

Foundations and Trends® in Marketing

Marketing and Firm Value

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Marketing and Firm Value

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ABSTRACT

The academic discipline of finance has been linked with the field of marketing, an enterprise referred to as “research on the marketing-finance interface.” It investigates the relationships between marketing-related variables and metrics of the behavior of financial-market participants, including analysts, investors, and creditors. Fundamental questions include: Do investors (and, therefore, the stock market) react when companies build brands, launch new products and engage in marketing activities that may not yield immediate cash-flow benefits, but strengthen the long-term viability of the enterprise? Conversely, are managers influenced by investor behavior? A firm’s stock price is a recognized consensus metric of its economic health and, as such, marketers are well served by knowing which of their actions, if any, either lift or depress stock prices.

This monograph integrates research in marketing, finance, and accounting into an overarching marketing–finance research framework. The timing is right for this monograph for several reasons. First, the number of empirical articles in major journals has grown to almost 300, with managers and researchers being confronted with an array of metrics, methods, and findings. Second, there has been a broadening

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of the metrics analyzed on both the marketing and the firm value side. Last, but not least, there is a growing trend in redefining the role of the corporation from maximizing shareholder value to providing value to several stakeholders, and the next-generation consumers will increasingly act on the notion that the primary purpose of a business is not to generate profits, but to improve society.

1

Introduction

Marketing investments represent an important component of firm expenditures and intangible market-based assets, which include brand and customer assets, comprise an increasing share of a company's market value. Traditionally, marketing activities have focused on success in the product marketplace. Increasingly, however, top management requires that marketing view its ultimate purpose as contributing to the enhancement of shareholder returns. Rust *et al.* (2004), for example, note that marketers have not been held accountable for showing how marketing adds to firm valuation, maintaining that "this lack of accountability has undermined marketers' credibility, threatened the standing of the marketing function within the firm, and even threatened marketing's existence as a distinct capability within the firm." As a result, it has become even more important for marketing managers to understand and measure marketing's impact on firm value (Lehmann, 2004). These demands create a need to translate marketing resource allocations and their performance consequences into financial and firm value effects (Srivastava and Reibstein, 2005).

In recent years, there has been a renewed emphasis in demonstrating that marketing investments can translate into profitable growth.

The challenges in marketing measurement today are not limited to improving marketing mix models, to assessing returns to marketing, or to examining the right marketing and customer metrics. They also include creating the right combination of analytics, research, and business case-based findings to guide both effective strategy and implementation. At the same time, the rise of new digital channels, such as the worldwide web and mobile communication, and the increasing importance of word-of-mouth and sponsorship, make marketing resource allocation decisions much more complex. CMOs and marketing executives are increasingly under pressure to make every dollar count. Now more than ever, it is imperative to demonstrate the financial and firm-value impact of marketing. Effective marketing calls for justification of marketing investment decisions *ex ante*, and evaluation of investment outcomes *ex post*.

The academic discipline of finance, both corporate finance and financial markets, has been linked with the field of marketing, referred to as “research on the marketing-finance interface.” The marketing-finance interface investigates the relationships between marketing-related variables and metrics, incorporating the behavior of financial-market participants including analysts, investors, and creditors. The main objective of this stream of research has been to broaden the scope of marketing to include investors as a relevant stakeholder.

Typical questions addressed in this stream include the following: How does the stock market react when companies build brands, launch new products and engage in marketing activities that may not yield immediate cash-flow benefits, but strengthen the long-term viability of the enterprise? Are managers influenced by investor behavior, for example, does the recent evolution of stock prices impact the types of marketing activities the firm engages in through a feedback loop? These and other questions are of interest to both academic disciplines, but also to their practice communities.

Indeed, stock price is a recognized consensus metric of a firm’s economic health and, as such, marketers are well served by knowing which of their actions, if any, either lift or depress stock prices. In that context, the finance literature on asset pricing relies heavily on

the efficient markets' hypothesis (EMH), which states that all value-relevant information about firms is incorporated immediately and fully in their stock prices. The EMH comes in three forms: *weak efficiency* (only historical information on the firm is incorporated), *semi-strong efficiency* (historical data plus newly emerged public information) and *strong efficiency* (semi-strong efficiency plus private information). Strong efficiency has been ruled out empirically and, in fact, the use of insider (private) information in stock trading is illegal precisely because it *can* result in substantial capital gains for the information holder.

