

AN EMPIRICAL EXAMINATION OF STOCK MARKET REACTIONS TO  
INTRODUCTION OF CO-BRANDED PRODUCTS

A Dissertation

by

ZIXIA CAO

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2012

Major: Marketing

An Empirical Examination of Stock Market Reactions to

Introduction of Co-branded Products

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## ABSTRACT

An Empirical Examination of Stock Market Reactions to Introduction of Co-branded  
Products. (August 2012)

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Chair of Advisory Committee: Dr. Alina Sorescu

This dissertation examines how the stock market reacts to announcements of introduction of co-branded new products. Despite the apparent enthusiasm of practitioners towards co-branding--the practice of using two established brand names on the same product-, there is a dearth of research on if and how co-branding can be effectively leveraged to significantly increase the value added of new products. Whether greater financial rewards accrue to the manufacturer of the co-branded product (i.e. the primary brand parent) or to the partner firm that lends its brand to the co-branded product (i.e. the secondary brand parent), and how these rewards may differ depending on the characteristics of the co-branded product itself are yet unanswered questions. Using data from the consumer packaged goods industry, I empirically examine the extent to which co-branding increases the market value of the parent firms and analyze the determinants of the magnitude of increase in market value for both firms involved in the co-branding alliance.

I present empirical evidence in support of a positive stock market reaction to the introduction of co-branded new products and find that this reaction is greater, on average, than the market reaction to the introduction of single-branded new products. I also show that

the consistency between the brand images of the two products, the innovativeness of the product, and the exclusivity of the co-branding relationship significantly impact the market's reaction to the announcement of new co-branded products. Moreover, these effects manifest both in the short term (i.e., at the time of the announcement) and over a longer time window (i.e., during the year following the announcement). Furthermore, I find that not all types of co-branding partnerships are equal. Composite co-branding (where both brands bring a substantive contribution to the formulation of the new product) results in higher financial rewards to the partners compared to ingredient and endorsement partnerships. The findings provide important managerial guidelines for increasing firm value through co-branding partnerships.

## DEDICATION

To my parents

for their unconditional love and endless support,  
and to those who are my source of strength and courage.

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## CHAPTER I

### INTRODUCTION

#### **INTRODUCTION**

Co-branding is the practice of using the established brand names of two different companies for the same physical product (e.g., Aaker 2004; Blackett and Boad 1999). From Dell Computers with Intel Processors, to Kellogg Star Wars cereal, to Philips shavers dispensing Nivea shaving cream, co-branded products take many forms across industries, at times connecting seemingly unlikely alliance partners. Industries such as the credit card industry have significantly increased product offerings through the practice of co-branding (Spethmann and Benezra 1994). In the automobile industry, Lexus GS 300 is outfitted with Coach Brand leather upholstery and features the Coach logo on the floor mats and headrests. In the consumer packaged goods industry, Lays offers KC Masterpiece-flavored chips by co-branding with the HV Food Products Company. The business press has typically touted it as a source of competitive advantage, calling it “a courtship that is beginning to look as an imperative” (Spethmann and Benezra 1994), and “a holy grail in [...] differentiating your brand, establishing consumer trust, gaining new channels of distribution or launching a new product successfully” (Thompson 1998).

However, despite practitioners’ apparent enthusiasm towards co-branded products, research has not yet determined if these are profitable investments for their parent firms. Indeed, co-branding may also have downsides. Co-branding carries the risk of eroding brand equity through potentially inconsistent brand associations and potential loss in perceived

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This dissertation follows the style of *Journal of Marketing*.

quality. Brand extensions with poor fit or low quality can lead to brand image dilution (Aaker and Keller 1990), and reduce the performance of businesses. Reputation of celebrity endorsed products can be adversely affected by scandals of celebrity and negative quality signals (Louie, Kulik, and Jaconson (2001). Moreover, the secondary brand relinquishes some control of management, production, and marketing in the co-branding activities, which may also negatively influence brand equity and sales. Negative associations can transfer from partner brands to the co-branded product, hindering its market success. Alternatively, negative associations can also transfer from the co-branded product to one of the partner brands. For instance, in an experiment intended to assess preferences for brownies made from a co-branded mix, Levin et al. (1996) found that if one partner brand is thought to be inferior (in their case, the brand of chocolate chips used in the brownie mix), it brings down not only the perception of the co-branded product but also that of the other partner brand. In addition to risk, there might also be direct costs that are greater with co-branding, for example, coordination efforts between partner firms.

This dissertation examines the financial consequences of co-branding activities and illuminates some key questions left unexplored by previous research. First, while co-branding can improve customers' attitudes towards the individual brands (Simonin and Ruth 1998) and elicit more positive perceptions than single brand extensions (Park, Jun, and Shocker 1996), little is known about how investors react to introductions of co-branded products. A majority of published research studies use an experimental approach to measure consumers' perceptions and awareness of co-branded products and constituent brands. There is a dearth of research on the stock market impact of co-branding. Positive evaluations obtained in lab settings may not necessarily translate in actual profits in an intensely

competitive environment. The financial gains of co-branding in the stock market could help us pinpoint the value of co-branding activities more accurately. Second, limited research has explored the asymmetric returns to alliance partners. Although prior research suggests that the partner that has a stronger market position can obtain a higher share in new product or technological alliances (e.g., Kalaignanam, Shankar, and Varadarajan 2007; Lavie 2007), it is not clear that how co-branding alliance, as a hybrid type of alliance that possess characteristics of both new product and marketing alliances, would generate different financial rewards for the two partner firms depends on alliance characteristics and market factors. Third, previous studies found that the influence of brand extensions on financial returns depends upon factors such as prior consumer attitudes and familiarity with the brands (Lane and Jacobson 1995). It would be worthwhile to explore the impact of relationship-specific characteristics such as exclusivity and innovativeness in the context of co-branding. Moreover, the dataset affords identifying the effects of certain co-branding characteristics on financial returns not only in the short-term, but also in the long-term. It is important to empirically investigate whether abnormal returns of co-branding accrue in the short term or long term and when the future financial goals can be achieved by implementing co-branding activities.

## **RESEARCH QUESTIONS**

In this paper, I examine the stock market's reaction to the introduction of co-branded *new products*, and provide a theoretical framework for the determinants of this reaction.

Specifically, I investigate the following research questions:

- 1) How do stock prices react to the introduction of co-branded new products?

- 2) Are financial rewards to co-branded products different from those to single-branded products?
- 3) Are there differences in the stock market's reactions to the two parent firms of co-branded products?
- 4) What determines the magnitude of the stock market reaction to the introduction of co-branded products?

I rely on two streams of research to build the theoretical framework. First, I draw upon consumer research on consumers' attitudes towards brands, brand extensions, and co-branded products. These studies suggest that attitudes towards partner brands impact attitudes towards the co-branded product, and vice versa (e.g., Park et al. 1996; Simonin and Ruth 1998; Walchli 2007). Second, I draw upon research on the stock market's reaction to corporate announcements about branding, new products, and alliances. Although these announcements usually affect stock prices, the extent to which they do often depends upon firm and product characteristics. For instance, it has been reported that the stock market reacts positively to brand extension announcements, but only in the case of brands that enjoy positive consumer attitudes and high familiarity (Lane and Jacobson 1995).

The empirical context for this research is the consumer packaged goods industry. I have assembled a sample of 190 announcements of co-branded products corresponding to 63 primary brand firms and 51 publicly traded secondary firms, using product level data from *Datamonitor's Product Launch Analytics*, archival data on firm announcements from *Factiva*, and firm level data from *COMPUSTAT* and *CRSP*.

This research makes important contributions to marketing practice and research. To brand managers, it provides a framework that can guide them toward maximizing the

profitability of their co-branded products. To the academic literature, it makes several contributions. First, I document positive abnormal returns to the introduction of new co-branded products and show that these returns are higher than those obtained when single-branded products are introduced by the same firms around the same time. Second, in contrast to extant findings in the new product alliance literature (e.g. Kalaiganam et al. 2007), I find that the average stock market response to the introduction of co-branded products is no different across the two firms involved in the co-branding alliance, despite the asymmetric contributions of the firms to the alliance. Third, I show that the stock market reaction to co-branding announcements is significantly impacted by the consistency between the product's two brand images, the innovativeness of the product, and the exclusivity of the co-branding relationship. Moreover, these effects manifest both in the short term (i.e., at the time of the announcement) and over a longer time window (i.e., during the year following the announcement).

The rest of the dissertation is structured as follows. The remainder of this chapter provides an introduction to co-branding activities and highlights the motivation behind this study and the research questions. Chapter II provides the background and definition of co-branding activities. A classification of co-branding is presented because there are other brand alliance terms in the literature to describe the cooperation between brands. This chapter also provides a review of literature and summarizes the findings with respect to the links between co-branding and consumer attitudes, and the links between branding activities that include co-branding and firms' financial performance. Following this, Chapter III outlines the conceptual foundation of the theoretical framework and proposes hypotheses about the stock market's reaction to co-branding announcements. Stock market returns of co-branded new



products are compared to returns of single-branded new products. In addition, the three main drivers of stock market returns of co-branding activities are discussed. This is followed by Chapter IV where I describe the empirical context, the data sources and the measurements of variables. The methods used for calculating the dependent outcome variable and the models are also explained in this section. Chapter IV tests the hypotheses and provides descriptive statistics as well as the main results. Additional analyses are conducted to support the robustness of the results. The results of additional analysis undertaken toward comparing different types of co-branding by calculating the financial returns to the three types of co-branding activities for each partner firm are also presented. Finally, Chapter VI provides the conclusion with a discussion of managerial implications, limitations and suggestions for future research.

## CHAPTER II

### BACKGROUND, DEFINITIONS AND LITERATURE OVERVIEW

#### **BACKGROUND AND DEFINITIONS**

##### *Co-branding As a Type of Brand Alliances*

Forming an alliance with other established brands has become a widely-used business strategy since 1980s when brand equity became an essential measure of businesses' real value. Examples of co-branded products which have been introduced in the past years include Diet Coke and Nutra-Sweet, and Pillsbury Brownies and Nestle Chocolate. These co-branded products have been successful in the marketplace and have likely contributed to their parent firms' bottom lines.

Co-branding, also referred to as a brand alliance, is the practice of using the established brand names of two different companies on the same product (Kotler et al. 1999). Co-branding is characterized by the simultaneous branding of a physical product with two brands which are otherwise independent and also appear on their own on other products. To distinguish the positions of two partner brands in a co-branding relationship, I define the primary brand in co-branding as the manufacturer's brand which is modified by the secondary brand, and which borrows brand associations from the secondary brand.

Brand alliances can take many forms, from product bundling, to dual branding, to co-branding. Table 2.1 shows the distinctions between co-branding activities and other types of branding strategies. First, product bundling is a strategy in which two or more different products are sold together for one price (Gaeth et al. 1990; Yadav 1994). In contrast, co-branding emerges as the outcome of the two brands contributing to a single physical product.

While in many instances the components of the bundle carry the same brand, there are cases in which different brands are sold together in one package (e.g., fragrance or skin care multi-brand packs sold by Sephora). Product bundling is also encountered in promotions, where typically one branded product is offered for free with the purchase of another branded product (e.g., Varadarajan 1986). Second, dual branding is the concept of hybrid retailers using a single location site, such as Sears and Jiffy Lube, and Arby's and John Long Silvers sharing the same retail space (Levin et al. 1996).

Third, joint sales promotion is a short-term alliance of two independent brands in promotional activities (Varadarajan 1986), such as offering a pack of Britannia Tiger Biscuits for free with purchase of Lipton Tazza Tea. In contrast, co-branding activities have more lasting cooperation and higher shared value than joint promotions, but have shorter duration of relationship and lower shared value creation than joint ventures.

Fourth, an advertising alliance is the simultaneous mention of different suppliers of different products in one advertisement (Samu et al. 1999). Similar to co-branding, an advertising alliance could lead to spillover of positive associations which can improve the images of the partner brands (Wernerfelt 1988). However, co-branding strategy is the only approach where a single product consists of two or more brands.

**Table 2.1 Co-branding and Its Distinctions from Other Branding Strategies**

<i>Branding Concepts</i>		<i>Representative Literature</i>	<i>Number of Brands</i>	<i>Duration</i>	<i>Examples</i>
Brand extensions	Co-branding	Norris (1992); Bucklin and Sengupta (1993)	Two	Short-to-long term	Pillsbury Brownies and Nestle Chocolate
	Single brand extension	Helmig et al. (2008)	One		Jello-gelatin creating Jello pudding pops
Product bundling		Gaeth et al. (1990); Yadav (1994)	Two or more	Short term	Skin care multi-brand packs sold by Sephora
Joint sales promotion		Varadarajan (1986)	Two or more	Short term	Britannia Tiger Biscuits for free with purchase of Lipton Tazza Tea
Advertising alliance		Samu et al. (1999)	Two or more	Short term	Kellogg and Tropicana sponsor an advertisement showing their products used together
Dual branding		Levin et al, (1996); Levin and Levin (2000)	Two or more	Mid term	Sears and Jiffy Lube

### ***The Relation between Brand Extension and Co-branding***

Co-branding is positioned as a sub-case of brand extension (Helmig et al. 2008). By definition, brand extension refers to the use of an existing brand name to launch a new product (Aaker and Keller 1990). Prior research suggests that the two strategies are different in the number of constituent brands involved: brand extension involves a single brand while co-branding utilizes a combination of two brands (Helmig et al. 2008). Two types of co-branding have been identified: If a co-branded product can be introduced into an existing product category, it is identified as “co-branding line extension” (e.g., the Acer-Ferrari

laptop). Alternatively, a co-branding category extension refers to the case where the co-branded product is released into a new product category.

