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Financial Value of Brands in Mergers and Acquisitions: Is Value in the Eye of the Beholder?

In mergers and acquisitions (M&As), brands account for significant but heterogeneous proportions of overall transaction value. The marketing literature focuses on the drivers of financial value of brands when there is no change in the ownership of brands. However, in M&As, the value of brands also depends on how their new owners leverage them. This study identifies both the target and the acquirer firm characteristics that affect the value of a target firm's brands in M&As. The study uses audited measures of acquired brand value from Securities and Exchange Commission filings (made available as a result of recent statutory reporting requirements) along with data collected from diverse secondary sources. The empirical test of the model is based on 133 M&A transactions in which acquirers attribute value to target firms' brands. The results indicate that acquirer and target marketing capabilities and brand portfolio diversity have positive effects on a target firm's brand value. The positive impact of acquirer brand portfolio diversity and target marketing capability is lower when the M&A is synergistic than when it is nonsynergistic. The findings are robust to various model specifications, measures, endogeneity, and sample selection.

Keywords: brand valuation, brand equity, marketing capability, brand portfolio, mergers and acquisitions

Brands are critical assets in mergers and acquisitions (M&As) (Keller 1993; Rao, Mahajan, and Varaiya 1991). For example, Constellation Brands (2005) justified the acquisition of Robert Mondavi Winery as follows:

> The acquisition of Robert Mondavi supports the company's strategy of strengthening the breadth of its portfolio across price segments to capitalize on the overall growth in the premium, superpremium, and fine wine categories.

In several of these M&A transactions, firms paid significant prices to acquire targeted brands. In a watershed transaction, Philip Morris acquired Kraft for $12.9 billion, four times its book value. Reflecting on the premium paid, Philip Morris chief executive officer (CEO) Hamish Marshall concluded, "The future of consumer marketing belongs to the companies with the strongest brands" (Biggar and Selame 1992, p. 36). Recently, Hewlett-Packard attributed $1.5 billion to Compaq's brands in a transaction valued at $24 billion. Table 1 provides a set of recent transactions and illustrates the variance in brand value as a percentage of firm value. At one end of the spectrum, 49% of the firm value was attributed to brands with the purchase of Gillette, and at other end, less than 1.51% was attributed to the brand value in the acquisition of Latitude by Cisco Systems.

What is the source of heterogeneity in the target firms' brand value across M&As? The extant marketing literature suggests that each brand has a different potential for generating future cash flows as a result of differences in brand-specific factors, such as price or revenue premiums (Srivastava, Shervani, and Fahey 1998). Complementing this expectation, acquirers may have different cash flow expectations of the brands that are independent of the target's brand-specific characteristics. For example, in 1994, Quaker Oats paid $1.7 billion for the Snapple brand, a price higher than Coca-Cola's offer as well as those of other bidders (Deighton 2002). More recently, PepsiCo and Coca-Cola offered $13.4 billion and $15.75 billion, respectively, in the bidding war to acquire Gatorade and the rest of Quaker Oats' brand portfolio (McKay and Deogun 2000; Sorkin and Winter 2000). Collectively, the literature and the examples point to two broad sources of heterogeneity in brand value in the context of M&As: (1) the brand-specific characteristics of the target firm and (2) the buyers' varying cash flow expectations of acquired brands.

The objective of this article is to understand the factors that determine the value attributed to the target firms' brands by the buyer in the context of M&As. We define brand value as the present value of future cash flows that accrue to a branded offering (product or service).[1] In the

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[1]Brand value can also be defined from the perspective of consumers (e.g., Kamakura and Rusell 1993; Keller 1993). We use

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TABLE 1
Illustrative Transactions and Brand Portfolio Value

Acquirer	Target	Target Firm Value (in Millions of Dollars)	Target Firm Brand Portfolio Value (in Millions of Dollars)	Brand Portfolio Value/Firm Value
Checkers Drive-In Restaurants	Rally's Hamburgers	40	19	49.72%
Procter & Gamble	Gillette	53,457	26,251	49.61%
Constellation Brands	Robert Mondavi	1,042	186	17.85%
Cisco Systems	Latitude	86	1	1.16%

Notes: Compiled from SEC filings.

marketing literature, conceptual and empirical work focuses on antecedents to brand value in contexts in which there is no change in the ownership of brands (e.g., Barwise et al. 1990; Chu and Keh 2006; Farquhar and Ijiri 1991). Although pri0or studies have incorporated important and relevant characteristics of the target (e.g., market share), they have overlooked the M&A context and therefore have not addressed an acquirer's perspective of brand value. Only Mahajan, Rao, and Srivastava (1994) acknowledge the importance of the acquirer's perspective on a target firm's brand value, but they do not empirically test the role of target and acquirer characteristics that could affect the value of a target firm's brands in M&As. The dearth of academic research on the financial value of brands, as we illustrate in Table 2, is surprising because firms allocate substantial resources to acquire brands and brands continue to be of strategic importance to firms.

data that reflect the acquirer firm's future cash flow expectations of the brand, so brand value from the firm perspective is more appropriate in this context than brand value from the consumer perspective. We modify Simon and Sullivan's (1993) definition of financial value of brands to capture a holistic perspective. We discuss the valuation of brands from a holistic perspective in the measurement section.

TABLE 2
Positioning the Research

	Within a Firm	In an M&A
Conceptual literature on the determinants of financial brand value	Barwise et al. (1990) Farquhar and Ijiri (1991) Shocker and Weitz (1988)	Mahajan, Rao, and Srivastava (1994) This study
Empirical literature on the determinants of financial brand value	Chu and Keh (2006) Simon and Sullivan (1993)	This study

Notes: The list of articles is illustrative.

Against this backdrop, we contribute to the marketing literature in the following ways: First, we identify the impact of both target and acquirer characteristics on the financial value of the target firm's brands in an M&A context. We find that acquirer and target marketing capabilities and their brand strategy (proxied by brand portfolio diversity) affect a target's brand value positively.[2] These findings underscore the significance of acquirer characteristics in determining the financial value of brands in an M&A context.

Second, we investigate the contingent effect of M&A strategy (synergistic versus nonsynergistic) on the relationship between a target firm's marketing capability and its brand value, as well as the relationship between the diversity of an acquirer's brand portfolio and a target's brand value. We find that the positive impact of an acquirer's brand portfolio diversity on a target's brand value is lower when the acquisition is synergistic. We also find that the positive effect of a target's marketing capability on its brand value is attenuated when the M&A strategy is synergistic in nature. Taken together, these findings underscore the significance of redundancy in brand portfolios and marketing capabilities on the value of acquired brands.

Third, for the dependent variable, we use an accounting estimate of brand value as reported in the Securities and Exchange Commission (SEC) filings of the acquirer firm in the analysis. We use the dollar value an acquirer firm attaches to the target firm's brands in an M&A transaction as the measure of brand value. There are several key strengths of this measure: (1) It is based on the acquirer's cash flow expectations from the brand, so it is expressed in monetary terms; (2) it is a forward-looking measure of brand value; (3) it reflects value attached only to brands, not to other assets; (4) it is based on a thorough analysis by the acquirer and valuation experts; and (5) it is subject to audit by the SEC. In the following section, we develop theoretical arguments that link the variables of interest to the acquirer's cash flow expectations from acquired brands.