There is general consensus in the financial community that market efficiency holds somewhere in between its weak and its semi-strong form. *Herein lies an important connection with the marketing discipline* because marketing almost always involves releasing new and publicly available information. In general, favorable developments affecting cash flows would result in increases in stock price, and unfavorable developments would result in decreases (Mizik and Jacobson, 2004). That is, all else equal, the stock market should reward firms with higher stock prices as “good news” about marketing becomes available. In contrast, “bad news” about marketing should have the opposite effect. In other words, *stock market valuation should be in sync with product-market valuation*—actions that drive value in product markets should also drive firm value. For example, if innovations are known to have a long-term impact on firm revenues and profits in product space, this knowledge should impact stock prices of the innovating firm as well, and vice versa. However, given that these marketing initiatives may not produce *immediate* revenue and earnings improvements, does the semi-strong form of EMH still hold?

These and other challenges are addressed in Hanssens (2019) and Edeling *et al.* (2021), which we summarize here. First, a key challenge for the practice of marketing is that it must be possible to distinguish successful marketing from unsuccessful marketing. On the input side, marketing actions include the decisions on the 4 Ps – product, price, promotion, and place. On the output side, there are several possible key performance indicators (KPIs) or metrics for marketing, which researchers have found influence firm profits (Abramson *et al.*, 2005) and shareholder value (Schulze *et al.*, 2012). At the same time, across

nearly 1000 published studies, Katsikeas *et al.* (2016) report the average correlation between accounting measures and customer mindset metrics is only 0.27, and the intercorrelation across customer-level metrics is only 0.13. As a result, there is ambiguity about the value relevance of different marketing and customer mindset metrics.

Importantly, since marketing inevitably consumes scarce firm resources of talent, time and money, the ultimate, generally agreed upon performance metric is the financial value of the firm. This value is continuously measured as the stock price of publicly held firms, and occasionally assessed for public and private firms when mergers or acquisitions occur. It is therefore not surprising that marketing accountability—defined as the measurement and optimization of the contribution of marketing investments to firm value—has emerged as a critical challenging issue for senior leadership of organizations. On average, 11% of revenues are dedicated to marketing investments, yet only 41.6% of marketers have been able to quantitatively prove the impact of marketing investments, according to the Duke CMO Survey. Additionally, in only 3% of surveyed firms does marketing have accountability for stock market performance. This leaves CEOs and boards uncertain of the true value of marketing (CMO Survey, 2019).

There are possible explanations for this gap. Mintz and Currim (2013) show that marketers in market-oriented firms are more likely to focus on marketing metrics than financial metrics such as firm value in marketing decisions. At the same time, CMOs have lost clout and now cycle through their assignments at an alarming rate of 4.1 years' average tenure, taking with them knowledge of marketing initiatives that deliver growth and risk management benefits to the firm (Whitler and Morgan, 2017). Rather than proving grounds for CMOs in line for CEO leadership positions, in the wake of digitization, the marketing workforce now consists largely of junior staff members engaged at the frontlines and equipped by tools such as programmatic ad placement and search engine optimization (SEO). The A/B testing that marketing analytics teams use to track performance is good for marketing tactics, campaigns and day-to-day decisions but not for the big strategy and trade-off decisions that the CMO needs to make. A second challenge therefore is the gradual cycle of diminution of the marketing function,

at great risk to the firm. This monograph calls for a reinvigoration of the accountability functions of marketing through the lens of firm value as a key driver of marketing.

Last but not the least, the changing landscape for marketing managers and researchers in the last decade is disrupting the world of marketing. Technological advances (acceleration of digitization, rise of social media and smart devices, big data), socioeconomic trends (inequality of wealth and financial literacy, rise of green and sustainable investing) and geopolitical trends (climate change activism, emerging markets with more regulated economies meet western democracies that are questioning free trade agreements) are the major causes for this change, which may have serious consequences of damaging intangible assets and firm value. We are witnessing a broader trend toward redefining the role of the corporation from provider of products and services to champion for social issues. Some call the shift to shareholder activism a mandate, specifically in the eye of millennials and coveted next generation consumers who charge that the primary purpose of a business is not to generate profits but to improve society. This philosophy has many high-profile supporters. BlackRock CEO Larry Fink called for corporations to leverage their leadership to solve pressing social problems. The recent statement by the US-American Business Roundtable to ditch shareholder-centric mantra and to balance the claims of all major stakeholders such as customers, employees, suppliers, communities, and shareholders brought this issue to the forefront.¹ Overall, in as far as investors take into account the Environmental, Social and Governance (so called ESG) standards of a company, these will become determinants of risk and return as well.