Several researchers (Park et al., 1996; Helmig et al., 2008) have suggested that firms pursue co-branding and brand extension to achieve the same objectives: both are approaches to reduce the potential failures of new products by utilizing the existing brand equities of the parent brand and by transferring the existing brand associations to the new product. However, it is noted by Leuthesser et al. (2003) that sometimes co-branding is a more effective strategy than brand extension because the possibility of diluting consumers' attitudes toward the partnering brands and damaging the allying brands' images is lower for co-branding.

### ***Categorizations of Co-branding***

Various forms of co-branding have been classified into several categories by prior researchers. Samu et al. (1999) classify inter-brands cooperation into three categories: horizontal cooperation when partner companies develop products that enjoy a unique positioning, ingredient branding characterized by the vertical cooperation when one partner brand supplies the other partner, and joint promotion developed by two firms featuring both brands. Blackett and Boad (1999) identify four levels of co-branding: awareness co-branding, endorsement co-branding, ingredient branding, and composite branding. Awareness co-branding and endorsement co-branding are at the lower levels of the spectrum of value creation aimed at strengthening a brand's value in consumers' minds.

Based on the preceding classification of co-branding types and the nature of co-branded consumer packaged products in the data set, I differentiate co-branded products into three types: endorsement branding, ingredient branding and composite branding.

*Endorsement branding* refers to co-branded products where the secondary brand is featured on the package of the primary brand product, mainly for promotional purposes. These alliances do not typically involve significant changes in formulation or form of the primary brand and the majority of the secondary brands featured on them belong to the entertainment and sports industries. *Ingredient branding* involves a secondary brand that is included in the form of an identifiable physical component in the primary brand's product. *Composite branding* refers to co-branded products that require a higher level of horizontal cooperation from both alliance partners and typically involve significant changes in product formulation or form. Operational definitions pertaining to these three types of co-branding strategies are provided with examples in a subsequent chapter which describes the data and the variables used to empirically test the hypotheses.

In this dissertation, I focus on a specific type of brand alliance: co-branding. Co-branding involves two brands that are typically independent before, during, and after the commercialization of the co-branded product, but lend their names to a single physical product for the duration of the co-branding alliance. Multiple terms have been used in the literature to label the two brands involved in a co-branding alliance: modifier and modified brand, primary and secondary brand, leader and partner brand, base and supplemental product (e.g., Levin et al. 1996; Ugglå and Asberg 2010). In this paper, I adopt primary and secondary brand as the terminology. *Primary brand* denotes the brand of the firm that manufactures the co-branded product. *Secondary brand* refers to the other brand involved in the partnership (Helmig et al. 2008). It should be noted that not all co-branding partnerships are structured in the same manner. Across co-branded products, the two partners bring

different levels of contribution. I investigate, and control for these differences in the empirical analysis.

Co-branding partnerships provide a unique setting that allows us to address the questions that could not be examined using the settings of new product introductions or other general formats of marketing alliances. Co-branding is different from single branded new products because two firms share the investment and the returns from the new products. It is also different from other formats of marketing alliances such as joint advertising and product bundling. Leveraging two brands from different firms enable firms to not only explore new markets and gain access to a new customer base for the new product, but also change product image through building brand associations. Therefore, an examination of co-branded products is necessary given that they differ both in characteristics and potentially in market response from single branded new product introductions and other kinds of marketing partnerships.

## **LITERATURE OVERVIEW**

### ***The Link between Co-branding and Consumer Perceptions***

In most prior research, researchers have employed an experimental approach to measure consumers' perceptions and awareness of co-branded products and constituent brands. On one hand, the equity of two brands is leveraged into positive associations for a new product. Entering an alliance with a secondary brand may provide a signal of higher quality that the original brand could not do by itself to marketplace and may command a premium price (Rao, Qu and Ruekert 1999). A co-branded product receives more positive evaluations when it incorporates a well-known secondary brand than a single brand extension

does (Park, Yun and Shocker 1996). Vaidyanathan and Aggarwal (2000) demonstrated that co-branded products formed by a national brand and a private brand obtain a more favorable perception if the private label host brand uses national brand ingredients. On the other hand, spillover effect of co-branding on consumers' attitudes is also supported by research which shows that consumers' positive attitudes toward a brand alliance leads to subsequent positive attitudes toward the constituent brands (Simonin and Ruth 1998). Co-branding studies have offered arguments on how co-branded products and partner brands can gain from co-branding activities.

Levin et al. (1996) use an experimental approach to examine consumers' reactions to several different branding strategies such as co-branding and dual branding. All the brand strategies considered in the Levin et al. study involve how to position an established brand in a new context. They first focus on how the brand name influences the evaluation of the branding strategy by manipulating whether the well-known name or a fictitious brand name is used in the new marketing strategy. They find that brand familiarity matters. A well-known ingredient brand added to chocolate cookies can enhance consumer evaluations of unknown or well-known host brands more than does an unknown brand. They further compare evaluations of the co-branded product, the host brand and the ingredient brand between those who were exposed to the new branding strategy and those who were not. The results suggest the brand's image is affected by various branding strategies.

Simonin and Ruth (1998) show that consumer attitudes toward the brand alliance influence subsequent impressions of each partner's brand. Moreover, brand familiarity positively moderates the impact of prior attitude on post-exposure attitude. Brands that are less familiar have a weaker impact on consumers' attitudes toward the co-branded product,



but are influenced by stronger spillover from the brand alliance than more familiar brands are. Product fit, defined in Simonin and Ruth (1998) as customers' perceptions of the compatibility of the two product categories of the partner brands and their brand concepts of the partner brands, is found to have positive effects on consumer attitudes toward brand alliance. They also provide evidence that each partner brand is not necessarily affected equally by its participation in a particular alliance. The asymmetry emerges in co-branding when a weak brand adds little value to the co-branded product, but benefits greatly from the spillover. However, asymmetry effects are not found in the context of brand extensions where there is no second brand to reinforce the spillover effects.

Samu et al. (1999) identify how consumers process and respond to joint advertising and suggest that the interactions between product complementarity and promotional strategies influence consumers' brand awareness and brand attitudes toward advertising alliances in the context of new product introduction. They explore situations when either a low or highly complementary advertising ally is suitable for enhancing brand awareness and brand accessibility. Specifically, the degree of complementarity between the featured products, type of differentiation strategy (common versus unique advertised attributes), and type of ad processing strategy (top-down versus bottom-up) are important factors in determining ad effectiveness. Firms can choose a high-complementarity partner to gain rapid acceptance for a new brand or choose a low-complementarity partner to develop the brand's associations in consumer memory. In the case of a high-complementarity ally, firms are advised to use a differentiated advertising strategy to emphasize unique attributes, use a top-down advertising strategy to strengthen the category-brand link, or choose a bottom-up advertising strategy to strengthen the brand-attribute link. If it is a low-complementarity ally,

managers should use a bottom-up advertising strategy to achieve top-of-mind responses and use a bottom-up advertising strategy to strengthen the category-brand link.

Washburn et al. (2004) examine how brand alliances transfer the positive brand equity of two or more partner brands to the newly created joint brand, how customer-based brand equity of the partner brands influences consumers' evaluations of the alliance brand in the perspectives of its search, experience, and credence attributes performance and how product trial influences such evaluations. Their findings suggest that merely partnering with another brand enhances the evaluations of the partner brand's customer based brand equity. There is positive effect regardless of whether the partner brand is perceived previously as high or low in customer-based brand equity. This may be due to partnerships suggesting less risk and more credibility to consumers. More than that, the partnership between brands not only positively affects consumers' perceptions of the individual partner brands, but also the perceptions of the brand alliance. High-equity partners enhance evaluation of experience and credence attributes that are relevant to themselves, which suggests that co-branded products can potentially make both high-equity partner brands win. Moreover, product trial moderates the brand equity value of the alliance partner.

Vaidyanathan and Aggarwal (2000) focus on the type of alliance between a national brand and a private brand and explore whether using a national brand ingredient can benefit a private brand without hurting the national brand. Their experiment shows respondents' quality perceptions and attitudes toward a private-brand raisin bran cereal were significantly more positive when a brand name ingredient was used in the product. However, the brand equity of a national brand is not decreased as a result of cooperation with an unknown private brand. Respondents' quality perception of the national name product did not change after it

was added as an ingredient in the private-brand product. Furthermore, the association with a private label product actually enhanced value perceptions of the nationally branded product among those value conscious consumers. These ingredient branding effects on the national brand and private brand provide implications for different kinds of partner firms.

Park et al. (1996) study the composite branding extension context where a combination of two existing brand names in different positions as header and modifier is used as the brand name for a new product. They found that a composite brand extension appears to have a better attribute profile than a direct extension of the header brand. In terms of influencing consumer choice and preference, combining two brands with complementary attribute levels is better than combining two highly favorable but not complementary brands. Moreover, a composite brand extension has different attribute profiles and feedback effects, depending on the positions of the constituent brand names. The feedback effects of the composite branding extension on the header brand seem to be limited when the header brand is evaluated favorably.

Desai and Keller (2002) conducted experiments to measure how ingredient branding influences consumer acceptance of a novel line extension as well as how the brand can successfully leverage the ingredient to introduce future category extensions. They studied two kinds of novel line extensions that are slot-filler expansions in which the level of one existing product attribute changes and new attribute expansions in which more dissimilar new attribute is added to the product. There are two types of ingredient branding strategies that brand the target attribute ingredient for the brand expansion with either a new name as a self-branded ingredient or an established, well-respected name as a cobranded ingredient. By testing consumers' initial expansion acceptance as well as subsequent category extension

attitudes, they focus on the synergy between types of novel line extensions and types of ingredient branding strategies. Specifically, with slot-filler expansions, a cobranded ingredient facilitates initial expansion acceptance, but a self-branded ingredient generates more favorable subsequent category extension evaluations. However, in the context of new attribute expansions, a cobranded ingredient leads to more favorable evaluations of both the initial expansion and the subsequent category extension.

From a signaling perspective in the context of brand alliances, Rao et al. (1999) examine the circumstances in which brand names convey information about unobservable quality when false claims may result in not only reputation losses but also losses of future profits. Their results suggest that the combination of two brands provides consumer greater assurance about product quality compared with a single branded product, which leads to higher product evaluations and premium prices. Moreover, they show that a brand with unobservable attributes receives better quality evaluations when that brand is allied with a second brand that is perceived as vulnerable to consumer sanctions.

Aaker and Keller (1990) examine how consumers form attitudes toward brand extensions by measuring consumer reactions to 20 brand extension concepts and testing the effectiveness of different positioning strategies for extensions. The findings suggest that positive attitude toward the extension emerges from both a perception of "fit" between the two product classes along one of three dimensions and a perception of high quality for the original brand. Furthermore, consumers' perceptions of the difficulty of making the extension have a positive relationship with evaluations of an extension, suggesting that an extremely easy-to-make extension is less likely to be accepted by consumers. The potentially negative associations can be neutralized more effectively by elaborating on the attributes of

the brand extension than by reminding consumers of the positive associations with the original brand. The elaboration appears to reduce the salience of perceived credibility of a firm in the original product class in making the extension.

Kumar (2005) focuses on the reciprocal effects of brand extensions and investigates the impact of a brand extension's success versus failure on customer evaluation of brand counter-extension. That is, a brand extension launched into Category A by Brand 2 that belongs to Category B in a reciprocal direction to the launch of a previous extension into Category B by Brand 1 that belongs to Category A. The findings show that a counter-extension is evaluated more favorably when the preceding extension is a success rather than a failure. Furthermore, the counter-extension would receive superior evaluation, if is launched by a major brand, especially if the previous successful extension was also launched by a major brand. While a majority of the previous research examines the effects of undesirable characteristics of an extension on brand dilution, Kumar shows that the success of an extension, a desirable characteristic, can indirectly dilute a brand and could even result in a greater loss in choice share to a counter-extension than does a failed extension.

Geylani et al. (2008) develop an analytical model and conduct experiments to investigate the conditions under which a brand's image is reinforced or impaired as a result of co-branding, and the characteristics of a good co-branding partner for image reinforcement. Consumers' attribute beliefs reflected in the two dimensions, the expected value of the attribute and the degree of certainty about the attribute, are updated after consumers are exposed to a co-branding activity. While co-branding may improve the expected values of the brand attributes, the uncertainty related with the brands could increase through the alliance in certain circumstances. Their findings suggest that it is not necessary for a brand to

choose an alliance partner that has the highest performance possible. Co-branding for image reinforcement may not be a viable strategy for a reliable brand.

However, positive evaluations obtained in lab settings do not necessarily suggest actual profits in an intensely competitive marketplace. One manner in which the true value of co-branding in the marketplace can be established is by examining the stock market's reaction to the introduction of co-branded products.

### ***The Link between Branding and Stock Market Returns***

#### ***Brand Equity and Financial Returns***

Brands are viewed as intangible assets that generate future cash flows (Aaker and Jacobson 1994) or reduce the volatility of future cash flows (Ambler 2003). As brand equity is a complex concept, Keller and Lehmann (2006) suggest that branding-shareholder value is reflected in three perspectives: customer-based equity, product-market brand equity and financial-based brand equity. All three components of brand equity have been found to be able to drive firm value (e.g. Madden et al. 2006). Many authors argue that financial-based brand equity as a metric of brand equity goes well beyond short-term sales, profits, and market share, and it is growing in appeal.