Model Development

We develop the theoretical model from a discounted cash flow perspective. In essence, all the constructs in the model

[2]We use the terms "target brand value" and "target brand portfolio value" interchangeably throughout the text.

affect one or more aspects of the acquirer's cash flow expectations from the target firm's brand portfolio: level, growth, volatility, and vulnerability of cash flows (Srivastava, Shervani, and Fahey 1998). In developing our arguments linking marketing capabilities and brand portfolio strategies—through cash flow expectations—to brand value, we build on two streams of research: (1) the resource-based view (RBV) and (2) brand strategy. The RBV literature suggests that firms differ in terms of their strategic resources and capabilities (Barney 1991; Wernerfelt 1984). Barney (1986) argues that the heterogeneity of resources and capabilities may explain why potential acquirers have different cash flow expectations from the same strategic assets. Makadok (2001) demonstrates how resource-deployment capability leads to differential cash flow expectations from the same resources among potential acquirers.

In the marketing RBV literature, brands (and brand equity) are identified as market-based assets and as sources of competitive advantage (Bharadwaj, Varadarajan, and Fahy 1993; Srivastava, Shervani, and Fahey 1998). Brands conform to the asset properties that lead to market imperfections (e.g., rarity, inimitability). Thus, firms differ in their market-based assets and capabilities. Consequently, in an M&A, we expect that the acquirer's cash flow expectations from the target firm's brand portfolio vary as a function of the target's and the acquirer's marketing capabilities.

The RBV points only to capabilities in explaining the cash flow expectations from a target's strategic assets. However, the brand strategy literature suggests that there are other target and acquirer characteristics that could affect the formation of an acquirer's expectations of a target's brands. The branding strategy literature identifies the presence of three main branding strategies in practice: corporate, house-of-brands, and mixed (Laforet and Saunders 1994, 1999). On a branding strategy continuum, at one end is the corporate branding strategy in which the firm uses only one brand name across product markets (e.g., General Electric). At the other end of the continuum is the house-of-brands strategy in which the firm uses different brands to serve different product markets (e.g., Procter & Gamble). The trade-off between two marketing strategies is economies of scale in marketing spending versus targeting and positioning of brands specific to each segment (Rao, Agarwal, and Dahlhoff 2004). Consequently, a firm's brand strategy reflects its preference for economies of scale over differentiation benefits, or vice versa. Firms restructure their brand portfolios to achieve differentiation or economies-of-scale benefits (Kumar 2004). For example, in the early 1990s, Colgate-Palmolive reduced its brand portfolio size by one-quarter, which led to savings of $20 million a year (Knudsen et al. 1997). Similarly, after an M&A, acquirers restructure a target firm's brand portfolio in various ways (e.g., divestment of target's brands) according to their brand strategies (Ettenson and Knowles 2006). Thus, both acquirer and target brand portfolio strategies are important in determining the value of a target firm's brands as a result of a firm's preference for different brand portfolio strategies.

Acquirer Characteristics

Acquirer marketing capability. The acquirer's marketing capability refers to its ability to combine efficiently several marketing resources to engage in productive activity and attain marketing objectives (Amit and Schoemaker 1993; Dutta, Narasimhan, and Rajiv 2005). Acquirers vary in terms of their marketing resources (e.g., sales personnel), and the differences in marketing resources create differences among acquirers' marketing capabilities (Makadok 2001). Prior empirical findings corroborate the argument that there is heterogeneity across firms' marketing capabilities, even among firms in the same industry (Dutta, Narasimhan, and Rajiv 1999). Firms with stronger marketing capabilities will attribute higher value to targets' brands because their expectations of future revenues from a brand portfolio will be higher than firms with lower marketing capabilities. This stems from the notion that acquirers with stronger marketing capabilities are able to deploy a target's brand portfolio more efficiently, which will affect their level, growth, and volatility of cash flow expectations from the target's brand portfolio. More specifically, "marketing-competent" acquirers may leverage a target's brands successfully in the following ways: (1) by achieving the same or higher level of revenues by spending fewer marketing dollars, leading to expectations of a greater cash flow; (2) by extending the target's brands to new markets more efficiently, thus enabling an expectation of a greater level of growth in cash flow; (3) by cobranding the target's brands with existing brands more efficiently, also leading to greater expectations of cash flow; or (4) by better withstanding the competitive pressures from other brands, leading to a lower volatility/vulnerability of expected cash flow and, thus, lower discount rates. An awareness of the capability to execute these possibilities will lead an acquirer to attribute higher value to the target firm's brand portfolio.

H_1: The greater the acquirer's marketing capability, the higher is the target firm's brand portfolio value.

Acquirer brand portfolio diversity. Brand portfolio diversity is defined as the degree to which a firm chooses to serve markets with different brands. Brand diversity is low when the firm uses a single brand or few brands across industries (e.g., General Electric). If the firm uses different brand names across its businesses, brand portfolio diversity is high (e.g., Procter & Gamble). A highly diverse brand portfolio enables the firm to customize the brands for the specific needs of different customer segments and to enjoy the revenue and price premium benefits of differentiation. However, such portfolios tend to be much less efficient in terms of marketing spending than less diverse brand portfolios (e.g., Rao, Agarwal, and Dahlhoff 2004).

In the context of an M&A, an acquirer with a diverse brand portfolio will keep more of the target firm's brands active following the M&A. In contrast, if the acquirer's brand portfolio diversity is low, the acquirer will divest most or all of the target firm's brands because keeping the target's brands alive will hurt the economies of scale in marketing spending.

If fewer brands are retained, the acquirer's level of cash flow expectations from the target firm's brand portfolio will be lower than when a larger number of brands are retained. Consequently, a fewer number of brands retained will lead to lower brand portfolio value. Empirical findings suggest that the target's assets are more likely to be divested than the acquirer's assets following a transaction (Capron, Mitchell, and Swaminathan 2001). Brands are subject to divestiture along with other assets. A recent review of 207 M&As completed since 1995 reports that target brands are divested in 39.6% of the transactions (Ettenson and Knowles 2006). As a case in point, after the merger between AT&T and SBC Communications, AT&T (which has low brand portfolio diversity) decided to abandon the popular Cingular brand and logo in 2007 (*Advertising Age* 2006). Given the empirical and anecdotal evidence that the acquirer is likely to keep few, if any, of the target's brands alive when the acquirer's brand portfolio diversity is low, we posit the following:

H_2: The greater the acquirer's brand portfolio diversity, the higher is the target firm's brand portfolio value.

Target Characteristics

Target marketing capability. Traditionally, firms' marketing objectives have been customer satisfaction, market share, and sales growth. However, achieving these objectives may be costly. Indeed, firms are increasingly interested in the productivity of marketing investments (Rust et al. 2004). If revenues are highly dependent on substantial marketing spending, the margins on the brands will be low. Thus, the critical metric for the acquirer firm is the outputs (revenues) generated by marketing inputs (advertising and promotion). Target firms with strong marketing capabilities are likely to achieve financial outcomes more efficiently than firms with weaker marketing capabilities. Empirical findings suggest that stronger marketing capabilities lead to higher firm profitability (Dutta, Narasimhan, and Rajiv 1999), implying that firms with stronger capabilities achieve efficiency in marketing spending. This efficiency will affect an acquirer's level of cash flow expectations from the brand portfolio. If the target firm is productive with respect to marketing spending, the acquirer firm will be able to generate higher revenues from the target firm's brand portfolio with lower marketing spending in the future. Similarly, the acquiring firm can extend a target firm's brand to new categories and cross-sell its brands in the target's market by leveraging the target's marketing capability, thus increasing both the level and the growth rate of acquirer's cash flow expectations.