In 2004, Donald Lehmann edited a special issue of the *Journal of Marketing* that paved the way for future developments on the marketing-finance interface. In 2006, a Marketing Science Institute/Emory Marketing Institute initiative led to the funding of several research projects that were subsequently published in a special section of the *Journal of Marketing* (November 2009). The marketing-finance initiative also spawned

¹<https://www.nytimes.com/2019/08/19/business/business-roundtable-ceos-corporations.html>.

a series of biennial conferences, termed the *Marketing Meets Wall Street Conference* in Atlanta (2009), Boston (2011), Frankfurt (2013), Singapore (2015), San Francisco (2017), Paris (2019) and Chicago (2022). Leading journals in marketing and management have started to publish frequent contributions on the marketing– finance interface. The first review article on this material appeared in the *Journal of Marketing Research* (Srinivasan and Hanssens, 2009a), and was translated in French by *Recherche et Applications en Marketing* (Srinivasan and Hanssens, 2009b). This was followed by other meta-analysis/review papers such as Edeling and Fischer (2016), Sorescu *et al.* (2017), and Edeling *et al.* (2021). The research has also been disseminated in books, notably the *Handbook of Marketing and Finance* (Ganesan, 2012).

The recent review article on the marketing-finance interface by Edeling *et al.* (2021) notes the following developments. First, the number of empirical articles in the research domain has been increasing at a rapid pace. There are 250 published papers since 2009 compared to 42 papers reviewed in Srinivasan and Hanssens (2009a). Managers and researchers are therefore confronted with an array of metrics, methods, and findings, possibly leading to information overload and a perceived “marketing performance credibility gap” (Diorio, 2017). Second, there has been a broadening of the metrics that have been analyzed, on both the marketing and the firm value side. Third, there are several ongoing methodological discussions such as the ACSI customer satisfaction debates of 2009 and 2016, the use of Tobin’s q (Bendle and Butt, 2018), and the scope of marketing event studies (Skiera *et al.*, 2017; Sorescu *et al.*, 2017).

Edeling *et al.* (2021)’s search led to the identification of 285 empirical articles, 226 (or 79.3%) of which were published in or after 2009. Figure 1.1 shows the evolution of the number of publications per year, both overall and journal specific. The authors conclude as follows: (1) taking the year 2009 as a positive outlier due to the *Journal of Marketing* special issue, there is a general upward trend in published articles; (2) the vast majority of studies have appeared in major journals with a managerial focus (*Journal of Marketing* and *Journal of the Academy of Marketing Science*); and (3) the number of studies dealing with marketing-finance topics outside the marketing discipline is

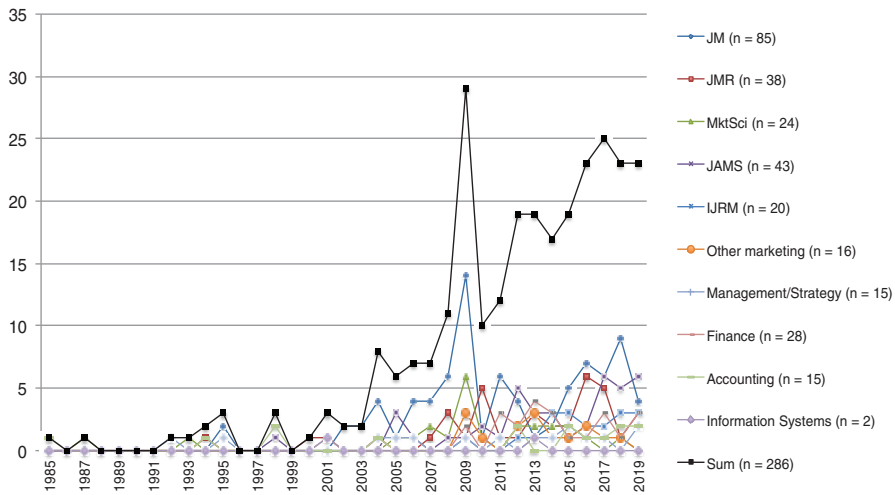


Figure 1.1: Evolution of the marketing-finance interface over time.

Source: Edeling *et al.* (2021).

considerable, with 59 studies (or 20.7%) in total. Among those, finance has the largest share (28 articles), followed by management/strategy (15) and accounting (14). Thus, while marketing–finance research has been growing rapidly in the marketing discipline, it has also spread (or developed in parallel) to related disciplines, in particular the foundational field of finance, where the focus has been on innovation, advertising, digital metrics, and, particularly, corporate social responsibility (CSR).

The emphasis on classic marketing action and asset topics in research on the marketing–finance interface is reflected in the free-text answers to a survey question on the most important marketing–finance interface topics in the past (see Figure 1.2). The only organizational topic that appears on the list of the most-often-mentioned themes is chief marketing officer (CMO)/top management team (4 mentions). The different marketing–finance research methodologies, based on the Fama–French model, have been used with different frequencies (see Figure 1.3): short-term (90, 19.7%) and long-term (11, 2.4%) event studies, stock return response models (75, 16.4%), calendar time portfolio models (30, 6.6%), and persistence (VAR) models (16, 3.5%).



Figure 1.2: Important extant marketing-finance topics (from survey).