Simon and Sullivan (1993) estimate a firm's brand equity that is based on the financial market value of the firm. They define brand equity as the incremental cash flows which accrue to branded products over unbranded products. The value of brand equity comes from the residual in the model of the firm's assets value. Their approach provides an objective value of a firm's brands that is related to the determinants of brand equity. Moreover, their technique isolates changes in brand equity at the individual brand level by

measuring the response of brand equity to major marketing decisions such as the major events of Coca-Cola and Pepsi from 1982 to 1986.

Barth et al. (1998) use simultaneous equations estimation to investigate the relationships between brand value and returns and accounting variables. They show that brand value estimates are positively associated with advertising expense, operating margin, and market share. Their findings suggest brand value estimates provide significant explanatory power for prices incremental to these variables, and to recognized brand assets and analysts earnings forecasts.

Madden et al. (2006) investigate the link between shareholder value and brand assets and provide evidence pertaining to how marketing affects firm performance. Using the Fama-French method, the authors show that, when market share and firm size are considered, strong brands not only deliver greater returns to stockholders but also help reduce the risk. Their findings provide more comprehensive perspective by supporting the importance of marketing function as the processes that create firm value.

Mizik and Jacobson (2009) develop a model that links key customer mind-set outcomes of brand-building initiatives (perceived brand differentiation, relevance, esteem, knowledge, and energy) to firm value and show that different brand asset components have different implications for firm financial performance. They examine how the five pillars that form the basis for the Young & Rubicam Brand Asset Valuator model influence stock market returns. Their analysis shows that perceived brand relevance and energy provide incremental information to accounting measures in explaining stock returns. However, the effects of esteem and knowledge are only reflected in current-term accounting measures. The financial markets do not consider brand differentiation as having incremental information content. But

since changes in differentiation are indicative of future-term accounting performance, they should be considered as a driver of stock return.

### *Corporate Branding Strategy and Financial Returns*

As investors view incremental information on branding activities as contributing to estimating future cash flows, the challenges emerge for marketers and researchers to assess and communicate the value created by corporate branding strategies on shareholder value. Research supports that firm value is linked to corporate naming strategies that influence brand awareness can change brand equity. Corporate activities related with social responsibility are also suggested to have an impact on firm value through building brand images. Moreover, many studies have documented the manner in which mergers and acquisitions (M&A) and brand portfolio strategies impact firm value.

Srivastava, Shervani, and Fahey (1998) develop a conceptual framework of the marketing-finance interface, and propose that marketing tasks involve developing and managing market-based assets that include customer relationships, channel relationships, and partner relationships. Market-based assets such as brands can increase shareholder value through accelerating cash flows, lowering the volatility and vulnerability of cash flows, and enhancing the residual value of cash flows.

Horsky and Swyngedouw (1987) use the event study method and find the positive effect of corporate name changes on firms' stock prices. Especially for industrial goods manufacturers and those whose previous performance was relatively poor, the improvement in financial performance is greater. It may be the act of a name change serves as a signal of other corporate activities such as changes in product offerings and organizational changes that will be successfully undertaken to improve performance. Moreover, Bosch and Hirschey



(1989) find a positive pre-announcement effect of corporate name changes, but it is canceled out by the negative post-announcement effect. Brand equity is one of the factors that can moderate the effects of name change (DeFanti and Busch 2009).

Bahadir, Bharadwaj, and Srivastava (2008) focus on brand assets in the setting of mergers and acquisitions and find that brand marketing capabilities of acquirers and target companies drives the target company's brand value and thus influences shareholder value. Their results indicate that acquirer and target marketing capabilities and brand portfolio diversity have positive effects on a target firm's brand value. Targets with diverse brand portfolios can charge higher prices for their brands, because while diverse portfolios provide strategic options for the acquirer, a single-brand strategy may limit the number of firms to which the brand is extended. Compared to a non-synergistic M&A, a synergistic M&A enhances the positive impact of acquirer brand portfolio diversity and target marketing capability.

Morgan and Rego (2009) find that a firm's portfolio strategy is a predictor of financial performance. Brand portfolio strategy, differing in terms of their design and complexity, specifies the structure of brand portfolio and the scope, roles and interrelationships among portfolio brands. The authors investigate firm value creation as a function of three characteristics of portfolios: the number of brand the firm owns, the scope of market coverage, and the degree of competition among the brands in the portfolio that are similarly positioned or directed to the same target markets. The findings indicate that owning a large number of brands is positively related with customer loyalty, reduced cash flow variability, and higher Tobin's Q. The brand portfolio strategy-business performance

relationships in their study reveal that appropriate brand portfolio strategies may depend essentially on the performance goals of the firm.

#### *Brand Extension and Financial Returns*

It is possible that brands can benefit or suffer from extensions. For instance, brand extensions may restrict financial value creation of the firm because brand extensions may preclude opportunities that are provided only through new and unconnected brand offerings (Aaker and Keller 1990). However, there is a dearth of research on the link between brand extensions and changes of financial returns. Lane and Jacobson (1995) use the event study method to investigate the financial returns of brand extension announcements and find that stock market response depend on brand equity components including brand familiarity and attitude towards the extension brands. Their analysis indicates that brand equity characteristics significantly influence the success of brand extensions.

#### *Brand Alliance and Financial Returns*

Prior research finds that licensing, an important component in many brand alliances, has a significant impact on firm value. Srivastava et al. (1999) indicate that strong brands generate higher royalty rates and increase firm value because they provide licensees the opportunity to strengthen their business. However, while licensing creates significant financial returns, a notable proportion of announcements may have negative effects on returns. Jayachandran, Hewett, and Kaufman (2009) find brand strength to be negatively related with royalty rates and thus decrease financial performance, because strong brands emphasize brand protection over revenue generation in generating license contracts.

It has been found that celebrity endorsement, as a prevalent form of advertising alliances, has effects on consumers' brand attitudes and purchase intentions. Agrawal and

Kamakura (1995) use an event study method in the context of celebrity endorsements to show that firms' stock market valuation increases when they sign celebrity endorsers. Their results suggest that a celebrity endorsement contract is used as information by investors to evaluate the potential profitability of endorsement expenditures, and as a worthwhile investment for firms.

Elberse and Verleun (2010) investigate the pay-off to enlisting celebrity endorsers in the context of alliances between sports athletes and consumer-goods firms. They find that the brand alliance with athletes as endorsers leads to positive effects on firm value and is associated with increasing sales. On average, with a celebrity endorsement, stocks go up roughly a quarter of a percentage point, and sales for products endorsed by athletes go up by an average of 4%. Furthermore, brand alliances can enhance reputation which maximizes the likelihood of further positive news. Both sales and stock returns increase significantly with each major achievement by the athlete. However, while the stock-return effects are relatively constant, sales effects show decreasing returns over time.

Knittel and Stango (2010) investigate the stock market effects of the Tiger Woods' scandal on his sponsors and sponsors' competitors and find that, relative to the market values of firms without the endorsement deals, firms with products endorsed by Woods suffered substantial decreases in market value. The negative effects on market value are particularly stronger for the competitors who were endorsement-intensive firms, which suggests that the scandal sent a negative market-wide signal about the reputation risk associated with celebrity endorsements. Furthermore, firms with substantial co-investments in new products endorsed by Tiger Woods had larger declines in market value, probably due to the decline in the brand equity of the products.

To summarize, a limited number of studies have investigated the stock market's response to brand related actions which involve a single firm. Lane and Jacobson (1995) found positive abnormal returns to brand extension announcements, contingent upon certain brand characteristics. Celebrity endorsements, as one particular form of brand alliance, have also been shown to elicit a positive market reaction (Agrawal and Kamakura 1995). Elberse and Verleum (2010) also found that the brand alliances with professional sports athletes have a positive effect on sales and firm value of the consumer goods company. However, strategic brand actions within a single firm or between a firm and an individual are very different from brand alliances which bring together two independent firms that may contribute and benefit unequally from the product that they jointly create.

#### *Co-branding and Financial Returns*

Little research has been done to empirically estimate the financial returns of co-branding activities. There are two potential mechanisms which can link co-branding to stock market returns. First, co-branding is a powerful way to multiply brand equity by introducing one company's goods and services to the loyal customers of another. Co-branding enables one brand to benefit from the halo of the other partner brand. Satisfied customers with high awareness and positive attitudes towards co-branded products or one constituent brand may also adopt the original partner brand and thus increase the brand equity of another brand. Brand equity can be a high information channel that leads to higher liquidity (McAlister, Srinivasan, and Kim 2007) and reduce the volatility of cash flows for the firm. Prior research suggests a positive association between brand equity and stock returns (Mizik and Jacobson 2008, Aaker and Jacobson 1994). An example is how NutraSweet built its brand equity by co-branding with Coca-Cola Co. and Pepsi-Cola Co. NutraSweet launched a brand that few

consumers had ever heard of. By piggybacking on the equity of big name companies that adopted and endorsed the NutraSweet brand name, it created the customer base for NutraSweet.

Second, from the perspective of strategic alliances, co-branding gives the firm access to new markets and provides access to other firm's resources such as manufacturing technology, managerial knowledge and advertising resources, which can reduce costs and increase cash flow levels of the firm (Kalaignanam, Shankar and Varadarajan 2007). Lay's and KC Masterpiece is a good example of optimizing the advertising costs by co-branding. Although there are not a lot of advertisements for Lay's and KC Masterpiece, a combination of these two highly recognizable brands offers consumers a product that catches the eye. The utility of co-branding as a cost-saving option is particularly emphasized in the recent decade's recession with intensified scrutiny over expenditures.

The evidence on brand alliances and stock returns is mixed. On one hand, the financial gains to alliances have been supported by the findings that partners in new product development alliances obtain positive financial returns (Kalaignanam, Shankar and Varadarajan 2007), and that technological alliances enjoyed greater abnormal return than marketing alliances (Das, Sen and Sengupta 1998). On the other hand, Anand and Khanna (2000) found non-significant returns to licensing contracts, suggesting that the effects of learning on value creation are strongest for research joint ventures, and weakest for marketing joint ventures. Effects generated by celebrity endorsements are not uniformly positive either.

Despite the valuable contributions of prior research, financial returns of each partner firm and some important co-branding characteristics that might lead to the mixed evidence of financial returns have not been explored. In the next chapter, I propose a series of hypotheses.

## CHAPTER III

### CONCEPTUAL FRAMEWORK AND HYPOTHESES

#### **FINANCIAL RETURNS TO CO-BRANDING**

Prior research shows that financial rewards to new products accrue mostly to radical innovations: products that are significantly new on some dimension of relevance to consumers (Sorescu and Spanjol 2008; Srinivasan et al. 2009). Co-branded products are typically incremental (as opposed to radical) innovations, suggesting that – at least from an innovation perspective – their announcement may not elicit a large stock market reaction . However, new co-branded products share two unique features that are likely to be viewed more favorably by investors when compared to single-branded products.

First, co-branding can signal quality to consumers (Rao et al. 1999) and can improve consumers' attitudes toward individual partner brands, with positive brand association spillovers documented both from the individual brands to the co-branded product and vice versa (Simonin and Ruth 1998). With greater credibility of product quality than those of a single branded product (Rao et al. 1999), co-branded products can also command a premium price (Venkatesh and Mahajan 1997), and elicit more positive perceptions than single brand extensions (Desai and Keller 2002; Park et al. 1996). Collectively, these findings suggest that, when compared to single-branded products, co-branded products are likely to be viewed more favorably by consumers and generate higher cash flows.

Co-branding alliances also offer the partner firms an opportunity to improve operational efficiencies. Co-branding partners can gain access to new markets and share each other's resources in terms of manufacturing, managerial knowledge, and advertising.

However, strategic alliances are not a guaranteed means of increasing shareholder wealth. In the case of marketing alliances, the stock market reaction has been found to be positive in some studies (e.g., Swaminathan and Moorman 2009), and non-significant in others (e.g., Das et al. 1998; Koh and Venkatraman 1991), potentially reflecting differences between investors' perceptions of such alliances. Moreover, the volatility of stock returns seems to increase following announcements of marketing alliances, reflecting additional risks such as the possibility of opportunistic partner behavior (Das et al. 1998).

In contrast, the market reaction is unambiguously positive in the case of new product or technological alliances (e.g., Kalaiganam et al. 2007), suggesting that investors anticipate higher future cash flows as a result of technology transfers. Because co-branding alliances involve the creation and commercialization of a new product, they draw upon characteristics of both marketing and technological alliances. Consequently, such alliances should not only generate higher future cash flows (similar to those generated by new product alliances) but also reduce the uncertainty associated with these cash flows by leveraging the equities of the two partner brands. I expect, therefore, that the stock market reaction to the announcement of co-branded products will be positive and larger in magnitude when compared to the reaction for single branded products.

An important question is to discern which partner benefits the most from co-branded products. The parent of the primary brand is the one which manufactures the product and typically has higher control over how the product is crafted and marketed, compared to the secondary brand partner. At the same time, the primary brand partner also faces higher costs, both in terms of upfront investment and reputational costs if the product is not successful. In contrast, the capital investment and reputational risk for the secondary brand parent are lower.



However, revenues are also arguably lower because secondary brand partners do not directly tap into the cash flows generated by the co-branded product.