Furthermore, the target firm's marketing capability may operate as insurance against the existing and potential competitive pressures. Consequently, the acquirer's volatility and vulnerability expectations associated with the cash flows from target firm brands will be much lower. Less risky cash flows will lead to higher brand value. Formally,

H_3: The greater the target's marketing capability, the higher is the target firm's brand portfolio value.

Target brand portfolio diversity. When brand portfolio diversity is high, revenues tend to be higher as a result of better targeting and positioning, but marketing spending also tends to be higher because of the separate marketing support needs of different brands. Empirical evidence is sparse on the net performance effects of high versus low brand portfolio diversity effects. Rao, Agarwal, and Dahlhoff (2004) find that a corporate branding strategy (low brand portfolio diversity) has a higher positive effect on Tobin's q than a house-of-brands strategy. In contrast, Morgan and Rego (2006) find a positive relationship between brand portfolio size and Tobin's q.

In the M&A context, brand portfolios with low diversity provide lower growth opportunities. As the brand portfolio diversity decreases, the extension options diminish because further extending the few brands in the portfolio holds risks of brand dilution. However, more diverse brand portfolios provide strategic options for the acquirer (i.e., flexibility in terms of brand extension opportunities). The acquirer can generate additional cash flows by using the target's brands in new markets or categories. The acquirer can cherry-pick the brand it wants to extend to new categories. The presence of extension options will increase the acquirer's level and growth of cash flow expectations from the acquired brand portfolio. For example, when Liz Claiborne acquired Prana (a maker of apparel for climbing, yoga, and outdoor activities), Paul Charron, CEO of Liz Claiborne, argued that Prana provided strategic brand extension opportunities in nonapparel categories (Ryan 2005). Similarly, after AOL/Time Warner's acquisition of IPC Media, Michael Pepe, CEO of Time International, contended that IPC Media had a brand portfolio in the publishing business that provided extension opportunities (Brech 2001). Collectively, these examples corroborate the argument that more diverse brand portfolios offer more extension opportunities to the acquirer. In the presence of multiple opportunities, the acquirer's expectations of the level and growth rate of cash flows from the target brand portfolio will be greater because the acquirer will be able to generate additional revenue streams by leveraging these extension opportunities. Consequently,

H_4: The greater the target's brand portfolio diversity, the higher is the target firm's brand portfolio value.

Moderators

The acquirer's and target's marketing capabilities and brand portfolio strategies will affect the acquirer's cash flow expectations from the target firm's brand portfolio. However, the literature suggests two contingencies as candidates that are likely to influence the impact of marketing capability and brand portfolio strategy on brand value. First, the acquirer's M&A strategy, which is treated as a determinant of its cash flow expectations in the strategy literature (e.g., Brush 1996), is likely to cause redundancy among acquirer and target brand portfolios and marketing capabilities. In turn, redundancy is likely to affect the acquirer's cash flow expectations. Second, target sales growth is considered a moderator because executives frequently focus more on short-term performance metrics than on long-term metrics,

such as marketing capabilities. Because marketing capability is a key variable in the model, we examine the moderating effect of sales growth on the relationship between target marketing capability and target brand value.

M&A Strategy

M&A strategy and acquirer firm brand portfolio diversity. When the acquirer and the target operate in the same industry, the redundancy between the acquirer's and the target's brands will be greater (Varadarajan, DeFanti, and Busch 2006). Acquirers with more diverse brand portfolios will suffer more from redundancy than acquirers with less diverse brand portfolios because firms with more diverse brand portfolios will have more brands targeted at different consumer segments within the same industry. The overlap among brand portfolios will cause a cannibalization of cash flows. Consequently, to minimize the cash flow cannibalization, the acquirer's propensity to retain the target's brands will be lower. For example, Procter & Gamble decided to divest Gillette's Right Guard, Soft & Dri, and Dry Idea brands in the deodorant category even though Procter & Gamble has a highly diverse brand portfolio. Fewer brands retained will lead to a lower level of cash flow expectations from target brands. Furthermore, the acquirer's cash flow expectations from the target's brand portfolio will be lower even for the retained brands. The presence of multiple brands in the same industry will inevitably lead to cannibalization of cash flows because customer segments in many industries are not separated by distinct borders. Thus:

H_5: The expected positive effect of the acquirer's brand portfolio diversity on a target firm's brand portfolio value is lower (higher) when the M&A strategy is synergistic (nonsynergistic).

M&A strategy and target firm marketing capability. A synergistic M&A strategy is likely to lead to redundancy between an acquirer's and a target's marketing capabilities. There may be overlaps in skills between the acquirer's and the target's marketing personnel. In such cases, the acquirer may put less of a premium on the target's marketing capability for generating additional cash flows because similar capabilities reside in the acquirer. In extreme cases of overlap among the marketing capabilities of the target and the acquirer, the acquirer may deploy the target's marketing personnel elsewhere (Capron and Hulland 1999). In the presence of redundancy between target and acquirer marketing capabilities, the ability of the target's marketing capability to affect the acquirer's cash flow expectations will be inhibited. Thus:

H_6: The expected positive effect of the target's marketing capability on its brand portfolio value is lower (higher) when the M&A strategy is synergistic (nonsynergistic).

Target Sales Growth

Target sales growth and target firm marketing capability. Firms with stronger marketing capabilities are more efficient in deploying marketing resources, leading to higher profitability (Dutta, Narasimhan, and Rajiv 1999). Such firms are attractive candidates for acquisition as a result of their potential to generate long-term market performance based on their marketing capabilities. If a target has a high level of sales growth, acquirer executives may perceive the higher sales growth as additional evidence of the target's marketing capabilities. In such a case, an acquirer's cash flow expectations will be influenced more by the target's marketing capability. However, acquirer firms may not always focus on marketing capabilities and long-term performance. Publicly traded firms are usually under pressure to meet quarterly earning estimates driven by short- to medium-term sales growth expectations (Dobbs and Koller 2005; Graham, Harvey, and Rajgopal 2005). Consequently, capturing a firm's growth opportunities is a key driver of M&A deals. For example, Jones Apparel Group acquired Barneys New York "to enter the high-growth, resilient luxury goods market" (Jones Apparel Group 2006). If the target achieves a high level of sales growth, an acquirer may pay less attention to the target's marketing capabilities and focus more on short-term growth. In that case, the positive influence of the target's marketing capability on an acquirer's cash flow expectations will be lower. Given the competing explanations on the moderating role of sales growth, we do not pose a directional hypothesis, and the net effect will be determined empirically.

Control Variables

We include four industry factors to control for their effects on the acquirer's cash flow expectations from acquired brands: (1) industry growth, (2) industry demand risk, (3) industry competition, and (4) industry type. We capture the nature of a target firm's industry by categorizing industries into two groups: product- or service-oriented industries. Competing views exist on brands' abilities to generate cash flows in these two industries. Ambler and colleagues (2002) argue that brands may be less important in service-oriented industries than in goods-oriented industries. In contrast, Bharadwaj, Varadarajan, and Fahy (1993) contend that service firms require strong brands to "tangibilize" the intangible nature of the offering.

