.

The branding literature suggests three main channels through which brand value changes can affect the NPV value in Eq. (1), and as such

[1] One exception is Bharadwaj et al. (2011), who examine the moderating impact of earnings and industry concentration on the relation between brand quality and firm value using stock return response modeling.