Prior literature on how financial rewards are shared between the two partner firms suggests that the partner with the stronger market position generally captures the higher share (e.g., Kalaignanam et al. 2007; Lavie 2007). In a co-branding alliance, the primary brand parent firm typically enjoys a dominant market position, as it is more heavily involved in the production and selling of the co-branded product. Thus, I expect that a larger percentage of cash flows related to the co-branded product will accrue to parent firm of the primary brand. In sum, I hypothesize:

H1a: *The stock market reaction to the announcement of co-branded new product introductions will be positive and significant.*

H1b: *Abnormal returns to the announcement of co-branded new product introductions will be greater than that of single-branded products introduced by the same firms around the same time.*

H1c: *Abnormal returns to the announcement of co-branded new product introductions will be greater for primary brand firms than for secondary brand firms.*

## **DETERMINANTS OF ABNORMAL RETURNS**

### ***Consistency***

The co-branding literature highlights one characteristic that can elicit positive brand associations for co-branded products: the consistency between the images of the two partner brands. *Brand consistency*, defined as the congruence or fit between two (or more) brand

images (Keller 1993), is positively related to attitudes toward brand extensions (Aaker and Keller 1990; Wedel et al. 2010) and to attitudes toward brand alliances (Simonin and Ruth 1998).

Consumers prefer consistent and compatible brand associations. Brand fit has been shown to be a key success factor for brand extensions. Attitudes toward brand extensions are most positive when there is a perception of "fit" between the two product classes (Aaker and Keller 1990; Wedel, Batra and Lenk 2010). Fit between the parent brand and an extension product is suggested to be the most important driver of brand extension success (Völckner and Sattler 2006). Studies of brand alliance also suggest that the overall perception of "fit" or "cohesiveness" between the two brands is positively related to the evaluation of the alliance (Simonin and Ruth 1998). Venkatesh and Mahajan (1997) found that products with branded components do not always lead to price premiums and incongruity between the branded components can hurt profits. Compared to mono-brand extensions, co-branding is even more significantly influenced by consistency, because the pairing of two consistent brands could contribute extra value to the co-branded product beyond what one brand could achieve alone.

The fit between two brands can override any associations that consumers may have with individual brands. Park et al. (1996) found that co-branded products enjoy better recognition when they carry two complementary brands rather than two brands that are viewed as highly favorable, but not complementary. Their findings support the predictions of cognitive consistency theory, which suggests that individuals are more likely to view an object favorably, and by extension choose that object among alternatives, if it does not involve dissonant elements.

In sum, when brands have a consistent image, prior research suggests that spillovers of positive attitudes and perceptions of quality are more likely to transfer between the two brand partners, or between the respective brands and their co-branded products. For the primary brand manufacturer, these positive attitudes should translate into higher and less volatile cash flows for the co-branded product. A spillover from the primary to the secondary brand should also strengthen the secondary brand's equity, translating into higher cash flows for the secondary brand parent. Although there is evidence that brand consistency influences consumer favorableness of co-branded products, extant studies do not discuss the effect of consistency on financial returns for two firms participating in co-branding. If stock market investors recognize the upside potential of consistent brands, I expect stock prices for both primary and secondary brands to react positively to announcements of consistent co-branding partnerships.

*H2: For each co-branding partner, abnormal stock returns associated with the announcement of co-branded new products will be positively related to the consistency between the two partner brands' images.*

### ***Exclusivity***

An important dimension in co-branding agreements is the exclusivity of the partnership. In line with industry practice, I focus only on cases of exclusivity regarding the secondary brand partner. These are cases where the secondary brand agrees to participate in a co-branding agreement with a single primary brand firm, and does not participate in similar agreements with the primary brand's competitors (e.g., Bucklin and Sengupta 1993). For instance, Kellogg's partnership with Disney specifies that only Kellogg can use selected

Disney characters on the packages of its breakfast cereal, but does not prevent Kellogg from entering into future co-branding partnerships with other firms (Verrier 2011).

Exclusivity in co-branding can function as a commitment mechanism that limits the secondary brand partner's ex-post options and protects the primary brand partner from opportunistic behavior (Williamson 1983). The manufacturer who owns the primary brand could be interested in imposing exclusive cooperation constraints on the secondary brand for several reasons.

First, from the standpoint of consumer perceptions, exclusivity can strengthen brand image for the primary partner, while the lack of exclusivity could dilute it (e.g., Park et al. 1986) and hence, reduce demand for the original product.

Second, when primary brands can develop exclusive deals with secondary brands, the alliance maintains the manufacturer's unique advantage relative to its rival (Krattenmaker and Salop 1986), which leads to higher sales. In other words, exclusivity of the contractual agreement provides unique attributes of the partner brand that add value and make the co-branded products highly differentiable.

Third, exclusive co-branding establishes barriers to entry by the firm's potential competitors (Aghion and Bolton 1987). The exclusive interaction and knowledge transfer between the partners could reduce the possibility that technology and skills will transfer to rival firms. Therefore, the primary brand partner can more freely contribute its capabilities since the exclusivity provision makes it less likely that critical technology and skills would transfer to rival firms.

Fourth, in an exclusive partnership, the secondary brand partner has stronger incentives to help the co-branded products turn into enduring assets, which can further

enhance the value of the partnership. Exclusivity can function as a commitment mechanism via offering a hostage (Williamson, 1983). The secondary brand's commitment in exclusive cooperation not only protects the primary brand's investments in manufacturing, financing or distribution, but also induces the primary brand to contribute valuable capabilities. When an exclusivity provision of the secondary brand signals its commitment to develop a stable co-branding relationship, the co-brand is more likely to be highly valued by the stock market.

In sum, exclusivity increases the uniqueness of co-branded products and should therefore be a source of competitive advantage for the primary brand partner (Krattenmaker and Salop 1986). Thus, from a strategic and operational standpoint, the above arguments suggest that the secondary brand's provision of exclusive co-branding is beneficial for the primary brand's parent firm and could positively influence investors' expectations about the firm's future cash flows.

The benefits of exclusivity are less clear for the secondary brand partner, because the exclusive provision restricts the choice of partners and increases opportunity costs. Its provision of exclusivity means trade-offs between the value of retaining the option to co-brand with additional partners versus the benefits of the primary brand's contribution induced by providing exclusive cooperation. Exclusive provision may expose the secondary brand to risks because it restricts the choice of partners and it increases its opportunity costs. Conversely, by offering the ingredient to a number of manufacturers in the channel, the ingredient branding partner can more quickly raise consumer awareness and make the ingredient widely available. Moreover, asymmetrical dependencies between partners in alliances could reduce the effectiveness of the alliance and its potential payoffs (e.g., Bucklin and Sengupta 1993). However, exclusivity, may encourage the manufacturer to make

valuable investments and improve its contractual performance (Somaya, Kim and Vonortas, 2011), which could benefit the secondary brand. With such a mixed effect on the returns, exclusivity may not necessarily favor the secondary brand. Therefore, a directional hypothesis can be provided only for the effect of exclusivity on the primary brand firm's stock price.

In contrast with the prediction for consistency, I posit that exclusivity is likely to increase shareholder value only for the primary brand partner. Thus:

*H3: For the primary brand partner, abnormal stock returns associated with the announcement of co-branded new products will be higher for exclusive co-branding partnerships than for non-exclusive partnerships.*

### ***Innovativeness***

In a meta-analysis, Henard and Szymanski (2001) found that, on average, there is no relation between product innovativeness and new product performance. However, Sorescu (2011) observes that in many studies, innovativeness is significantly related to performance (in particular, stock performance), but most such studies are based on samples of highly salient or radical innovations in high tech industries.

This calls into question whether product innovation in non-high-tech industries would elicit a positive stock market reaction, especially since innovative products also increase risk for their underlying firms due to uncertainty about the speed and extent of their adoption by the market place (Sorescu and Spanjol 2008). I argue, however, that this uncertainty is reduced by branding innovative products with not one, but two established brands. Indeed, a transfer of positive associations from either partner's brand should increase the credibility of

the product's new features as well as its overall perceptions of quality. In turn, this should translate into higher value for both co-branding partners.

Specifically, the partner brand could add expertise in the extension field, transfer positive brand associations, and thus provide credibility and substance to the perceived innovativeness of the co-branded products. For example, if the ingredient brand is perceived to have the credibility and expertise to make the co-branded new products, then consumers and stock market evaluations of the co-branding activity would be favorable. Moreover, the innovativeness of co-branded products may signal close cooperation between the two firms, improved competitiveness of partner brands and the quality of products. Since a strong branded innovation can affect the reputation of the parent organizational brand (Aaker 2007), the co-branded innovative products might be able to create similar positive market reaction to the brands' parent firms.

Innovativeness may also minimize losses from launching an unsuccessful product. When brand extensions fail, they usually dilute parent brands only in the case of products that are not very different from other products that carry the same brand name (Keller and Aaker 1992; Loken and Roedder John 1993). An innovative product, particularly a co-branded product, is more likely to be dissimilar from the partners' individually branded products, which should limit negative associations and damage to the brand in the case of a market failure. Overall, I expect that shareholder wealth should increase more for innovative co-branded products than for non-innovative ones.

*H4: For each co-branding partner, abnormal stock returns associated with the announcement of co-branded new products will be positively related to product innovativeness.*

Taken together, the four hypotheses predict that the stock market reaction to co-branded new product announcements will be significantly positive, and stronger than in the case of single-branded products introduced by the same (primary brand) firm. I also predict a stronger stock market reaction for innovative products whose co-brands are perceived as consistent by consumers. In contrast, exclusivity agreements with secondary brand partners are expected to add value only to the primary brand's parent.



## CHAPTER IV

### METHODOLOGY

#### **EMPIRICAL CONTEXT**

I test my hypotheses using data from the consumer packaged goods industry. I select this industry for two reasons. First, consumer packaged goods account for a sizeable portion of the U.S. economy. The food, beverage, and consumer packaged goods industry contributed over \$1 trillion to the US GDP in 2009 (Grocery Manufacturers Association, 2010). Second, co-branding is a prevalent practice in this industry as evidenced by the steadily increasing number of co-branded products reported in the Datamonitor's Product Launch Analytics (formerly known as ProductScan), a comprehensive and detailed source of product information that includes consumer packaged goods (CPG) launched around the world since the early 1980s.

#### **DATA AND SAMPLE**

To test my hypotheses, I use Product Launch Analytics to build a representative sample of co-branded products for which I can identify both the primary and secondary brand parent firms. This database provides, among others, the date of product introduction, the manufacturer, an assessment of the product's innovativeness, and a tag identifying products that are co-branded or that carry a double trademark. Moreover, products are added to this database at the time they are launched, eliminating potential memory biases related to new product selection and to classification along relevant dimensions (such as innovativeness).

I obtained from Product Launch Analytics all CPG products introduced in the United States between 1981 and 2008 that carry the “co-branded” or “double trademark” tag. I identified manufacturers for all products and retained only those that are publicly traded. For the remaining products, I identified their primary and secondary brands. The primary brand is usually the manufacturer’s corporate brand or one of the brands under its umbrella. The secondary brand is the other brand that appears on the product’s package and is identified by Product Launch Analytics in the product description as being the co-branded partner. For example, Heinz co-branded with Tabasco to market a spicy version of its ketchup. The product is manufactured by Heinz, the primary brand, and Tabasco as the secondary brand appears on the product’s package.

The final sample includes 190 co-branded products introduced by 63 publicly traded companies. Of the corresponding secondary brands, 51 also belong to publicly traded companies.

To obtain announcement dates, I conducted searches in Factiva and Lexis Nexis using the primary and secondary brand names for each product. If the announcement mentioned that a series of co-branded products would be introduced through time, I included in my analysis only the first product, which is likely to carry the highest informational content for stock market investors. I only use the first mentioned launch because the series of new products introduced under same agreement should not differ on the independent variables investigated in this research. In rare cases when no formal announcement took place, I used the product introduction date listed in Product Launch Analytics in lieu of the announcement date. I also took care in ensuring that the sample contains no duplicates or reporting errors.

To test H1, I collected, also from Product Launch Analytics, data on single-branded products introduced by primary brand firms in the sample. Specifically, for each co-branded product, I assembled the portfolio of new products introduced by the primary brand firm two years before to two years after the co-branded product announcement. This yielded a sample of 16,148 new, single-branded products introduced by the same firms and during the same time periods as the co-branded products. On average, 189 single-branded products were introduced for every co-branded product in this sample by the same parent firms.

Archival searches in Factiva and Lexis Nexis were also used to obtain data on the exclusivity of the co-branding agreements; the exact process is described below in the *Independent Variables* subsection. Firm level control data (such as size and marketing resources) are obtained from COMPUSTAT, and stock returns are obtained from CRSP.

## **MEASURES**

To test the hypotheses, I develop empirical measures for the dependent and independent variables. I also identify control variables that affect the relation between stock returns and co-branded product introductions. These measures are discussed in this section and summarized in Table 4.1.

**Table 4.1 Variables and Data Sources**

	<i>Conceptual variable</i>	<i>Measured Variable</i>	<i>Data Source</i>
Dependent Variables	Cumulative abnormal return	Cumulative abnormal return (over a four-day window) computed using the market model and the Fama-French-Carhart four-factor model	CRSP
	Buy and hold abnormal return	12-month, benchmark-adjusted buy-and-hold abnormal returns	CRSP and COMPUSTAT
Independent Variables	Exclusivity	Exclusivity of co-branding deal for manufacturer in prior 10 years (1,0)	Factiva and Product Launch Analytics
	Consistency	Consistency of the two brands involved, measured by 7-point scale (Helmig, Huber, and Leeflang 2007)	Average ratings provided by 5 raters
	Innovativeness	Innovativeness of the first introduced product (1,0)	Product Launch Analytics
Control Variables	Primary brand parent firm prior co-branding experience	Number of co-branding partnerships undertaken by the primary brand in past five years prior to the introduction of the focal product	Product Launch Analytics
	Type of co-branding agreement	Dummy variables for: a) endorsement co-branding b) ingredient co-branding c) composite co-branding	Factiva
	Firm size	Total assets (log)	COMPUSTAT
	Corporate brand	Corporate brand or house of brands (1,0)	Mergent
	Firm marketing resources	Sales, general, and administrative expenditures (log)	COMPUSTAT

### ***Dependent Variables: Stock Returns***

Short-term event studies have frequently been used to measure the stock market reaction to corporate announcements such as new product introductions (Chaney et al. 1991), brand extensions (Lane and Jacobson 1995), alliances (Swaminathan and Moorman 2009) and additions of internet channels (Geyskens et al. 2002). The methodology is well established and well specified over short-term horizons (Brown and Warner 1985).