A competing explanatory mechanism that could potentially capture the variability in reported values of acquired brands is the firms' incentives to manipulate financial statements. The accounting literature notes that firms may overestimate or underestimate the value of acquired intangible assets for financial reporting purposes (e.g., Wyatt 2005). Muller (1999) discusses the potential impact of two factors on brand value reporting: leverage and financing considerations. First, attributing value to brands improves the leverage ratio, possibly helping the firm to secure long-term debt from financial institutions. Second, anecdotal evidence (e.g., Jackson 1996) suggests that firms use brand valuations to support the raising of new loan capital, so we incorporate acquirer leverage and financing considerations as controls.

Methodology

Sample

The population for the study is all M&As in which the targets and acquirers were U.S.-based public firms during the

period from 2001 to 2005. We began sampling in 2001 because detailed reporting of intangible assets in M&A transactions was only voluntary before this time. We focused on public firms because the data for the dependent variables and some of the independent variables (e.g., marketing capability) were available only for public companies. We randomly sampled transactions from a wide range of industries and reviewed the SEC filings of all the firms in the sampled industries. Of the 268 transactions reviewed, target brand portfolio value was recognized in 133 transactions, which serves as the sample for the main model in the estimation.

Of the target firms, 31.58% operated in the business services industry, and 9% operated in the measurement instruments industry. Among the acquirer firms, 24.81% operated in the business services industry, and 12.78% operated in the industrial, commercial machinery, and computer equipment industries.

Data Sources

We compiled the data set manually from several secondary sources, including SEC filings, COMPUSTAT, SDC Platinum, *Advertising Age*, the National Bureau of Economic Research (NBER) patent database, and the U.S. Patent and Trademark Office (USPTO). We collected data from COMPUSTAT, *Advertising Age*, and the updated NBER database to measure marketing capability. We used COMPUSTAT to obtain sales; advertising; selling; and general administrative expenses, receivables, and intraindustry classification data. We cross-checked the *Advertising Age* database to validate whether firms in the sample incurred advertising expenses without reporting them. We relied on the USPTO database for the data on the targets' and the acquirers' brands. We searched for all the brands registered in the firms' names. We did not include a brand in the portfolio if it was abandoned before or registered after the effective date of the M&A transaction.

Measurement of Dependent Variable

Background. The literature divides the brand equity measures into three broad categories: (1) customer mindset, (2) product market, and (3) financial outcomes (Keller and Lehmann 2006). Although Categories 1 and 2 are useful to managers, they cannot be easily converted into a financial market value measure. Category 3 is increasingly discussed as viable and as a complementary measure to the other two categories. Financial market outcome measures are primarily based on the cash flows that are attributable to brands. Although some researchers have criticized the financial approach because cash flows can be driven by a larger set of factors beyond brands (Ambler 2003; Ambler and Barwise 1998), it is still popular with managers. According to their review of brand value measures, Ailawadi, Lehmann, and Neslin (2003) conclude that there is no perfect measure or method. Of the ten criteria developed in a Marketing Science Institute workshop, all three methods meet some of the ten criteria and not others, appear to complement one another, and therefore are appropriate for different contexts.

Given the M&A context of the study, we draw on a financial market measure as the dependent variable for this study. In line with the objective of the study, the dependent variable reflects the acquirer's cash flow expectations from the acquired brand. Beyond managers' broad acceptance of a financial measure, the measure we use has the following strengths: (1) It is based on the acquirer's cash flow expectations from the brand, so it is expressed in monetary terms; (2) it is a forward-looking measure of brand value; (3) it reflects value attached only to brands, not to other assets; (4) it is based on a thorough analysis by the acquirer and valuation experts; and (5) it is subject to audit by SEC.

Brand value measure. The dependent variable is the dollar value of the target brand portfolio that acquirer firms report in the SEC filings concurrent with their M&A transactions. Financial Accounting Standards Board guidelines recommend three methods of valuing brands: market-, income-, and cost-based approaches. We conducted 30- to 45-minute-long interviews with five groups of experts and executives to gain insights into the valuation process, as well as the reliability and validity of an accounting-based measure of brand value. The groups included investment bankers with M&A expertise, strategic business development executives and a CEO responsible for M&A activities in their firms, audit firm executives, independent appraisers, and accounting faculty. The practitioners worked for one of the following types of organizations: *Fortune* 500 firms, Wall Street financial institutions, Big 4 accounting firms, and valuation firms. Overall, we contacted 23 practitioners. The interviewees' experience ranged between 2 and 30 years.

The experts indicated that the dominant method in the practice is the income approach. Similar opinions are voiced in practitioner publications (e.g., Smith and Parr 2005). The income-based valuation is conducted in two steps. First, cash flow expectations from brands are formed and present values of future cash flows are computed. Second, this value is multiplied by a factor called the "royalty rate." This factor is selected from the following perspective: If the brand were subject to a licensing deal, what would be the royalty rate for the brand? Royalty rates reported for similar brands in the same and/or related industries are used as the benchmark for the royalty rate determination. As the valuation method shows, the measure captures the value of the brand in association with the product because the ultimate value relies inherently on the cash flow expectations from the brand and product. Consequently, we resort to a holistic definition of brand value that includes the product and brand.[3]

The final value attributed to the target firm's brands is provided by an independent third-party valuation firm/practice with input from the acquirer firm. The acquirer provides its cash flow expectations from the target firm's brand portfolio and the associated assumptions about its

[3]In addition, the data set we analyze does not have any transactions in which the ownership of brands changes without the underlying products. We thank a reviewer for pointing out this important distinction and the need to take a holistic perspective.

expectations to valuation experts. Valuation experts use these cash flow expectations to arrive at the final value of acquired brands by questioning and challenging these assumptions if necessary.

The process is finalized within a 6- to 12-month period of the effective date of the acquisition. This value is subject to audit by the acquirer's auditors, and the final value reported in the SEC filings is also subject to SEC audits. The reported value of acquired brands is subject to an annual impairment test to ensure that the carrying value of asset on the balance sheet is valid.

Reliability. A key objective of conducting interviews with a diverse set of experts was to understand whether acquirers would have the incentive and flexibility to manipulate (i.e., over- or underestimate) the value of acquired brands. Almost unanimously, all the interviewees pointed out that accounting regulations are strict about the reporting of intangible assets. For example, a vice president for strategic business development of a *Fortune* 500 firm stated, "In the past, firms could have a desired outcome in mind, and they put that number on the balance sheet, but in the current accounting environment (i.e., post-Enron and post-Sarbanes-Oxley Act), firms do not have that flexibility." Similar sentiments were voiced in other interviews as well. We performed robustness checks on potential manipulation of the reported values and discuss these in the results section.

Validity. In our interviews, we asked open-ended questions to elicit information on the validity of the measure of brand value. Both the valuation experts and the acquirer firm executives indicated that they spend considerable time to "get it [the value] right." As one executive stated, "We come up with our cash flow expectations from the brands but appraisers question our numbers." A valuation expert stated that he uses a comprehensive checklist during the valuation of intangible assets. The checklist and the related questions ensure that the acquirer's expectations from the target's brand portfolio are reflected realistically on the balance sheet.

We also searched the accounting literature to gain insights into the validity of our measure. Several recent studies have reported that capitalized intangible assets are value relevant. Investors and financial analysts tend to react to changes in the value of intangible assets, including brands (Barth and Clinch 1998; Matolcsy and Wyatt 2006; Ritter and Wells 2006).