Source: Edeling *et al.* (2021).

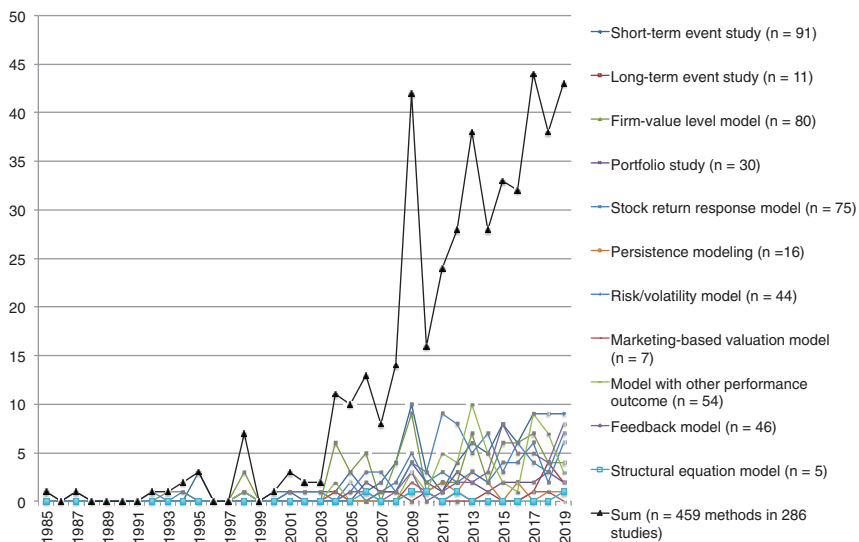


Figure 1.3: Evolution of marketing-finance methods over time.

Source: Edeling *et al.* (2021).

We proceed as follows in this monograph. We first explain our conceptual framework and the procedure followed to arrive at our synthesis of the marketing-finance literature. Next, we identify the marketing-finance metrics and methods used. For *researchers*, we provide an overview of metrics, methods, and findings and provide a practical roadmap for how to conduct marketing-finance research, as well as an agenda for future research. For *marketing executives*, our monograph provides insights on the strongest drivers of firm value. Further it provides an understanding on the potential of marketing to reconcile the objectives of at least two stakeholders (customers and shareholders), and possibly more (employees, communities). For the investor community (analysts and investors), we provide insights on how to incorporate information from various marketing signals in their investment decisions and show how marketing-based valuation methods can be used to evaluate entire businesses.

2

Marketing-Finance Framework

Based on existing frameworks by Edeling and Fischer (2016) and Edeling *et al.* (2021), we posit a marketing-finance value chain that starts with marketing action decisions. Figure 2.1 describes the framework we use to categorize hitherto investigated metrics within the marketing-finance interface.¹ The classical “4-P” conceptualization from marketing is augmented with customer-asset and brand-asset building actions and activities that involve more than one marketing-mix instrument (e.g., corporate social responsibility activities), leading to the creation of intangible marketing assets. The next step within the chain is the transfer of marketing actions and assets into product market performance (e.g., sales and market share) and accounting performance (e.g., revenues and profits). The “investor community” consists of two groups. *Financial analysts* professionally evaluate the future potential of firms in terms of their stock market performance and *investors* (both individual and institutional) observe firms’ behavior and performance along the different stages of the value chain. They react with buy, hold, and sell recommendations (analysts) or buy, hold, and sell decisions (investors). These financial-market participants’ reactions culminate in financial-market performance metrics, which can be subsumed under the term firm value.

¹This section is inspired by Edeling *et al.* (2021).