One basic assumption of short term event studies is that all available information contained in corporate announcements is immediately understood by investors and incorporated into stock prices. This implies that cumulative abnormal stock returns measured during the announcement window (which typically ranges from one to five days) captures the *entire change in firm value* resulting from the corporate action.

But this assumption does not always hold true. Some corporate actions have complex ramifications whose consequences cannot be quickly understood by stock market investors. The literature on rational learning and structural uncertainty posits that in such cases, investors undergo a learning period during which they continuously adjust, in a Bayesian manner, their prior beliefs about the future consequences of corporate actions (e.g., Brav and Heaton 2002; Brennan and Xia 2001). If investors require learning time, short-term event studies are inadequate for measuring market reactions to corporate actions. In such cases, the market effects may only become discernible over longer time periods, using long-term event studies (Gompers et al. 2003).

A certain level of uncertainty does indeed surround the announcement of co-branding partnerships. Examples of successful co-branded products abound, but failures are also frequent. Successful long-time partners (such as Diet Coke – Splenda and Betty Crocker –

Hershey) use co-branded products as great revenue generators. Unsuccessful co-branded products (such as Fritos – Tabasco) struggle with problems of effective alignment.

Consumers may enthusiastically adopt the co-branded product or choose to ignore it, and until product level sales data becomes available, estimates of future cash flows generated by the co-branded product are simply speculative.

In the case of co-branded products, it is unclear whether abnormal returns accrue over the short-term or over the long-term. In this paper, I view this as an important empirical question, and examine abnormal returns over both short- and long-term horizons. As shown later, ignoring the long-term stock price effects of co-branding may prevent managers from fully understanding the rewards associated with this important marketing decision.

#### *Short-Term Abnormal Returns*

I use the market model to estimate the short-term market reaction to the introduction of co-branded products (Brown and Warner 1985). Specifically, I estimate abnormal returns (AR) for each firm that introduces a co-branded product, as follows:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (4.1)$$

where  $R_{it}$  is the rate of return of stock  $i$  on day  $t$ ,  $R_{mt}$  is the rate of return on the stock market index on day  $t$ , and  $\alpha$  and  $\beta$  are the parameters of the market model estimated from an ordinary least squares (OLS) regression of  $R_{it}$  on  $R_{mt}$  during the 100 trading days prior to the start of the event period of the co-branded product. The daily abnormal returns are then cumulated over a time window  $(t_1, t_2)$  which includes the announcement day:

$$CAR_{(t_1, t_2)} = \sum_{t=t_1}^{t_2} AR_{it} \quad (4.2)$$

For robustness, I also compute abnormal returns using the Fama-French-Carhart four-factor model, which augments the market model with three additional risk factors that have

been shown to explain the cross-section of stock returns (see Carhart 1997; Fama and French 1993):

$$AR_{it} = R_{it} - (\hat{\alpha} + \hat{\beta} R_{mt} + \hat{\gamma} SMB_t + \hat{\delta} HML_t + \hat{\lambda} UMD_t) \quad (4.3)$$

where  $R_{it}$  and  $R_{mt}$  are as previously defined,  $SMB_t$  is the return differential between portfolios of small and large market capitalization stocks,  $HML_t$  is the return differential between portfolios of high- (value) and low- (growth) book-to-market ratio stocks, and  $UMD_t$  is the momentum factor computed as the return differential between portfolios of high- and low-prior-return stocks.

To choose the appropriate length of the event window, I computed cumulative abnormal returns for various event windows, beginning with two days before the announcement and ending two days after the announcement. I tested the significance of the CARs in each event window and selected the event window with the most significant t-statistic (Geyskens et al. 2002; Swaminathan and Moorman 2009). The event window begins two days prior to the announcement and ends one day after the announcement [t-2, t+1].

#### *Long-Term Abnormal Returns*

I use the buy-and-hold abnormal return methodology (BHAR) to measure the long-term stock market reaction to the introduction of co-branded products (Barber and Lyon 1997). BHARs are increasingly used in the marketing literature to capture the long-term stock price effect of corporate actions (see, e.g., Boyd et al. 2010, and Mizik 2010). To compute BHARs, I first compound the returns of the event firm over a long-term period (one year in this study), and then subtract the compounded returns of a benchmark portfolio with similar risk profile. Daniel et al. (1997) propose that benchmark portfolios should be matched on size, book-to-market, and momentum to account for the known Fama-French-Carhart

factors. Size, book-to-market, and momentum are chosen as matching characteristics because they are the firm characteristics upon which the Fama-French-Carhart factors are constructed used to initially measure abnormal returns. Also prior literature supports the independent cross-sectional explanatory power of all three characteristics (Fama and French 1992).

Consistent with previous studies, I set the length of the long-term measurement window equal to one year. I then calculate BHARs as follows:

$$\text{BHAR}_{it} = \prod_1^{12}(1 + R_{it}) - \prod_1^{12}(1 + R_{j(it)}) \quad (4.4)$$

where  $R_{it}$  is the monthly stock return inclusive of dividends for event firm  $i$  in month  $t$  and  $R_{j(it)}$  is the monthly return of benchmark portfolio  $j$ , matched on size, book-to-market and momentum with firm  $i$  in month  $t$ .

### ***Independent Variables***

#### *Consistency*

To evaluate the consistency between each pair of primary and secondary brands, I use the three item scale of brand fit developed by Helmig et al. (2007). Specifically, using a seven-point scale (1 = “strongly disagree,” 7 = “strongly agree”), I measure agreements with the following three statements:

- The following primary brand and secondary brand are complementary and fit well together.
- The brand images of the primary brand and secondary brand are endorsing each other.
- The combination of brand images of primary brand and secondary brand leads to a consistent new brand image for the co-branded product.



Five experts independently used this scale to rate each of the 190 brand dyads included in the sample. I provided the experts - US born doctoral students with an interest in branding related research - with the name of the brands, examples of products they carry and the categories in which they are present. The reliability of their ratings was good with a Cronbach' alpha above .71. When differences between individual ratings were higher than two points on the seven point scale, I asked the experts to revisit the respective ratings and resolve their differences through discussion. I used the average rating scores across the five experts as the measure of consistency between the primary and secondary brand.

### *Exclusivity*

I use two different methods to identify cases where the secondary brand has an exclusive partnership with the primary brand. The first method is implicit: I search for evidence of previous partnerships in Product Launch Analytics, Factiva and Lexis Nexis, beginning with ten years prior to the introduction of the co-branded product. To illustrate, a co-branding partnership with NutraSweet is not exclusive, since this brand has partnered with many food manufacturers. Alternatively, the fitness brand Curves' partnership with General Mills, which led to Curves' branded cereals and cereal bars is exclusive, since General Mills is the only consumer packaged goods manufacturer that has established a partnership with Curves. Exclusivity is coded as a dummy variable that takes a value equal to one if the co-branding agreement is exclusive, and zero otherwise.

The second measure of exclusivity is explicit: I read the co-branded product announcements to determine if the agreement contains an exclusivity provision. I found, however, that the information provided in co-branding announcements does not always include exclusivity. Thus, the explicit measure of exclusivity may incorrectly classify some

of the exclusive partnerships as non-exclusive, if the information provided in the published announcement is incomplete. Results obtained with this explicit measure are reported in the robustness section.

### *Innovativeness*

To identify innovative products, I use the “innovative” rating available in Product Launch Analytics. This rating is assigned by that database’s staff experts at the time of product introduction, and identifies products that are new to the market in terms of formulation, packaging or merchandising. An example of a co-branded product that is innovative on a formulation dimension is Budweiser & Clamato Chelada, a flavored malt beverage introduced in 2007 that combines Budweiser beer and Clamato juice. Proctor & Gamble’s IntelliClean Toothbrush System (a rechargeable toothbrush with a liquid toothpaste container that carries both the Sonicare and Crest brands) is innovative both in terms of formulation (the liquid toothpaste) and technological innovation. If the co-branding agreement provides for a series of products to be introduced through time, I use the innovativeness rating of the product (or products) launched at the time of the initial announcement. Innovativeness is coded as a dummy variable that is equal to one in the case of innovative products, and zero otherwise.

### *Control Variables*

The relationship between co-branding and stock returns can be affected by several other factors. These are used here as control variables.

### *Type of Co-Branding Agreement*

In the conceptual section, I alluded to the fact that co-branding agreements can be classified into three types, depending upon the relative contribution of the two partners to the



co-branded product: *ingredient*, *composite* and *endorsement co-branding*. I use the following heuristic to code co-branding agreements into these three categories, and use dummy variables to control for the type of co-branding agreement in this empirical analysis.

- i. *Endorsement co-branding* occurs when the secondary brand makes no contribution to product formulation. In most such cases, the secondary brand belongs to the entertainment industry, and thus classification along this dimension is straightforward. For example, SpongeBob owned by Viacom endorsed Colgate toothpaste without changing the product formulation.
- ii. *Ingredient co-branding* is an agreement whereby the secondary brand is an identifiable ingredient that contributes to product formulation for products that were previously available in similar forms when they were single-branded. The secondary brand is featured on the package; however, the primary brand's characteristics remain clearly dominant.
- iii. *Composite co-branding* occurs when both brands have a significant contribution to the formulation and positioning of the co-branded product, and when no similar version of this product was available in the market place prior to the co-branding agreement. Both primary and secondary brands are prominently featured on the package and are an integral part of the co-branded product. The secondary brand appears to be a partner in product design, rather than a supplier. For example, Kraft's *Handi-Snacks Baskin-Robbins Ready-to-Eat Pudding*, a new type of Handi-Snacks pudding with flavors inspired by Baskin-Robbins' ice cream, is a composite co-branded product that prominently leverages the characteristics of both brands and is quite different from the





original Kraft product. By contrast, *Coke with Splenda* is an example of ingredient co-branding because the product is essentially a diet soda with a new ingredient.

Two experts classified all co-branded products by type. The initial agreement was 95% and remaining differences were resolved through discussion. Examples of the three types of co-branded products are presented in Table 4.2.

**Table 4.2 Examples of Co-branded Products**

<i>Type of co-branded product</i>	<i>Name of product</i>	<i>Primary brand (parent firm)</i>	<i>Secondary brand (parent firm)</i>	<i>Introduction date</i>	<i>Package illustration</i>
Endorsement branding	Colgate SpongeBob Squarepants and Friends Toothpaste	Colgate (Colgate- Palmolive)	SpongeBob SquarePants (Nickelodeon)	3/1/2004	
	Hansen's Clifford the Big Red Dog - Natural Junior Juice	Hansen (Hansen Beverage Co.)	Clifford the Big Red Dog (Scholastic Entertainment Inc.)	2/11/2002	

**Table 4.2 continued**

<i>Type of co-branded product</i>	<i>Name of product</i>	<i>Primary brand (parent firm)</i>	<i>Secondary brand (parent firm)</i>	<i>Introduction date</i>	<i>Package illustration</i>
Ingredient branding	Ruffles WOW! - Potato Chips - Original	Frito-Lay (PepsiCo)	Olean (Procter & Gamble Co.)	1/25/1996	
	Diet Coke - Soft Drink with Splenda	Coke (Coca-Cola Co.)	Splenda (Johnson & Johnson)	2/7/2005	
Composite branding	Budweiser & Clamato - Chelada	Budweiser (Anheuser-Busch)	Clamato (Cadbury Schweppes plc's Mott's LLP)	9/24/2007	
	Sonicare Crest IntelliClean - Toothbrush System	Crest (Procter & Gamble Co.)	Sonicare (Royal Philips Electronics)	10/1/2004	

#### *Prior Co-Branding Experience of the Primary Brand Partner*

The prior co-branding experience of the primary brand partner can affect how stock prices react to the introduction of co-branded products. A long history of co-branding helps reduce investors' information asymmetry when estimating future cash flows, and may also be an indication that the firm has successfully managed past co-branding partnerships. Thus, investors may be more optimistic about the prospects of co-branded products introduced by firms with prior co-branding experience. On the other hand, co-branding announcements

made by firms with prior co-branding experience may no longer contain a surprise element, and could already be incorporated into stock prices. I measure the prior co-branding experience of the primary brand partner using the number of co-branding partnerships in which it participated during the five-year period preceding the announcement of a co-branded product. I collected this information from Product Launch Analytics and through archival searches in Factiva and Lexis Nexis.

#### *Firm Size*

I use the book value of firm assets to control for the effect of firm size on abnormal returns. This is standard practice in event studies since larger firms typically have smaller percentage changes in their stock prices following corporate announcements. Consistent with prior literature, I use the log of firm assets in the empirical model to account for diminishing returns to scale (e.g., Boyd et al. 2010).

#### *Corporate Brand versus House of Brands*

I control for the position of the brand in the primary brand's parent portfolio. A partnership with a corporate brand is likely to be more salient compared to a partnership with an individual brand from a house of brands portfolio. On average, corporate brands have better established brand associations, and more resources are available to support the brand and the co-branding partnership. Thus, I expect a stronger market reaction to the introduction of a co-branded product when the primary brand is corporate as opposed to individual. In this analysis, I use a dummy variable that equals one for corporate primary brands, and zero otherwise.