Measurement of Independent Variables

Marketing capability. Researchers have adopted three main approaches to measure marketing capabilities. The first is a knowledge-based approach, which attempts to measure directly the knowledge and skills that constitute marketing capabilities by means of surveys or case studies (e.g., Atuahene-Gima 2005; Vorhies and Morgan 2005). The second approach treats an output measure (e.g., market share) as a proxy for marketing capability (e.g., Moorman and Slotegraaf 1999). The third approach yields a measure of a firm's ability to convert inputs (i.e., resources) into outputs (e.g., sales, profitability). This approach is predicated on the viewpoint that capabilities represent a firm's ability to use resources more efficiently than its competitors to achieve certain objectives (Amit and Schoemaker 1993; Dutta, Narasimhan, and Rajiv 2005). We adopt this input–output approach for both theoretical and practical reasons. First, it overcomes a key limitation of outcome-based capability measures—that is, the tautology induced by attributing the presence of strong capability to success (Dutta, Narasimhan, and Rajiv 2005; Williamson 1999). Second, our interest is in examining the overall impact of marketing capability on brand value rather than studying various components of marketing capability (e.g., pricing capability, distribution capability). This approach allows for the calculation of a marketing capability score without measuring the underlying dimensions of the capability. Third, from a practical standpoint, because we are examining acquisitions in the period from 2001 to 2005, a retrospective survey measurement of capability is likely to have low validity. Moreover, the market share of these brands is not publicly available. Consequently, we rule out the first and second approaches to measure marketing capabilities.

Following Dutta, Narasimhan, and Rajiv (1999), we estimate an input–output equation that uses sales as the output and a set of variables (e.g., advertising; selling, general, and administrative expenses) as the input. We compute the technical efficiency score using the parameter estimates of the input–output equation one industry at a time.[4] Then, we divide this score by the maximum score of marketing capability in an industry and multiply it by 100 for each year. We use the three-year average of relative marketing capability scores in the model estimation.

Brand portfolio diversity. We use a measure of brand portfolio diversity that is conceptually similar to Rao, Agarwal, and Dahlhoff's (2004) measure of brand strategy. Specifically, brand portfolio diversity is brand portfolio size divided by the number of categories in which a firm operates. Brand portfolio size is measured as the number of brands that a firm owns. The number of categories is computed as the number of different North American Industry Classification System (NAICS) categories in which the firm operates. For example, if the firm implements a pure corporate-branding strategy, the portfolio size is equal to 1. If the firm operates in five different NAICS categories, the brand portfolio diversity is .2. As this ratio approaches zero, it suggests that the firm's brand is extended to many different categories. If the ratio grows large, it suggests that the firm's strategy is closer to a house-of-brands strategy.

M&A strategy. We categorize an M&A strategy as synergistic if the target's and acquirer's primary four-digit Standard Industrial Classification (SIC) codes are the same (Beckman and Haunschild 2002). We code the variable as 1 if the target and acquirer operate in the same industry and as 0 if otherwise.

Target firm sales growth. We compute the year-over-year sales growth of a target firm in the primary SIC industry for the three years preceding the transaction. Then, we

[4]The results appear in an Appendix that is available on request.

average the three year-over-year sales growth rates to arrive at the target firm's sales growth. (We provide the measurement of the other independent variables in Table 3.)

Model Specification and Estimation

We use the Heckman (1979) procedure to control for the systematic differences that might arise between the firms that recognize the value of acquired brands on their balance sheets and those that do not. Failure to control for these systematic differences will lead to biased parameter estimates as a result of sample selection. In estimating the model, we use the Heckman two-step estimator. In the first step of the estimation, a probit model is estimated (see Equation 1). We compute the Mills lambda using the estimates from the probit model and include it in Equation 2. The Mills lambda accounts for systematic differences between firms that recognize the value of brands and those that do not.

Selection equation. The dependent variable equals 1 if an acquirer recognizes the value of acquired brands on its balance sheet and 0 if the acquirer does not recognize the value of brands. As indicated in the previous subsection on control variables, we include acquirer firm leverage and financing considerations to account for a firm's possible over- or underestimation of the value of acquired intangible assets in financial reporting (Muller 1999). We include the marketing and technology emphasis of the acquirer firm as predictors of brand value recognition. Firms with a marketing emphasis are more likely to recognize the value of brands on their balance sheets. We also control for the target firm's industry type because acquirers are more likely to attribute value to brands from consumer industries than to brands from business-to-business industries. Formally,

$$
\begin{aligned}
(1)\quad &\text{Brand value recognition by the acquirer} \\
&= \beta_0 + \beta_1\text{Acquirer leverage} \\
&+ \beta_2\text{Acquirer financing considerations} \\
&+ \beta_3\text{Acquirer marketing emphasis} \\
&+ \beta_4\text{Acquirer technology emphasis} \\
&+ \beta_5\text{Target industry type} + \beta_6\text{Acquirer size} + \varepsilon.
\end{aligned}
$$

Model equation. In the second step of the Heckman procedure, we estimate the following model:

$$
\begin{aligned}
(2)\quad &\text{Log (Target brand portfolio value)} \\
&= \beta_0 + \beta_1\text{Acquirer marketing capability} \\
&+ \beta_2\text{Acquirer brand portfolio diversity} \\
&+ \beta_3\text{Target marketing capability} \\
&+ \beta_4\text{Target brand portfolio diversity} \\
&+ \beta_5\text{M\&A strategy} + \beta_6\text{Target sales growth} \\
&+ \beta_7(\text{M\&A strategy} \times \text{Acquirer brand portfolio diversity}) \\
&+ \beta_8(\text{M\&A strategy} \times \text{Target marketing capability}) \\
&+ \beta_9(\text{Target sales growth} \times \text{Target marketing capability}) \\
&+ \beta_{10}\text{Target market share} + \beta_{11}\text{Target firm value} \\
&+ \beta_{12}\text{Target industry growth} \\
&+ \beta_{13}\text{Target industry demand risk} \\
&+ \beta_{14}\text{Target industry competition} \\
&+ \beta_{15}\text{Target industry type} \\
&+ \beta_{16}\text{Acquirer leverage} \\
&+ \beta_{17}\text{Acquirer financing considerations} \\
&+ \beta_{18}\text{Mills} + \varepsilon.
\end{aligned}
$$

Results

Descriptive Statistics

On average, the magnitude of a target firm's brand value accounts for 7.3% of the transaction value. Given the magnitude of these transactions (mean acquisition value is $2.16 billion), brands account for substantial portions of firm value. Because the correlations presented in Table 4 are not very large, multicollinearity is unlikely to be a concern in the analysis.

Estimation Results

We estimate Equations 1 and 2 using the Heckman procedure and report the results in Table 5. The Wald statistic suggests that the model is significant. The overall results indicate that both target and acquirer characteristics are important determinants of the financial value of a target firm's brands in an M&A.

There is no established goodness-of-fit statistic provided by the Heckman two-step procedure. We use Type II Tobit estimation to obtain an approximate statistic for the goodness of fit.[5] The likelihood ratio test suggests that the addition of main effects to the model with only controls improves fit significantly ($\chi^2(3) = 10.77$, $p < .05$). Similarly, the full model with controls, main effects, and interactions has a better fit than the model with only main effects and controls ($\chi^2(2) = 49.41$, $p < .01$).