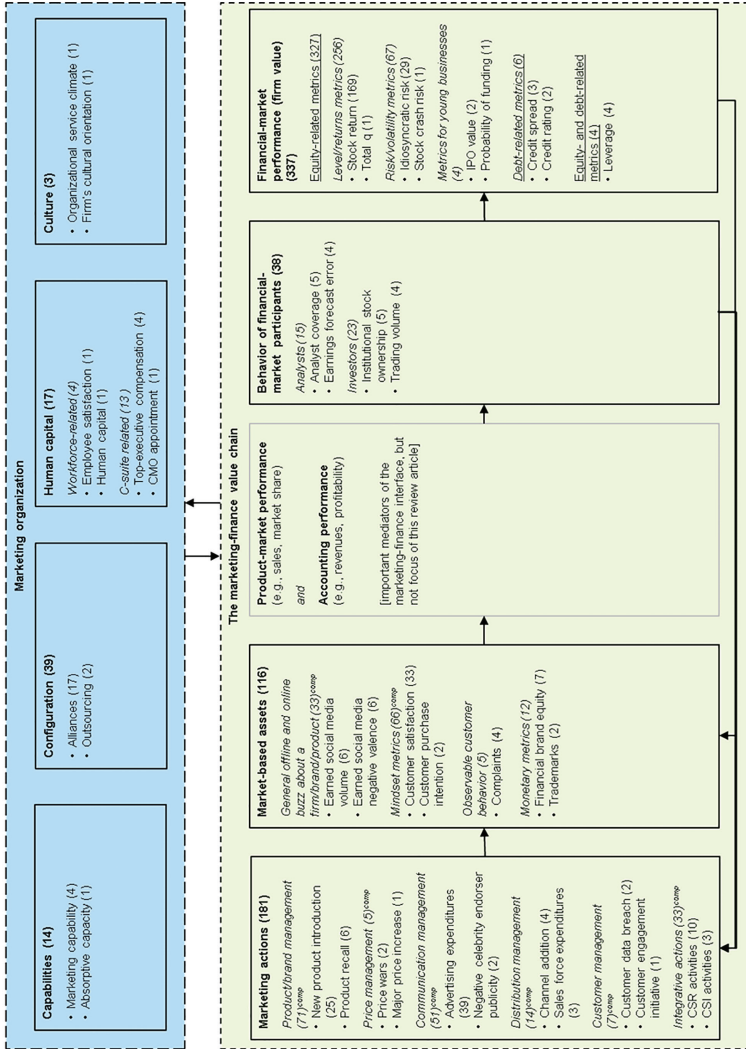


Figure 2.1: Metrics studied at the marketing–finance interface.
 Source: Edeling et al. (2021).

Notes: The first variable in each (sub)category is the most-investigated variable. The number of studies is in parentheses. ^{some} stands for competitor studies.

Early research on marketing performance focused on product-market outcome metrics such as product price (Chaudhuri and Holbrook, 2001; Srinivasan *et al.*, 2008), market share (Srinivasan and Bass, 2000; Srinivasan *et al.*, 2000), sales (Srinivasan *et al.*, 2010), and revenues (e.g., Pauwels and Srinivasan, 2004; Srinivasan *et al.*, 2004). However, current-term accounting measures, such as short-term revenues and earnings, do not appropriately reflect firm value since they fail to capture the benefits of investing in intangible assets such as customer relationships and brands. Furthermore, a defining characteristic of most marketing actions is that they are inherently slow-moving and not immediately visible (Srinivasan and Hanssens, 2009a). Changes in a well-managed marketing organization are usually slow to manifest themselves on a firm's bottom-line metrics (Ambler, 2003). As such, the quality or effectiveness of a firm's marketing decisions is less likely to be captured by backward-looking accounting measures such as profit and return on assets.

Given these realities and challenges, the gold standard metric for assessing marketing's impact on the firm is shareholder value, which is determined by levels of stock returns and the volatility associated with those returns (Srinivasan and Hanssens, 2009a). According to the shareholder value perspective, the main objective of companies is to maximize shareholders' return on their equity (Rappaport, 1997). Rappaport (1987, p. 57) in his earlier work noted that "By closely reading the stock market, managers can find out whether proposed strategies will be effective."

A frequently used metric of shareholder value is therefore firm value or market capitalization, the share price multiplied by the number of outstanding shares. From an *investor* perspective, share price is the relevant criterion as it determines the investor's potential profit or loss at any point in time. From a *managerial* perspective, market-to-book ratio may be more relevant, as it reflects the return to the cumulative investments that the firm has made, which should be accounted for in the firm's *book value*. In practice, however, marketing is treated as an expense, even though marketing may create brand and customer assets that generate future cash flows. As such, marketing activity as an expense is captured in the P&L statement, and is not typically reflected

in a firm's book value. For instance, a firm with significant unreported market-based assets might be sold for less than its economic worth if book value is taken as a proxy for economic value (Bendle *et al.*, 2021).

Tobin's q is another frequently used firm-value variable, but it has significant limitations. Bendle and Butt (2018) questioned the validity of marketing-finance studies that use accounting-based approximations of Tobin's q (AATQ) as the dependent firm-value variable. Their critique is that market-based assets are unrecorded in firms' accounting reports, leading to a biased measure of a firm's replacement value in the denominator of the AATQ formula. They argue that Tobin's q should not be used as a performance metric to consider the impact of market-related decisions. Market-to-book/price-to-book metrics are similarly impacted by accounting conventions. Overall, we agree with Bendle and Butt's arguments that care should be taken when using such metrics, as they may not be appropriate to use as dependent variables.

Stock returns, another frequently used metric, reflect the change in the total value of an investment in a common stock over some period per dollar of initial investment (e.g., Srinivasan and Hanssens, 2009a) and is operationalized as $(Price_t + Dividend_t - Price_{t-1}) / (Price_{t-1})$. An advantage of using stock returns is that it does not incorporate the financial accounting-based book value, which does not reflect marketing activity. Since the papers that use stock return metrics are cleaner and not subject to the reservations on the accounting of book value, the results may be more reliable. We also call for further research on the findings from papers that use Tobin's q or market-to-book metrics.