### *Firm Marketing Resource*

A firm with strong marketing resources can extract higher rents from co-branded products by providing appropriate marketing support during and after product launch. Thus, abnormal returns to co-branded announcements should be higher for firms with greater marketing resources. As in prior studies, I use Compustat's *selling and general administrative expenditures* as a proxy for marketing resources (Bahadir et al. 2008; Swaminathan and Moorman 2009; Wuyts et al. 2004). While advertising expenditures may provide a more direct measure of marketing resources, advertising data is only available for a sub-set of this sample. However, where available, advertising expenditures are highly correlated (0.84) with selling and general administrative expenditures, suggesting that the latter provides a reasonable proxy for marketing resources. I use the marketing resources of the primary brand parent to control for the market reaction for both the primary and secondary brand partners, since the resources of the manufacturing firm are the ones that are typically leveraged to support the co-branded product.

### **MODELS**

Given multiple co-branding announcements by some of the firms in this sample, I use a multi-level model that controls for unobserved heterogeneity across firms (e.g., Kreft and De Leeuw 1998). This model consists of estimating two equations for each co-branding partner, in each case alternating the dependent variable between short- and long-term abnormal returns.

For the parent firm of the primary brand partner, I estimate:

$$CAR1_{ij} = \alpha_{11} + \beta_{11} \text{Endorsement Branding}_{ij} + \beta_{12} \text{Composite Branding}_{ij}$$

$$\begin{aligned}
& + \beta_{13}\text{Consistency}_{ij} + \beta_{14}\text{Exclusivity}_{ij} + \beta_{15}\text{Innovativeness}_{ij} \\
& + \beta_{16}\text{Experience}_{ij} + \beta_{17}\text{Size1}_{ij} + \beta_{18}\text{Resources}_{ij} + \beta_{19}\text{Corporate brand1}_{ij} \\
& + V_{11}\text{YEAR} + \mu_{11j} + \varepsilon_{11ij}
\end{aligned} \tag{4.5}$$

$$\begin{aligned}
\text{BHAR1}_{ij} = & \alpha_{21} + \beta_{21}\text{Endorsement Branding}_{ij} + \beta_{22}\text{Composite Branding}_{ij} \\
& + \beta_{23}\text{Consistency}_{ij} + \beta_{24}\text{Exclusivity}_{ij} + \beta_{25}\text{Innovativeness}_{ij} \\
& + \beta_{26}\text{Experience}_{ij} + \beta_{27}\text{Size1}_{ij} + \beta_{28}\text{Resources}_{ij} + \beta_{29}\text{Corporate brand1}_{ij} \\
& + V_{21}\text{YEAR} + \mu_{21j} + \varepsilon_{21ij}
\end{aligned} \tag{4.6}$$

And, for the parent firm of the secondary brand partner:

$$\begin{aligned}
\text{CAR2}_{ij} = & \alpha_{12} + \delta_{11}\text{Endorsement Branding}_{ij} + \delta_{12}\text{Composite Branding}_{ij} \\
& + \delta_{13}\text{Consistency}_{ij} + \delta_{14}\text{Exclusivity}_{ij} + \delta_{15}\text{Innovativeness}_{ij} \\
& + \delta_{16}\text{Experience}_{ij} + \delta_{17}\text{Size2}_{ij} + \delta_{18}\text{Resources}_{ij} + \delta_{19}\text{Corporate brand2}_{ij} \\
& + V_{12}\text{YEAR} + \mu_{12j} + \varepsilon_{12ij}
\end{aligned} \tag{4.7}$$

$$\begin{aligned}
\text{BHAR2}_{ij} = & \alpha_{22} + \delta_{21}\text{Endorsement Branding}_{ij} + \delta_{22}\text{Composite Branding}_{ij} \\
& + \delta_{23}\text{Consistency}_{ij} + \delta_{24}\text{Exclusivity}_{ij} + \delta_{25}\text{Innovativeness}_{ij} \\
& + \delta_{26}\text{Experience}_{ij} + \delta_{27}\text{Size2}_{ij} + \delta_{28}\text{Resources}_{ij} + \delta_{29}\text{Corporate brand2}_{ij} \\
& + V_{22}\text{YEAR} + \mu_{22j} + \varepsilon_{22ij}
\end{aligned} \tag{4.8}$$

In these four equations,  $j$  identifies the firm and  $i$  identifies the announcement.  $\text{CAR1}$  and  $\text{BHAR1}$  are the short- and long-term abnormal returns of the primary brand's parent, while  $\text{CAR2}$  and  $\text{BHAR2}$  are the short- and long-term abnormal returns of the secondary brand's parent.  $\text{YEAR}$  is a vector of year dummy variables. Each equation contains an announcement-level error term,  $\varepsilon$ , and a firm level error term,  $\mu$ . The remaining variables are as previously defined.



## CHAPTER V

### RESULTS

#### **DESCRIPTIVE STATISTICS**

I first examine the descriptive statistics of co-branded products and their parent firms, and present the results in Table 5.1. Panel A examines the prevalence of various types of co-branded products. The most common type is endorsement co-branding: there are 88 cases of endorsement, 55 cases of ingredient, and 47 cases of composite co-branded products in the sample. This is not surprising, since endorsement co-branding requires minimal commitment from the primary brand, as it typically affects only the package of a product it already sells.

Panel B examines the characteristics of co-branding partnership announcements. I find that exclusivity is implicitly present in 44% of the co-branding agreements (top line), but is mentioned explicitly in only 12% of announcements (second line). The average consistency between the primary and the secondary brands is fairly high, 4.31 on a 1-7 scale (where a higher number indicates higher consistency), in line with my expectations that firms are more likely to pursue co-branding partnerships with brands that provide a good fit with their own. Finally, the prevalence of innovativeness is also worth noting: 14% of co-branded products in my sample are coded as innovative by the Product Launch Analytics staff. In contrast, using the same database but without restricting it to co-branded products, Sorescu and Spanjol (2008) found that the rate of innovative products is only 7%. This suggests that co-branding is frequently used to achieve innovation in the consumer packaged goods industry.

Panel C of Table 5.1 presents descriptive statistics of the abnormal returns to the primary and secondary brand firms, and of the control variables included in the analysis.

**Table 5.1 Descriptive Statistics**

Panel A: Type of co-branding agreement

	<i>Endorsement</i>	<i>Ingredient</i>	<i>Composite</i>
Number of agreements	88	55	47

Panel B: Announcement characteristics

	<i>Mean</i>	<i>STD</i>	<i>Min</i>	<i>Max</i>
Exclusivity (implicit)	0.44	0.49	0	1
Exclusivity (explicit)	0.12	0.32	0	1
Consistency	4.31	1.08	2.23	6.4
Innovativeness	0.14	0.35	0	1

Panel C: Parent firms characteristics and associated variables

	<i>Primary brand parent firm level variables</i>				<i>Secondary brand parent firm level variables</i>			
	<i>Mean</i>	<i>STD</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>STD</i>	<i>Min</i>	<i>Max</i>
Short term abnormal return (Market Model)	0.20%	0.88%	- 3.45%	4.45%	0.27%	1.17%	-3.54%	4.63%
Short term abnormal return (Four- factor model)	0.23%	0.87%	- 3.43%	5.52%	0.38%	1.00%	-2.24%	4.45%
BHAR	0.28%	22.32%	- 79.9%	175.61 %	4.26%	42.82%	- 115.96 %	313.68 %
Firm size (\$ mill)	14,786. 47	19,835. 61	15.04	135,69 5	26,020. 85	39,468. 90	22.30	208,50 4
Firm resources (\$ mill)	4,212.8 6	4,895.0 8	3.26	21,278				
Co- branding experience	7.63	6.99	0	29				

## TEST OF HYPOTHESES

I find support for H1a. The short-term abnormal returns (CARs) calculated with the four-factor model in this sample are positive and significant for both brand partners (0.23% for the primary brand, and 0.38% for the secondary brand,  $p < .01$  in both cases). In contrast, the long-term abnormal returns measured over a one-year window are not statistically significant for either brand. These findings indicate that the unconditional effect of co-branding announcement is positive and significant, and that investors appear to immediately recognize the basic information conveyed by unconditional co-branding announcements.

To test H1b, I compare the stock market reaction to two different types of events: the introduction of co-branded products and the introduction of single branded products launched by the same firms during a comparable time period. I used the Product Launch Analytics to collect data on all the single-branded products introduced by firms in the sample two years before and two years after the co-branding announcement. I then computed the short-term abnormal returns over the (-2, +1) time window surrounding the introduction of single-branded products. As expected, co-branded products have significantly higher abnormal returns when compared to single-branded products ( $p < .05$ ). Moreover, this difference remains significant even among the sub-sample of non-innovative products, suggesting that the positive abnormal returns to co-branding announcements are not driven by innovativeness. Thus, I find support for H1b. The positive stock market reaction to new, co-branded products is not simply a reaction to the product newness aspect; the co-branding aspect has distinct informational content that seems to be valued by investors.

I did not find support for H1c: I found no difference in abnormal returns between the primary and secondary brands upon announcement of the co-branded product. To test for this

difference, I stacked data for all primary and secondary brands and estimated a random effects model of the determinants of abnormal returns for this stacked sample, similar to the one described in equations (4.5)-(4.8), but controlling for announcement, rather than firm specific effects. I added a dummy called “FIRM” that takes a value of one if the observation corresponds to a primary brand and zero if it corresponds to a secondary brand. Controlling for announcement and firm characteristics, the FIRM dummy was not significant, nor was its interaction with dummies representing the type of co-branding agreement. This is a surprising result, as one would expect higher returns for the primary brand firm, which is typically responsible not only for manufacturing the co-branded product but also marketing it. Nonetheless, this result highlights the advantage of entering such partnership as a secondary brand, rather than taking primary brand responsibilities without additional compensation from investors in the stock market.

To test hypotheses H2-H4, I estimate the models presented in equations (4.5)-(4.8), using separate samples for primary and secondary brands. Results are presented in Table 5.2, using two metrics of short-term abnormal returns (four-factor model and market model) and one metric of long terms returns (BHARs) as dependent variables. The top three lines in Table 5.2 present the coefficients of the main independent variables and provide direct tests of hypotheses H2-H4. The subsequent lines present the coefficients of control variables, and the last line presents the Wald chi-square statistic for model significance. Results in this table are based on the implicit measure of exclusivity; those obtained with the explicit measure are discussed in the robustness section. All models are significant at the 5% level or better, and include firm effects and year dummies. The variance inflation factors (VIF) across all the

models are less than 4, alleviating concerns about multicollinearity between independent variables.

I find support for H2. Consistency is a positive and significant determinant of abnormal returns for both the primary and secondary brand firms ( $p < .01$ ), and its effect is captured both over the short- and long-term horizons. This suggests that investors initially underestimate the value of a consistency among the two brands, and that excess stock returns would continue to accrue to both partners for at least one year after the launch of a co-branded product which leverages two brands with consistent images.

H3 is also supported. If the co-branding agreement is exclusive, abnormal returns to the primary brand parent are higher, both over the short- and long-term horizons ( $p < .05$ ). Surprisingly, and contrary to initial expectations, I also found a positive short term effect of exclusivity for the secondary brand parent ( $p < .01$ ). One possible explanation is that the exposure gained by the secondary brand partner from co-branding may offset its opportunity costs of engaging in an exclusive partnership.

I find support for H4 only for the primary brand, and only over the long-term horizon. This suggests that investors do not initially understand the value of innovativeness for co-branded products. Over the longer term period, innovative products are rewarded with higher stock returns for primary brand parents ( $p < .05$ ), but not for secondary brand parents. First, this could be an artifact of the consumer packaged goods industry, where new products are not as radically innovative as those in high tech industries such as pharmaceuticals or computers. If differences between innovative and non-innovative products are not as salient in the CPG industry, investors could underweight the innovativeness dimension at the time of the co-branding announcement. This is consistent with Griffin and Tversky's (1992) finding

that people tend to discount information with low saliency. Second, the uncertainty associated with the adoption of innovative products can explain why returns accrue only over the long-term horizon. I used earlier the example of Budweiser & Clamato Chelada, a flavored malt beverage that combines Budweiser beer and Clamato juice, which was rated as innovative in the Product Launch Analytics database. It is not surprising that such products may elicit some initial skepticism from investors, who may decide to wait for actual sales data before they update their expectations of the product's cash flows.

Finally, the fact that secondary brand parent firms do not obtain higher abnormal returns for innovative co-branded products may indicate how difficult it is to transfer perceptions of innovativeness from primary to the secondary brand partners. These perceptions are typically firm specific and linked to each firm's unique architecture of resources and capabilities.

The coefficients of control variables are as expected. Firm size is negative and significant for primary brand firms ( $p < .05$ ), because abnormal returns capture a proportional change in firm market value. Previous co-branding experience is positive and significant in the case of long-term returns for primary brand firms ( $p < .05$ ), perhaps an indication of these firms' superior abilities to support their products after introduction. Finally, the type of co-branding does not seem to make a difference for primary brand firms, but in the case of secondary brand firms, composite co-branding appears to be the most valuable. This is consistent with the fact that secondary brands are more prominently featured on composite co-branded products.