Acquirer characteristics. We find support for H_1 ($\beta_1 = .012$, $p < .1$). Acquirers with strong marketing capabilities attribute higher value to a target's brand portfolio. This result corroborates the argument that an acquirer with strong marketing capability expects higher cash flows than an acquirer with weak marketing capability. We find support for H_2. An acquirer's brand portfolio diversity has a positive effect on a target's brand value ($\beta_2 = .024$, $p < .01$). Because this effect is conditional on the moderator, we compute the average effect of acquirer brand portfolio diversity after accounting for the interaction effects. The

[5]We use the Type II Tobit model to assess goodness of fit because it also addresses the truncation in the dependent variable, albeit in a different manner. It also provides a log-likelihood statistic. We thank an anonymous reviewer for this suggestion. We also assessed goodness of fit using ordinary least squares because the second step of the Heckman procedure uses a least square estimator. The results were similar to Tobit model results; namely, stepwise addition of main effects and interaction terms led to a significant increase in R-square.

TABLE 3
Variable Definitions, Measures, and Data Sources

Variable	Definition	Measure[a]	Data Source
Brand value	The present value of incremental future cash flows that accrue to a branded product	Dollar value of the target firm's brands as reported by the acquirer firm	SEC filings
Marketing capability	A firm's ability to combine efficiently several marketing resources to engage in productive activity and attain marketing objectives (Dutta, Narasimhan, and Rajiv 2005)	Technical efficiency score from stochastic frontier estimation (Dutta, Narasimhan, and Rajiv 1999, 2005)	COMPUSTAT, NBER patent database
Brand portfolio diversity	The extent to which the firm prefers stand-alone brands to serve markets	Number of brands/number of categories	USPTO, COMPUSTAT
M&A strategy	Whether or not M&A is synergistic	Coded 1 if the target and the acquirer firms operate in the same four-digit SIC code and 0 if otherwise	COMPUSTAT
Target firm sales growth	The extent to which the target firm grows	The average of three-period year-over-year sales growth	COMPUSTAT
Target firm market share	The target firm's average market share during the three-year period before the deal	Firm sales/total sales of four-digit SIC code	COMPUSTAT
Target industry growth	The extent to which demand in the target firm's industry grows	The average of three-period year-over-year sales growth in the target firm's primary four-digit SIC code	COMPUSTAT
Target industry demand risk	The extent to which demand in a target firm's industry reflects volatility	Coefficient of the variation of sales in the target firm's primary four-digit SIC code	COMPUSTAT
Target industry competition	The level of concentration in the target firm's industry (e.g., Sharma and Kesner 1996)	The sum of top-three market shares in target firm's primary four-digit SIC code	COMPUSTAT
Services	The extent to which the target firm's industry is product versus service oriented.	1 if target firm's primary four-digit SIC code begins with 4–9 and 0 if otherwise	COMPUSTAT
Acquirer leverage	The extent to which the target firm is able to finance its long-term debt (Muller 1999)	Long-term $debt_{it-1}$/Total $assets_{it-1}$	COMPUSTAT
Acquirer financing consideration	The extent to which the firm needs to raise capital in the short run (Muller 1999)	Short-term $debt_{it-1}$/Total $assets_{it-1}$	COMPUSTAT
Target firm value net of brand value		Total purchase price net of brand value that the acquirer firm pays for the target firm	SEC filings
Selection Equation Variables			
Acquirer marketing emphasis	The extent to which the firm emphasizes marketing (Bharadwaj, Bharadwaj, and Konsynski 1999)	Advertising $spending_{it-1}$/$Sales_{it-1}$	COMPUSTAT
Acquirer technology emphasis	The extent to which the firm emphasizes research and development (Bharadwaj, Bharadwaj, and Konsynski 1999)	R&D $spending_{it-1}$/$Sales_{it-1}$	COMPUSTAT
Acquirer firm size		Number of $employees_{it-1}$	COMPUSTAT
Consumer	The extent to which the target firm's industry sells to end consumers versus firms.	1 if the four-digit SIC industry that the target firm operates in primarily sells directly to end consumers and 0 if the industry sells primarily to firms	COMPUSTAT

[a]The subscript "i" refers to the firm, and "t" refers to the effective year of the transaction.

TABLE 4
Descriptive Statistics (n = 133)

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Log(brand value)	16.32	2.09	1													
2. Acquirer's marketing capability	79.47	21.79	.34	1												
3. Acquirer's brand portfolio diversity	9.59	13.99	.22	.07	1											
4. Target marketing capability	76.83	22.91	.21	.43	.01	1										
5. Target brand portfolio diversity	6.37	8.49	.32	.12	.11	.14	1									
6. M&A strategy	.52	.50	–.01	.01	.05	.05	.02	1								
7. Target sales growth	.32	.59	–.24	–.20	–.13	–.16	–.13	.06	1							
8. Target market share	.03	.09	.52	.17	.11	.15	.19	–.04	–.14	1						
9. Target firm value net of brand value	19.74	2.09	.69	.24	.19	.19	.25	.05	–.11	.35	1					
10. Target industry concentration	.58	.19	.15	.16	–.12	.20	.12	–.18	–.12	.31	–.06	1				
11. Target industry growth	.04	.12	–.19	–.10	–.07	–.14	–.11	.17	.21	–.35	–.16	–.20	1			
12. Target industry demand risk	.11	.10	.21	.18	–.03	.09	.24	–.02	.03	.28	.17	.24	.03	1		
13. Services	.53	.50	–.16	–.22	.05	–.31	–.23	–.03	.19	–.21	–.06	–.32	.06	–.19	1	
14. Acquirer firm leverage	.16	.18	.34	.31	–.08	.21	–.01	.01	–.12	.29	.14	.15	–.10	.09	–.19	1
15. Acquirer's financing consideration	.02	.03	.17	.10	.02	.03	.10	–.06	–.07	.22	–.08	.10	–.32	.30	–.09	.18

Notes: r < –.22 and r > .22 are significant at the $p < .01$ level.

TABLE 5
Main Model Results

Main Equation: Dependent Variable = Log(Target Brand Portfolio Value)	Expected Sign	Estimate	SE	Significance
Independent Variables				
Intercept		–1.374	1.835	
Acquirer marketing capability	+	.012	.006	*
Acquirer brand portfolio diversity	+	.024	.008	***
Target marketing capability	+	.016	.007	**
Target brand portfolio diversity	+	.035	.013	**
Moderators				
M&A strategy		2.096	.868	**
Target sales growth		1.073	.530	**
Interactions				
M&A strategy × acquirer portfolio diversity	–	–.048	.018	***
M&A strategy × target marketing capability	–	–.021	.011	**
Target firm sales growth × target marketing capability	–/+	–.022	.007	***
Controls				
Target market share		3.623	1.542	**
Target firm value net of brand value		.819	.077	***
Target industry concentration		.549	.670	
Target industry growth		1.548	1.209	
Target industry demand risk		–2.500	1.467	*
Services		.064	.243	
Acquirer leverage		.906	.905	
Acquirer financing considerations		4.117	6.718	
Mills lambda		–1.885	.862	**
n		133		
Wald χ^2 (d.f. = 19)	255.77***			

*$p < .1$ (two-tailed test).
**$p < .05$ (two-tailed test).
***$p < .01$ (two-tailed test).

unconditional effect remains positive ($\beta_{unconditional} = .001$).[6] Acquirers with highly diverse brand portfolios attribute higher value to the target firm's brand portfolio.