Researchers in the marketing-finance interface use abnormal return (AR) or cumulative abnormal return (CAR) as key metrics in the context of event studies (see Srinivasan and Hanssens, 2009a,b). Skiera *et al.* (2017) develop a solution to the phenomenon that most marketing events are likely to affect only a firm's operating business (OB) and not the other two components of shareholder value (SHB): non-operating assets (NOA, e.g., excess cash) and debt (DEBT). They derive mathematically, that if the assumption of a sole effect on OB holds, the CAR on the operating business (CAR^{OB}) is equal to the standard CAR^{SHV} divided by a firm-specific "leverage effect" $OB / (OB - NOA + DEBT)$, which describes the relative change in SHV for a 1% change in operating

business. Applying this simple formula to three previously published event studies, the researchers show that CAR^{OB} results can differ fundamentally from the standard CAR^{SHV} results, including even a change in sign. Given that the components of the leverage effect are publicly available, calculating CAR^{OB} and comparing it with CAR^{SHV} to interpreting potential differences should be standard practice in marketing–finance research (for a recent application, see Lim *et al.*, 2018).” For a discussion of the debate on this topic, we refer to Edeling *et al.* (2021). Overall, researchers are well advised to justify their choice of firm-value metrics and to use more than one metric for robustness testing.

Marketing can be also be viewed more broadly as a strategic tool for managing a firms’ risk exposure. A strong brand, for example, can encourage broader stock ownership, insulate a company from market downturns, grant protection from equity dilution in the case of product failures, and reduce variability in future cash flows (Frieder and Subrahmanyam, 2005; Rego *et al.*, 2009). Given that managers and investors are inherently risk-averse (Swedroe and Grogan, 2009) and seek to maximize returns while minimizing risk exposure, it is crucial for management to consider risks. Without considering stock price volatility, managers are not able to assess “whether expected returns offer adequate compensation for the inherent level of risk” (Anderson, 2006, p. 587).

Total risk has two components: systematic risk and idiosyncratic or firm-specific risk. *Systematic* risk stems from exogenous macroeconomic factors that affect the overall stock market or particular industries (e.g., interest rate shifts, exchange rates, macroeconomic developments, industry concentration). Systematic risk reflects sensitivity to overall market changes and is a function of the extent to which a firm’s stock returns change when the overall market changes. *Idiosyncratic* risk is the risk associated with micro, firm-specific circumstances, characteristics, or activities (e.g., research and development pipeline, marketing mix decisions, brand portfolio strategy), after general market variation is accounted for; it applies to the proportion of returns that move independently of market-wide returns.

Although idiosyncratic risk accounts for upwards of 80% of total risk (Goyal and Santa-Clara, 2003), there is robust evidence supporting the importance among managers and investors of examining systematic risk as well as idiosyncratic risk as both have been shown to be related to firm value (Ang *et al.*, 2006a; Bansal and Clelland, 2004; Brown and Kapadia, 2007; Ferreira and Laux, 2007). Different stakeholders have different perspectives on firm risks. Rego *et al.* (2009) view risk from both debt-holder and equity-holder perspectives. Per finance theory, the former deals with the vulnerability of the firm's future cash flows because it determines the ability of the firm to deal with existing debt (Merton, 1974). The latter focuses on the total equity risk as the variability of a firm's stock returns, which is driven by the capital asset pricing model (Sharpe, 1964). Recently, researchers have started to distinguish between upside risk, the firm's stock risk when stock returns are increasing overall (Rego *et al.*, 2009; Tuli and Bharadwaj, 2009), and downside risk, the firm's stock risk when stock returns are decreasing overall (Ang *et al.*, 2006b; Harlow, 1991; Miller and Leiblein, 1996).

Commonly used metrics of shareholder value include stock returns, market capitalization, and Tobin's q; systematic risk and idiosyncratic risk also serve as key metrics for publicly traded companies (Tuli and Bharadwaj, 2009) (see Figure 2.1). Table 2.1 provides an overview of common financial metrics, including their definitions and operationalizations. We also highlight the important characteristics of each financial metric in Table 2.1.

In Figure 2.1, we adopt the view of Moorman and Day (2016) that marketing organization is the strategic foundation for the functioning of the conversion of marketing actions into firm value along the marketing-finance value chain. Their view of the marketing organization is operationalized along four dimensions: *capabilities* ("complex bundles of firm-level skills and knowledge and firm adaptation to marketplace changes"), *configuration* ("organizational structures, metrics, and incentives/control systems that shape marketing activities"), *human capital* ("marketing leaders and employees [...] that create, implement, and evaluate a firm's strategy"), and *culture* ("values, norms, and behaviors that facilitate a focus on the market over time") (Moorman and Day, 2016, p. 6).