**Table 5.2 Estimation Results: Determinants of Abnormal Returns**

<i>Independent variables</i>	<i>Primary brand parent firm</i>			<i>Secondary brand parent firm</i>		
	<i>Long-term</i>	<i>Short-term CAR</i>		<i>Long-term</i>	<i>Short-term CAR</i>	
	<i>BHAR</i>	<i>Four-Factor Model</i>	<i>Market Model</i>	<i>BHAR</i>	<i>Four-Factor Model</i>	<i>Market Model</i>
Consistency	0.0537***	0.0016***	0.0016***	0.1544** *	0.0033***	0.0044***
Exclusivity	0.0572**	0.0025**	0.0030***	0.0322	0.0048***	0.0052***
Innovativeness	0.1034**	0.0013	0.0008	-0.0780	0.0025	0.0038
Endorsement branding	0.0256	0.0012	0.0003	0.1518	0.0009	-0.0006
Composite branding	-0.0025	0.0005	-0.0001	0.2467**	0.0071***	0.0062**
Co-branding experience	0.0060**	-0.0001	-0.0001	0.0103	0.0001	0.0001
Primary firm size	-0.0256**	-0.0012**	-			
Secondary firm size			0.0011***	-0.1168**	0.0001	0.0001
Corporate brand	0.0280	-0.0004	-0.0019	-0.1918	0.0001	0.0006
Firm resources	-0.0023	0.0001	0.0001	0.0642	-0.0012	-0.0015
Wald $\chi^2(9)$	45.02**	54.75***	53.12***	66.29***	109.62***	107.15***

\*\* $p < 0.05$ ; \*\*\* $p < 0.01$

*Note: The models also include year dummies.*

## ROBUSTNESS TESTS AND ADDITIONAL ANALYSIS

### *Alternative Measures of Abnormal Returns*

I re-estimated the models using three alternative metrics of abnormal returns. For the short-term window, I used a market-adjusted model. As expected, the results were almost identical to the ones obtained from the market model (Brown and Warner 1985). For the long-term window, I re-computed abnormal returns for the one-year period using, alternatively, (1) BHARs calculated with the equally-weighted market index as benchmark

(Barber and Lyon, 1997), and (2) abnormal returns obtained from a Fama-French-Carhart model (Carhart 1997). The results are similar to the ones reported in Table 5.2.

### ***Explicit Measure of Exclusivity***

Only 23 of the 190 announcements make an explicit reference to the exclusivity provision, in contrast with the implicit measure where exclusivity is identified for 84 announcements. I repeated the analysis with the explicit measure of exclusivity and found that the results for the primary brand remained substantially unchanged. For the secondary brand, however, explicit exclusivity is only significant in the case of short-term abnormal returns measured with the market model. This may be due to low statistical power, or to the fact that an explicit mention of exclusivity is a stronger signal that the secondary brand partner relinquishes future co-branding opportunities with other primary partners.

### ***New Markets or Product Categories***

Abnormal returns may be higher if a co-branded product opens a new product category or a new market for its manufacturer. Using the product category codes provided in Product Launch Analytics, I identified co-branded products introduced in categories where the primary brand firm was already present. A corresponding dummy variable was added to the analysis, but its effect on stock performance was found to be insignificant.

### ***Separate Analysis of the Three Types of Co-branding Agreements***

The full model in Table 5.2 includes two dummy variables that identify composite and endorsement co-branding agreements. The coefficients of these dummy variables can be interpreted as a comparison between the market response to composite and endorsement agreements on the one hand, and ingredient agreements on the other. This empirical design, however, is not informative as to the stand-alone average returns for each type of co-



branding agreement. Therefore, I directly measure the short- and long-term abnormal returns for each type of co-branding agreement and present the results in Table 5.3. On average, ingredient and composite co-branding generate significantly positive abnormal returns for both the primary and secondary brand partners. Of these two, composite co-branding generates the highest short- and long-term abnormal returns for both partners. This suggests that, due to their unique formulation composite co-branded products provide a more compelling differentiation from existing alternatives marketed by the two brand partners. Because each of the two brand names is prominently visible on the package, these products can better leverage their two brands leading to higher returns for the shareholders.

The results for endorsement co-branding show that abnormal returns to secondary brand firms are not significantly different from zero ( $p > .05$ ). In the case of primary brand firms, abnormal returns are positive only in the short-term, and are significant only for the four-factor model. Short-term returns based on the market model are still positive, but insignificant, while long-term returns are not significantly different from zero. These results suggest that firms in the entertainment industry should carefully consider the value of co-branding with partners in CPG industries.

**Table 5.3 Average Abnormal Returns to Three Types of Co-branding for the Two****Firms**

	<i>Primary brand parent firm</i>			<i>Secondary brand parent firm</i>		
	<i>Long-term BHAR</i>	<i>Short-term CAR</i>		<i>Long-term BHAR</i>	<i>Short-term CAR</i>	
		<i>Four-Factor Model</i>	<i>Market Model</i>		<i>Four-Factor Model</i>	<i>Market Model</i>
Endorsement branding (n=88)	-0.19%	0.15%**	0.11%	6.91%	0.18%	-0.04%
Ingredient branding (n=55)	-0.26%	0.22%** *	0.24%***	-2.27%	0.34%**	0.32%**
Composite branding (n=47)	1.80%	0.39%**	0.31%**	1.80%	0.85%***	0.86%***

\*\* $p < 0.05$ ; \*\*\* $p < 0.01$

## CHAPTER VI

### CONCLUSION, IMPLICATIONS AND LIMITATIONS

#### CONCLUSION

A substantial stream of research that documents how consumers react to brand partnerships is available to researchers and practitioners interested in learning about co-branding . This literature has identified a set of organizational and environmental conditions under which co-branding can strengthen perceptions of the partner brands. However, this body of literature also points to the potential for brand equity damage to one or both partners if the brand alliance is not successful. I extend this literature by focusing on how the stock market reacts to the announcement of new co-branded products.

I find that the stock market does, on average, reward both partners involved in the introduction of the co-branded product. These rewards are higher, on average, than those obtained from new single-branded products, irrespective of product innovativeness. I also find that consistency between the brand images of the two partners has a positive and significant effect on the market's reaction to the introduction of co-branded products. Likewise, investors appear to value partnerships where the secondary brand has agreed to an exclusive co-branding agreement with a single primary brand. Finally, I find that not all types of co-branding partnerships are equal. Composite co-branding (where both brands bring a substantive contribution to the formulation of the new product) results in higher financial rewards to the partners when compared to ingredient and endorsement partnerships.

## IMPLICATIONS

*1. New products need not be technological innovations to create shareholder wealth; co-branding can be effectively leveraged to significantly increase the value added by new products.* The results contribute to the literature by demonstrating that co-branding decisions have significant implications for firm market values. In the specific case of new product introductions, co-branding appears to be a significant driver of shareholder value even for products that are not technologically innovative. Indeed, the Product Launch Analytics innovativeness classification indicates that the percentage of technological innovations among co-branded products is negligible. Nevertheless, this study shows that these products generate positive abnormal returns, on average. This finding has important, actionable implications for brand managers and top management (the CEO and executives directly reporting to the CEO).

*2. While perceptions of newness may be best achieved through exclusivity rather than innovativeness, consistency is critical in co-branding partnerships.* Conventional wisdom links innovativeness to profitability. In the case of co-branding, consistency appears to trump innovativeness. As reported in Table 5.2, compared with consistency, innovativeness has a much weaker relation to stock returns. This suggests that the selection of secondary brand partners should be carefully considered in view of consumers' perceptions of consistency between the images of the partnering brands.

*3. Exclusivity is valued.* The results also show that the value of co-branding partnerships is higher in cases where the secondary brand partner has not previously engaged in co-branding agreements with other primary brand firms. However, this could be a simple manifestation of pioneering advantage. For instance, Cadbury Schweppes's Diet Rite, the

first beverage to incorporate the Splenda sweetener, saw a significant boost in sales after its reformulation with the Splenda brand, but the same was not true for other entrants which subsequently partnered with Splenda (Esfahani 2005).

*4. Secondary-brand firms seeking a primary brand partner should consider composite, rather than ingredient co-branding.* One of the most interesting findings is that stock market returns to secondary brand partners are much higher for composite co-branding agreements than for other types of co-branding agreements. A possible explanation is the prominence of the secondary brand on the package of the composite co-branded product, which could increase consumer awareness of that brand. However, secondary brands are also prominently featured in the case of endorsement co-branded products, particularly in the case of entertainment brands whose presence is often magnified on packages to make them more salient. Yet these products do not seem to elicit positive stock market reactions.

An alternative explanation is that composite products are truly unique when compared to their competitors, because they leverage the best in each of the two underlying brands. In a composite product, the secondary brand contributes unique characteristics to the product, and the prominence of the co-branded product is increased because these characteristics are themselves branded. Irrespective of the reasons as to why composite products are valued so highly, the results suggest that composite co-branding partnerships are clear winners from the perspective of secondary brand partners. These firms do not have to incur substantial costs, risks and efforts associated with product manufacturing, yet can reap significant rewards from its introduction.

*5. Endorsement co-branding agreements may not be a worthwhile investment.* Endorsement co-branding agreements, despite being twice as prevalent as ingredient or

composite agreements seem to add no value to the secondary brand partner. One potential explanation for the absence of abnormal returns for secondary brand partners is that these firms are behemoths from the entertainment industry, whose sizes make it difficult to disentangle the market reaction to corporate actions such as co-branding agreements. Still, secondary brands should carefully examine the value added they can obtain from endorsement co-branding partnerships.

The results also suggest that primary brand firms should reexamine the licensing fees they pay to feature another brand on their product packages. Without a substantive change to an existing product, merely adding a secondary brand to the package does not provide sufficient differentiation to generate additional shareholder value.

## **LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

As a first attempt to investigate the stock market reaction to the introduction of co-branded products, this dissertation has some limitations that could potentially serve as avenues for future research.

First, the dataset contains limited information about the revenue model behind co-branding agreements. In cases where a licensing fee is paid, this fee is typically not reported in the announcement of the co-branding partnership, yet this fee could be an additional determinant of the stock market's reaction to co-branded product introductions.

Second, I used a backward-looking measure of consistency between the images of the two partner brands. The experts are using their current knowledge and understanding of the brand identity, not the historical brand image. Brand identity might have changed as a result of co-branding and joint associations. To my knowledge, data on contemporaneous brand

consistency is not available for this sample. For robustness, future researchers can justify the measurement of consistency by using an alternative measurement. For example, one can measure consistency based on how close the two brand ratings are on the various brand equity dimensions, or use some distance measures between the ratings such as energized differentiations in the potential available dataset.

Third, additional factors may moderate the relationship between stock returns and co-branded product introductions. Examples include the level of concentration in the product categories to which the co-branded product belongs and competitors' reaction to the introduction of co-branded products.

The use of stock return metrics limits the co-branding sample to publicly traded firms. The sample could be extended to privately held corporations by using accounting measures of performance such as sales or return on investment, when such measures are available at the product level.

To further validate the findings of this research, future researchers can create a selection model for whether a product introduced should be co-branded versus not co-branded. For example, the firm may decide to enter into a co-branding arrangement for a reason that may be correlated with the expected sales and profits for the product. To control for observed as well as unobserved differences reasons for co-branding, future research can incorporate a selection model to support the comparison between co-branded and single-branded announcements and to test the determinants of CARs to introduction of co-branded products.

Future research could also examine the length and success of co-branding relationships, and investigate the extent to which the initial market reaction can anticipate the

longevity and success of co-branded products. Finally, co-branding research from other industries, particularly services where co-branding is increasingly frequent, could explore additional important dimensions of co-branding that are unique to each industry.



## REFERENCES

- Aaker, David A. and Kevin Lane Keller (1990), "Consumer Evaluations of Brand Extensions," *Journal of Marketing*, 54 (1), 27-41.
- Aaker, David A. and Robert Jacobson (1994), "The Financial Information Content of Perceived Quality," *Journal of Marketing Research*, 31 (2), 191-201.
- Aaker, David A. (2004), *Brand Portfolio Strategy: Creating Relevance, Differentiation, Energy, Leverage, and Clarity*. Glencoe, IL: Free Press.
- Aaker, David A. (2007), "Innovation: Brand It or Lose It," *California Management Review*, 50 (1), 8-24.
- Aghion, Philippe and Patrick Bolton (1987), "Contracts as a Barrier to Entry," *American Economic Review*, 77 (3), 388-401.
- Agrawal, Jagdish and Wagner A. Kamakura (1995), "The Economic Worth of Celebrity Endorsers: An Event Study Analysis," *Journal of Marketing*, 59 (3), 56-62.
- Ambler, Tim (2003), *Marketing and the Bottom Line* (2nd Edition). Great Britain: FT Press.
- Anand, Bharat and Tarun Khanna (2000), "The Structure of Licensing Contracts," *Journal of Industrial Economics*, 48 (1), 103-35.
- Bahadir, S. Cem, Sundar G. Bharadwaj, and Rajendra K. Srivastava (2008), "Financial Value of Brands in Mergers and Acquisitions: Is Value in the Eye of the Beholder?" *Journal of Marketing*, 72 (November), 49-64.
- Barber, Brad and John Lyon (1997), "Detecting Long-Run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics," *Journal of Financial Economics*, 43 (3), 341-372.
- Barth, Mary E., Michael B. Clement, George Foster and Ron Kasznik (1998), "Brand Values and Capital Market Valuation," *Review of Accounting Studies*, 3 (1/2), 41-68.
- Blackett, Tom and Bob Boad (1999), *Co-Branding: The Science of Alliance*. New York: St. Martin's Press.
- Boyd, D. Eric, Rajesh Chandy, and Marcus Cunha Jr. (2010), "When Do Chief Marketing Officers Impact Firm Value? A Customer Power Explanation," *Journal of Marketing Research*, 47 (6), 1162-1176.
- Brav, Alon and James B. Heaton (2002), "Competing Theories of Financial Anomalies," *Review of Financial Studies*, 15 (2), 575-606.