Target characteristics. We find support for H_3. A target's marketing capability has a positive effect on its brand portfolio value ($\beta_3 = .016$, $p < .05$). The unconditional effect of target marketing capability is also greater than zero ($\beta_{unconditional} = .017$). The significance of this finding is compounded because we control for the target firm's market share. If target firms are interested in increasing the value of their brands in an M&A, it is not enough just to pursue market share; target firms also must build marketing capabilities. We find support for H_4. Acquirers attribute higher value to target brand portfolios that are highly diverse ($\beta_4 = .035$, $p < .01$). This finding supports the argument that diverse brand portfolios provide flexibility to acquirers with respect to strategic options that allow access to greater cash flow.

[6]We use the following formula to compute the unconditional effect of acquirer brand portfolio diversity on target brand portfolio value: $\beta_{unconditional} = \beta_2 \times P_1 + P_2 \times (\beta_2 + \beta_7)$, where P_1 is the proportion of observations that represent nonsynergistic transactions and P_2 is the proportion of observations that represent synergistic transactions.

M&A strategy and acquirer brand portfolio diversity. We find support for H_5 ($\beta_7 = –.048$, $p < .05$). When the M&A strategy is synergistic in nature, the impact of an acquirer's brand portfolio diversity on a target's brand value is lower. This result corroborates the argument that because of redundancy among brand portfolios, acquirers with diverse brand portfolios are more likely to divest more of the target firm's brands than acquirers with less diverse brand portfolios and consequently will have lower cash flow expectations from the target's brands.

M&A strategy and target marketing capability. We find support for H_6 ($\beta_8 = –.021$, $p < .1$). The impact of a target's marketing capability on its brand portfolio value is lower when M&A strategy is synergistic in nature. This result suggests that an acquirer operating in the same industry as the target places a lower premium on the target firm's marketing capability.

Target sales growth and marketing capability. We find that there is a negative interaction between the target's sales growth and its marketing capability ($\beta_9 = –.022$, $p < .01$). When a target firm achieves high levels of sales growth, the impact of its marketing capability on its brand value is lower. Acquirer firms appear to place a premium on growth

even if the target firm does not have strong marketing capabilities (cf. Graham, Harvey, and Rajgopal 2005).

Selection equation. Several variables included in the models reflect a significant association with acquired brand value recognition. We find that an acquirer's marketing emphasis increases its likelihood of recognizing the value of acquired brands on the balance sheet ($\beta_3 = 3.99$, $p < .01$). It is not surprising for firms that focus more on marketing to form cash flow expectations from market-based assets (see Table 6). The results confirm the findings in accounting literature in which acquirer financing considerations and acquirer firm size are significant predictors of brand value recognition (e.g., Mueller 1999).

Robustness Checks

Model specification. We used two alternative model specifications to test the robustness of our results. First, instead of target brand portfolio value, we use the ratio of brand value divided by firm value as the dependent variable. The significance patterns are robust to this specification. Second, instead of total firm value, we use acquisition premium as a predictor. Following Beckman and Haunschild (2002), we compute the acquisition premium as the price the acquirer pays above the market price of the target firm. The significance patterns are robust to this specification as well.

We also added other independent variables to check the stability of the results. We included the acquirer's cash/total assets, the acquirer's tax/total assets, and the acquirer's basic earnings per share to the main model. We added the acquirer's cash assets to control for the acquirer's resource availability to support the acquired brands. We included the acquirer's tax and basic earnings per share to control for the acquirer's incentive to manipulate the reported value of brands. Inclusion of these additional variables did not change any of the reported results.[7]

[7]We thank the reviewers for suggesting the additional control variables.

TABLE 6
Selection Equation Results

Selection Equation: Dependent Variable = Acquirer Firm's Decision to Recognize Brand Value			
Independent Variables	**Estimate**	**SE**	**Significance**
Intercept	.036	.133	
Acquirer leverage	.511	.491	
Acquirer financing considerations	8.048	3.890	*
Acquirer marketing emphasis	3.993	1.429	**
Acquirer research-and-development emphasis	–1.517	.506	**
Acquirer firm size	–.004	.001	*
Consumer	.013	.204	
n	268		

*$p < .05$ (two-tailed test).
**$p < .01$ (two-tailed test).

Measurement. In our previous analysis, we used a dummy variable to categorize M&A strategies into two groups: synergistic and nonsynergistic. Following Beckman and Haunschild (2002), we tried a continuous measure of M&A strategy to capture the level of synergy between firms, assigning a score of four when the target and the acquirer operated in the same four-digit SIC industry, a score of three when the target and the acquirer operated in the same three-digit SIC industry, and so forth. The significance patterns of the results are robust to the measurement of synergy.

Endogeneity. We tested the potential endogeneity of acquirer brand portfolio diversity. There are no established instruments for brand portfolio strategies. Empirical findings suggest that the level of marketing spending tends to be substantially different for corporate and house-of-brands strategies (e.g., Morgan and Rego 2006; Smith and Park 1992). Thus, we use selling and administrative expenses as an instrument in the test. The Hausman test fails to reject the null hypothesis that parameters of exogenous and endogenous models are statistically the same ($\chi^2(18) = 7.73$). Consequently, we do not believe that endogeneity is an issue.

Discussion

Summary of Findings

The objective of this research is to examine the impact of target and acquirer characteristics on target brand portfolio value in M&As. The results support the argument that both acquirer and target characteristics are important in determining the value attributed to the target firm's brands. We observe that the acquirer firm's marketing capability and brand portfolio diversity have positive effects on the financial value of the target firm's brand portfolio value. As we hypothesized, a target firm's marketing capabilities and its brand portfolio diversity also have a positive impact on the value of the target firm's brands.

We also examined the contingent role of M&A strategy and target sales growth on a subset of proposed main effects. The post hoc analysis of the interactions illustrates the moderating role of these variables. We observe that the impact of acquirer brand portfolio diversity on target brand value is lower in synergistic M&As than in nonsynergistic M&As. As Figure 1 illustrates, when the M&A strategy is synergistic, the value of a target firm's brands decreases as the acquirer's brand portfolio diversity increases. On average, the value attributed to a target's brands decreased by 43.22% (from $163.8 million to $93 million).[8] This finding corroborates the argument that synergistic acquisitions create redundancies between acquirer and target brand portfolios when the acquirer brand portfolio diversity is high. Conversely, in nonsynergistic M&As, the value attributed to

[8]The "high" and "low" cases in the figures are generated by setting the main effect of interest (e.g., acquirer portfolio diversity) to +/– one standard deviation from its mean. A similar procedure is used if the moderator is a continuous variable. The other variables are set at their mean values.

a target's brands increased by 76.11% (i.e., from $20.1 million to $35.5 million) when acquirer brand portfolio diversity changed from low to high.

We also test the moderating role of M&A strategy on the relationship between target marketing capability and target brand value. The impact of target marketing capability on target brand value is lower in synergistic M&As than in nonsynergistic M&As. As Figure 2 shows, when the M&A strategy is synergistic, the value of target brands decreases as target marketing capability increases. The average reduction in value placed on the target's brands was 20.48% (from $125.1 million to $99.5 million). This finding suggests that the acquirer operating in the same industry as the target places a lower premium on the target's marketing capabilities as a result of redundancy between the acquirer's and the target's marketing capabilities. However, in nonsynergistic M&As, the average increase in value attributed to the target's brands was 108.16% (from $47.7 million to $99.4 million) when the marketing capability increased from low to high.