Table 2.1: Relevant financial metrics

Financial Metrics	Definition	Measure	Characteristics	Illustrative Papers
<i>Returns/Levels Metrics</i>				
Stock returns	Change in the total value of a stock over some period of initial investment	$\frac{Price_t + Dividend_t - Price_{t-1}}{Price_{t-1}}$	A stationary time series of stock returns is obtained as a dependent variable	Mizik and Jacobson (2004) Srinivasan <i>et al.</i> (2009)
Tobin's q (<i>q</i> -values)	Ratio of market value of the firm to the replacement value of the firm's assets	$\frac{Market\ price}{Replacement\ value\ of\ asset}$	Tobin's q estimates have smaller average errors and greater correlation with true measures as compared with accounting rates of return	Simon and Sullivan (1993) Rao <i>et al.</i> (2004)
Market-to-Book Ratio (M/B)	Ratio of market equity to the book value per share	$\frac{Market\ value}{Book\ Equity}$	M/B > 1 signals firms creating value for its shareholders	Pauwels <i>et al.</i> (2004)
Market capitalization	Share price multiplied by the number of outstanding shares	$Stock\ price \times Number\ of\ shares\ outstanding$	Forward-looking measure, providing investor expectations of the firm's future profit	Fornell <i>et al.</i> (2006)
<i>Risk/Volatility Metrics</i>				
Cash flow volatility	Ratio of firm's cash flow coefficient of variation (CV) to the market's cash flow coefficient of variation (CV)	$\frac{Firm's\ cash\ flow\ CV}{Market's\ cash\ flow\ CV}$	Can explain as much as 80% of the variation in systematic market risk	Gruca and Rego (2005) Fischer <i>et al.</i> (2016)
Abnormal returns (α_t)	Difference between the expected return of a stock and the actual return	<i>Carhart four-factor Model:</i>	Positive abnormal returns indicates outperformance	Joshi and Hanssens (2009)

Continued.

Table 2.1: Continued

Financial Metrics	Definition	Measure	Characteristics	Illustrative Papers
Systematic risk (β_i)	The part of stock volatility that is explained by changes in average market portfolio returns	$R_{i,t} - R_{r,f,t} = \alpha_i + \beta_i (R_{m,t} - R_{r,f,t}) + s_i S M B_t + h_i H M L_t + u_i U M D_t + \varepsilon_{i,t}$	Cannot be mitigated through diversification	Fornell <i>et al.</i> (2006) Madden <i>et al.</i> (2006) McAlister <i>et al.</i> (2007)
Idiosyncratic risk ($\sigma_{\varepsilon_{i,t}}$)	The variability that is not explained by changes in average market portfolio return but instead by firm-specific events	where $\varepsilon_{i,t} \sim N(0, \sigma_{\varepsilon_{i,t}})$	Accounts for approximately 80% of total risk on average	Luo (2007) Luo and Bhattacharya (2009)
Downside (Upside) risk	The observed variability in a firm's stock returns accounted for by equity market movements when the stock market declines (rises)	$\frac{cov(r_i, r_m r_m < \mu_m)}{var(r_m r_m < \mu_m)}$ where r_i (r_m) is security i 's (the market's) excess return, and μ_m is the average market excess return*	Only assets that magnify the market's downward swings are viewed as risky	Rego <i>et al.</i> (2009) Tuli and Bharadwaj (2009)

Source: Srinivasan *et al.* (2012).

Figure 2.1 also indicates the frequency with which marketing-finance researchers have investigated relationships between marketing variables and financial-market metrics – the numbers in parentheses show the number of studies that have dealt with a category or variable. A majority of studies have investigated either marketing-action (180 studies) or marketing-asset relationships (117). Specifically, the most investigated marketing variables are advertising (39), customer satisfaction (33), new product introductions (25), alliances (17), R&D expenditures (16), customer-based brand equity (15), and CSR activities (10). Figure 2.1 also highlights the marketing subcategories in which competitor effects have been investigated using the superscript ^{comp}. Examples of such studies include understanding competitor effects on topics such as innovations, promotions, and advertising (Srinivasan *et al.*, 2009), customer data breaches (Martin *et al.*, 2017), negative online chatter about product recalls (Borah and Tellis, 2016), and celebrity endorsements (Knittel and Stango, 2014). Marketing organization is an emerging area of research within the marketing-finance, the most frequently studied topics are configurational themes (38), followed by human capital (17), capabilities (14), and culture (3).