Brennan, Michael and Yihong Xia (2001), "Stock Price Volatility and the Equity Premium," *Journal of Monetary Economics*, 47 (2): 249-283.

Brown, Stephen and Jerold B. Warner (1985), "Using Daily Stock Returns: The Case of Event Studies," *Journal of Financial Economics*, 14 (1), 3-31.

Bucklin, Louis P. and Sanjit Sengtupa (1993), "Organizing Successful Co-Marketing Alliances," *Journal of Marketing*, 57 (4), 32-46.

Carhart, Mark M. (1997), "On Persistence in Mutual Fund Performance," *Journal of Finance*, 52 (1), 57-82.

Chaney, Paul K., Timothy M. Devinney, and Russell S. Winer (1991), "The Impact of New Product Introductions on the Market Value of Firms," *Journal of Business*, 64 (4), 573 -610.

Daniel, Kent, Mark Grinblatt, Sheridan Titman, and Russ Wermers (1997), "Measuring Mutual Fund Performance With Characteristic-based Benchmarks," *Journal of Finance*, 52 (3), 1035-1058.

Elberse, Anita and Jeroen Verleun (2010), "Brand Alliances and the Value of Reflected Glory: The Case of Athlete Endorsements," Working paper. Boston, MA: Harvard Business School.

Esfahani, Elizabeth (2005), "Finding the Sweet Spot," *Business 2.0*, 6 (10), 49-51.

Das, Somnath, Pradyot K. Sen, and Sanjit Sengupta (1998), "Impact of Strategic Alliances on Firm Valuation," *Academy of Management Journal*, 41 (1), 27-41.

Desai, Kalpesh Kaushik and Kevin Lane Keller (2002), "The Effects of Ingredient Branding Strategies on Host Brand Extendibility," *Journal of Marketing*, 66 (1), 73-93.

Fama, Eugene F. and Kenneth R. French (1993), "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics*, 33 (1), 3-56.

Gaeth, Gary J., Irwin P. Levin, Goutam Chakraborty, and Aron M. Levin (1990), "Consumer Evaluation of Multi-Product Bundles: An Information Integration Analysis," *Marketing Letters*, 2 (1), 47-57.

Geylani, Tansev, J. Jeffrey Inman, and Frenkel Ter Hofstede (2008), "Image Reinforcement or Impairment: The Effects of Co-Branding on Attribute Uncertainty," *Marketing Science*, 27(4), 730-744.

Geyskens, Inge, Katrijn Gielens, and Marnik G. Dekimpe (2002), "The Market Valuation of Internet Channel Additions," *Journal of Marketing*, 66 (April), 102-119.

Gompers, Paul, Joy Ishii, and Andrew Metrick, (2003), "Corporate Governance and Equity Prices," *The Quarterly Journal of Economics*, 118 (1), 107-155.

Griffin, Dale and Amos Tversky (1992), "The Weighing of Evidence and the Determinants of Confidence," *Cognitive Psych*, 24, 411–435.

Grocery Manufacturers Association (2011), "2010 Food, Beverage, and Consumer Products Financial Performance Report," (accessed April 5, 2011), [available at <http://www.gmaonline.org/resources/research-tools/research-and-reports/>].

Helmig, Bernd, Jan-Alexander Huber, and Peter S.H. Leeflang (2007), "Explaining Behavioural Intentions toward Co-Branded Products," *Journal of Marketing Management*, 23 (3/4), 285-304.

Horsky, Dan and Patrick Swyngedouw (1987), "Does It Pay to Change Your Company's Name? A Stock Market Perspective," *Marketing Science*, 6 (4), 320-35.

Jayachandran, Satish, Kelly Hewett, and Peter Kaufman (2009), "Intellectual Property Rights and Brand Licensing: The Importance of Brand Protection," Working Paper. Cambridge, MA: Marketing Science Institute.

Kalaigianam, Kartik, Venkatesh Shankar, and Rajan Varadarajan (2007), "Asymmetric New Product Development Alliances: Win-Win or Win-Lose Partnerships?" *Management Science*, 53 (3), 357-374.

Keller, Kevin Lane and David A. Aaker (1992), "The Effects of Sequential Introduction of Brand Extensions," *Journal of Marketing Research*, 29 (May), 35–50.

Keller, Kevin Lane (1993), "Conceptualizing, Measuring and Managing Customer-based Brand Equity," *Journal of Marketing*, 57 (January), 1-22.

Keller, Kevin Lane and D. R. Lehmann (2006), "Brands and Branding: Research Findings and Future Priorities," *Marketing Science*, 25 (6), 740-59.

Knittel, Christopher R. and Victor Stango (2010), "Celebrity Endorsements, Firm Value and Reputation Risk: Evidence from the Tiger Woods Scandal," Working paper, University of California Davis, 28 Oct. 2010. Web.

Koh, Jeonsuk and Venkataraman, N (1991), "Joint Venture Formations and Stock Market Reactions; An Assessment in the Information Technology Sector," *Academy of Management Journal*, 34 (4), 869-892.

Kotler, Philip (1999), *Marketing: An Introduction*. Upper Saddle River, New Jersey: Prentice Hall.

Krattenmaker, Thomas G. and Steven C. Salop, (1986), "Anticompetitive Exclusion: Raising Rivals' Costs by Gaining Power Over Price," *Yale Law Journal*, 96 (2), 209- 214.

Kreft, Ita and Jan de Leeuw (1998), *Introducing Multilevel Modeling*. Thousand Oaks, CA: Sage.

Kumar, Piyush (2005), "Brand Counterextensions: The Impact of Brand Extension Success Versus Failure", *Journal of Marketing Research*, 42 (2), 183-194.

Lane, Vicki and Robert Jacobson (1995), "Stock Market Reactions to Brand Extension Announcements: The Effects of Brand Attitude and Familiarity," *Journal of Marketing*, 59 (1), 63-77.

Lavie, Dovev (2007), "Alliance Portfolios and Firm Performance: A Study of Value Creation and Appropriation in the U.S. Software Industry," *Strategic Management Journal*, 28 (12), 1187-1212.

Leuthesser, Lance, Chiranjeev Kohli, and Rajneesh Suri (2003), "2 + 2 = 5? A Framework for Using Co-Branding to Leverage a Brand," *Journal of Brand Management*, 11 (1), 35-47.

Levin, Aron M., J. Charlene Davis, and Irwin P. Levin (1996), "Theoretical and Empirical Linkages between Consumers Responses to Different Branding Strategies," *Advances in Consumer Research*, 23 (1), 296-300.

Loken, Barbara and Deborah Roedder John (1993), "Diluting Brand Beliefs: When Do Brand Extensions Have a Negative Impact?" *Journal of Marketing*, 57 (July), 71-84.

Louie, Therese A. Robert L. Kulik, and Robert Jacobson (2001), "When Bad Things Happen to the Endorsers of Good Products," *Marketing Letters*, 12 (1), 13-23.

Madden, Thomas J., Frank Fehle, and Susan M. Fournier (2006), "Brands Matter: An Empirical Demonstration of the Creation of Shareholder Value through Branding," *Journal of the Academy of Marketing Science*, 34 (2), 224-35.

McAlister, Leigh, Raji Srinivasan, and MinChung Kim. (2007), "Advertising, Research and Development, and Systematic Risk of the Firm," *Journal of Marketing*, 71 (1), 35-48.

Mizik, Natalie and Robert Jacobson (2009), "Valuing Branded Businesses," *Journal of Marketing*, 73 (6), 137-53.

Mizik, Natalie (2010), "The Theory and Practice of Myopic Management," *Journal of Marketing Research*, 47 (4), 594-611.

Morgan, Neil A. and Lopo L. Rego (2009), "Brand Portfolio Strategy and Firm Performance," *Journal of Marketing*, 73 (1), 59-74.

Park, C. Whan, Bernard J. Jaworski and Deborah J. MacInnis (1986), "Strategic Brand Concept-Image Management," *Journal of Marketing*, 50 (October), 135-145.

Park, C. Whan, Sung Youl Jun, and Allan D. Shocker (1996), "Composite Brand Alliances: an Investigation of Extension and Feedback Effects," *Journal of Marketing Research*, 33 (November), 453-466.

Rao, Akshay R., Lu Qu and Robert W. Ruekert (1999), "Signaling Unobservable Product Quality through a Brand Ally," *Journal of Marketing Research*, 36 (2), 258-268.

Samu, Sridhar, H. Shanker Krishnan, and Robert E. Smith (1999), "Using Advertising Alliances for New Product Introduction, Interactions between Product Complementarity and Promotional Strategies," *Journal of Marketing*, 63, 57-74.

Simon, Carol J. and Mary W. Sullivan (1993), "The Measurement and Determinants of Brand Equity: A Financial Approach," *Marketing Science*, 12 (1), 28-52.

Simonin, Bernard L. and Julie A. Ruth (1998), "Is a Company Known by the Company It Keeps? Assessing the Spillover Effects of Brand Alliances on Consumer Brand Attitudes," *Journal of Marketing Research*, 35 (1), 30-42.

Somaya, Deepak, YoungJun Kim., and Nicholas S. Vonortas (2011), "Exclusivity in Licensing Alliances: Using Hostages to Support Technology Commercialization," *Strategic Management Journal*, 32 (2), 159–186.

Sorescu, Alina and Jelena Spanjol (2008), "Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods," *Journal of Marketing*, 72 (2), 114-132.

Sorescu, Alina (2011), "Innovation and The Market Value of Firms", in the *Handbook of Marketing and Finance*, edited by Shankar Ganesan and Sundar Bharadwaj, Edward Elgar Publishing, forthcoming.

Spethmann, Betsy and Karen Benezra (1994), "Co-brand or be Damned," *Brandweek*, 35 (45), 20-5.

Srivastava, Rajendra K., Tasadduq A. Shervani, and Liam Fahey (1998), "Market-Based Assets and Shareholder Value: A Framework for Analysis," *Journal of Marketing*, 62 (1), 2-18.

Srivastava, Rajendra K. (1999), "Marketing, Business Processes, and Shareholder Value: An Organizationally Embedded View of Marketing Activities and the Discipline of Marketing," *Journal of Marketing*, 63 (Special Issue), 168-79.

Srinivasan, Shuba and Dominique M. Hanssens (2009), "Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions," *Journal of Marketing Research*, 46 (3), 293-312.

Swaminathan, Vanitha and Christine Moorman (2009), "Marketing Alliances, Firm Networks and Firm Value Creation," *Journal of Marketing*, 73 (5), 52-69.

Szymanski, David M. and David H. Henard (2001), "Customer Satisfaction: A Meta-Analysis of the Empirical Evidence," *Journal of the Academy of Marketing Science*, 29 (1), 16–35.

Thompson, Stephanie (1998), "Brand Buddies – Co-branding Meal Solutions," *Brandweek*, 39 (8), 22-30.

Tipton, Martha M., Sundar G. Bharadwaj, and Diana C. Robertson (2009), "Regulatory Exposure of Deceptive Marketing and Its Impact on Firm Value," *Journal of Marketing*, 73 (November), 227–43.

Uggla, Henrik and Per Asberg (2010), "A Psycho-Semiotic Research Agenda for Strategic Brand Alliances," *Journal of Brand Management*, 7 (1/2), 92-104.

Vaidyanathan, Rajiv and Praveen Aggarwal (2000), "Strategic Brand Alliances: Implications of Ingredient Branding for National and Private Label Brands," *Journal of Product & Brand Management*, 9, 214-228.

Varadarajan, P. Rajan (1986), "Horizontal Cooperative Sales Promotion: A Framework for Classification and Additional Perspectives," *Journal of Marketing*, 50 (2), 61-73.

Venkatesh, Ramaswamy and Vijay Mahajan (1997) "Products with Branded Components: An Approach for Premium Pricing and Partner Selection," *Marketing Science*, 16 (2), 146-165.

Verrier, Richard (2001), "Disney, Kellogg Sign Marketing Alliance," *Los Angeles Times*, September 6 2001.

Walchli, Suzanne B. (2007), "The Effects of Between-partner Congruity on Consumer Evaluation of Co-branded Products," *Psychology & Marketing*, 24 (11), 947–973.

Washburn, Judith H., Brian D. Till, and Randi Priluck (2004), "Brand Alliance and Customer-Based Brand-Equity Effects," *Psychology and Marketing*, 21 (7), 487-508.

Wedel, Michel, Rajeev Batra, and P. Lenk (2010), "Brand Extension Strategy Planning: Empirical Estimation of Brand-category personality Fit and Atypicality," *Journal of Marketing Research*, 47 (2), 335-347.

Wernerfelt, Birger (1988), "Umbrella Branding as a Signal of New Product Quality: An Example of Signaling by Postinga Bond," *RAND Journal of Economics*, 19, 458-466.

Williamson, Oliver (1983), "Credible Commitments: Using Hostages to Support Exchange", *The American Economic Review*, 73 (4), 519-540.

Wuyts, Stefan H.K., Stefan Stremersch, and Shantanu Dutta (2004), "Portfolios of Interfirm Agreements in Technology-intensive Markets: Consequences for Innovation and Profitability," *Journal of marketing*, 68 (2), 88-100.

Yadav, Manjit S. (1994), "How Buyers Evaluate Product Bundles: A Model of Anchoring and Adjustment," *Journal of Consumer Research*, 21 (September), 342-353.

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