Finally, as Figure 3 shows, we observe that the impact of target marketing capability on target brand value is lower when target sales growth is high (one standard deviation above the mean). This finding corroborates the argument that in the presence of high sales growth, executives of acquirer firms pay less attention to the target's marketing capabilities that are likely to affect brand value in the long run. Alternatively, acquirer firms may put a premium on tangibility. In real terms, when sales growth was high, the decrease in value attributed to the target's brands was 13.05% (from $30.7 million to $26.7 million) as the target marketing capability moved from low to high. Similarly, in real terms, when sales growth was low, the increase in value attributed to the target's brands was 108% (from $33.8 million to $70.5 million) as the target marketing capability increased from low to high. The sales growth of target firms is visible and perhaps more certain and tangible than the potential of the target's marketing capability.

FIGURE 1
Acquirer Brand Portfolio Diversity and M&A Strategy Interaction

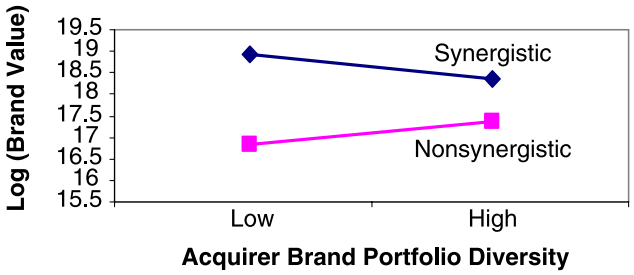
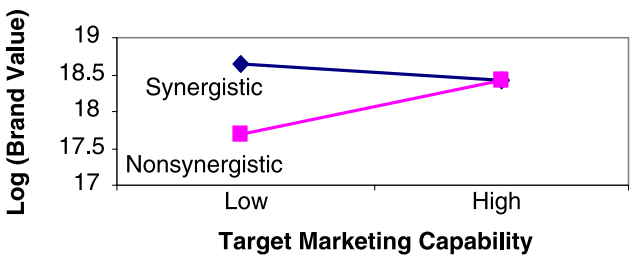


FIGURE 2
Target Marketing Capability and M&A Strategy Interaction

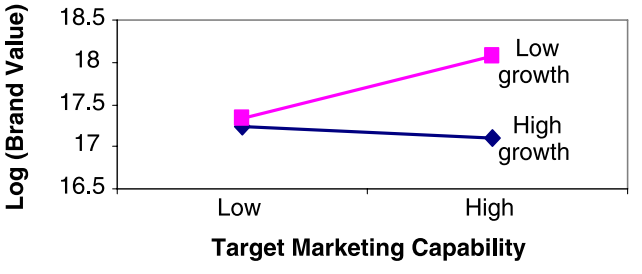


Implications for Theory

Financial value of brands. This study contributes to the literature on brand strategy by providing empirical evidence on the impact of acquirer characteristics on the financial value of brands. The literature on the financial value of brands in marketing does not address contexts in which the ownership of brands changes. Drawing on the RBV and the brand strategy literature, we introduce acquirer characteristics as a set of explanatory variables for understanding the financial value of brands in an M&A context. Two acquirer characteristics—namely, acquirer marketing capability and acquirer brand portfolio diversity—emerge as important predictors of the value attributed to a target firm's brands. This finding underscores the relevance of acquirer/licensor characteristics as explanatory variables for the value of market-based assets in transaction contexts (e.g., licensing).

Marketing strategy and financial outcomes. Recently, there have been calls for investigating the link between marketing actions and financial outcomes (e.g., Rust et al. 2004). The findings of this study contribute to two research streams in the marketing strategy and financial outcomes domain. First, we contribute to the literature on marketing capabilities. We find that both target and acquirer firm marketing capabilities have positive effects on target firm brand value. The significant, positive relationship between acquirer marketing capability and target brand value has implications across contexts in which market-based assets are objects of exchanges between the firms. The extant research on marketing capabilities has focused on establishing the link between marketing capabilities and firm performance within the boundaries of the organizations. However, when a market-based asset is subject to a transaction (e.g., a firm may license some of its brands to another firm), both buyers' and sellers' marketing capabilities should be incorporated into theoretical models that focus on the value of the market-based assets.

FIGURE 3
Target Marketing Capability and Target Sales Growth Interaction



Second, we contribute to the literature on brand portfolio strategy. We find that the target firms with high brand portfolio diversity receive higher valuation for their brands by the acquirers. This finding underscores the significance of the context and of the evaluator. For example, Rao, Agarwal, and Dahlhoff (2004) find that a corporate-brand strategy leads to higher Tobin's q than a house-of-brands strategy. They discuss that this finding may be explained by the investment community's inability to observe or understand the benefits of a house-of-brands strategy. In an M&A context, the acquirer firm's executives, rather than the investment community, assess the value of the target firm's brand portfolio. Unlike the investment community, the acquirer firm's executives seem to put a premium on the presence of strategic options in a target's brand portfolio. This finding underscores the significance of information asymmetry between agents and principals (e.g., managers, investors) as a potentially fundamental explanatory mechanism for differences in expectations about marketing actions and financial outcomes.

Managerial Implications

Our findings have managerial implications especially for firms planning to be involved in an M&A. Executives who are grooming their firms for a potential M&A transaction need to be cognizant of their potential acquirers' marketing capabilities and their brand portfolio strategies. They may seek acquirers with strong marketing capabilities and high brand portfolio diversity to obtain a higher price for their brands. However, if the potential buyer operates in the same industry as the target company, high brand portfolio diversity may lower the price because of potential redundancies between the brand portfolios of the two companies.

Target firms need to recognize the significance of a firm's marketing capabilities and its brand portfolio diversity. Targets with strong marketing capabilities can negotiate higher prices for their brands because their marketing capabilities provide assurance to the acquirer firms in terms of the future performance of the brand portfolios. Targets with diverse brand portfolios can charge higher prices for their brands (or acquirers may have higher willingness to pay) because diverse portfolios provide strategic options for the acquirer. If a firm follows a single-brand strategy, it may consider limiting the number of businesses to which the brand is extended. After a certain threshold of extension, it may be better to use new brands.

Limitations and Future Research Directions

A limitation of the study is that it relies on cross-sectional data. We do not observe the change in the value of brands over time. For example, the ownership of the Snapple brand changed three times in a matter of seven years. At each transaction, a different value was attributed to the Snapple brand, providing evidence of both brand value creation and destruction. Further research could examine the factors that affect the change in value of a brand over time. In the case of Snapple, the ownership of the brand was transferred from private founders to a public firm to a private equity group to a public firm again. With the growing presence of private equity firms, it would be worthwhile to explore how the ownership structure affects the brand value.

Further research could also examine the impact of fit between acquirer and target brand portfolios on brand value. This would likely require a multidimensional approach and disaggregate data because brand portfolios may show variability on various important dimensions, such as brand image and price positioning. For example, an acquirer may own brands that have hedonic images, whereas a target's brand portfolio may comprise brands with functional images. The (dis)similarity of the portfolios across various dimensions can be used to construct a fit measure to test the impact of fit on the value of the target's brands.

Marketing researchers have largely ignored the importance of signaling to the investment community (strategic acquirers, financial analysts, and individual investors). Our research foreshadows the role of marketing capabilities in influencing one aspect of a target firm's value. Further research could explore the value of customer and channel relationships in influencing a firm's acquisition value.

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