As for the financial metrics, studies with financial-market performance (334) outnumber those that focus on the behavior of financial-market participants (51). Specifically, the most frequently investigated metrics are stock return (167), Tobin's q/market-to-book ratio (61), idiosyncratic risk (29), systematic risk (25), market capitalization (12), cash flow (10), and total stock risk (6).

3

Methods for the Marketing-Finance Interface

High-quality research on the marketing-firm value relationship requires good research methods i.e., metrics and models, which are discussed next. Some of these methods have relied on cross-sectional data, which allow for a comparison of firm values. Other methods have focused on time-series data, which allow the study of how firm value impact of new marketing develops over time. For each approach, we will explain the research design and provide an illustrative example. Our discussion in this section is based on our previous review papers on this topic, Srinivasan and Hanssens (2009a) and Edeling *et al.* (2021). A summary of the different research approaches is shown in Table 3.1.

Srinivasan and Hanssens (2009a) discuss four research methodologies based on the Fama-French model, which have been used with different frequencies in previous work (see Figure 1.3): Short-term event studies (82), long-term event studies (11), stock-return response models (60), calendar time portfolio models (27), and persistence (vector autoregressive or VAR) models (14). These approaches generally rely on the efficient market hypothesis (EMH) in finance that investors fully and accurately incorporate any new information that has value relevance.

Table 3.1: Overview of research approaches

Approach	Characteristics of Approach	Limitations of Approach	Representative Studies/ Sample from Approach	Dependent/Predictor Variable used in Study
1. Four-Factor Model	<p>Recognizes systematic sources of cross-sectional differences among firms: the size factor, the market-to-book value factor, the market risk factor and the momentum factor.</p> <p>Relies on efficient market hypothesis.</p> <p>Straightforward to estimate.</p> <p>Can assess cross-sectional variation in firm value.</p>	<p>Inferences from the portfolio approach are sensitive to the choice of the benchmark portfolio.</p> <p>Is correlational in nature.</p> <p>Is subject to omitted variable bias.</p> <p>For application outside the U.S., three of the four factors are not readily available.</p>	<p>Rao <i>et al.</i> (2004) (across industries)</p> <p>Barth <i>et al.</i> (1998) (across industries)</p> <p>Madden <i>et al.</i> (2006)</p>	<p>Tobin's q/Branding strategy</p> <p>Firm valuation/ Brand value estimates</p> <p>Stock returns/Brand valuation</p>
2. Event-Study	<p>Assesses the abnormal return for a stock as the ex-post return of the stock during the course of the event window minus the normal expected return, assuming that the event had not taken place.</p> <p>Relies on efficient market hypothesis.</p> <p>Easy to implement since key data are event dates and stock prices around the events.</p> <p>Analysis is causal in nature.</p>	<p>Inappropriate for measuring long-term abnormal returns to events that are clustered in time.</p>	<p>Horsky and Swyngedouw (1987) (across industries)</p> <p>Chaney <i>et al.</i> (1991) (across industries)</p> <p>Lane and Jacobson (1995) (within industry)</p> <p>Geyskens <i>et al.</i> (2002) (within industry)</p>	<p>Stock returns/Name change events</p> <p>Stock returns/New product announcements</p> <p>Stock returns/Brand extension announcements</p> <p>Stock returns/Internet channel investments</p>

Continued.

Table 3.1: Continued

Approach	Characteristics of Approach	Limitations of Approach	Representative Studies/ Sample from Approach	Dependent/ Predictor Variable used in Study
3. Calendar Portfolio	<p>Constructs a single portfolio including stocks of firms with the event to measure the long-term abnormal returns to that portfolio</p> <p>Accounts for cross-sectional correlation of returns.</p> <p>Statistical inferences are likely more accurate than those obtained with event studies.</p> <p>Establishes whether or not investors perceive information on marketing activity such as advertising spending as contributing to the projection of future cash flows.</p> <p>Based on the Carhart four-factor (1997) model</p> <p>Relies on efficient market hypothesis.</p> <p>Provides insights into the market's expectations of the <i>long-term</i> value prospects associated with changes in marketing strategy.</p> <p>Takes into account the dynamic properties of stock returns.</p>	<p>Does not produce separate measures of abnormal returns for each event.</p> <p>Inferences from the portfolio approach are sensitive to the choice of the benchmark portfolio.</p>	Sorescu <i>et al.</i> (2007) (within industry)	Stock returns/New product announcements
4. Stock-Return Response Model	<p>Establishes whether or not investors perceive information on marketing activity such as advertising spending as contributing to the projection of future cash flows.</p> <p>Based on the Carhart four-factor (1997) model</p> <p>Relies on efficient market hypothesis.</p> <p>Provides insights into the market's expectations of the <i>long-term</i> value prospects associated with changes in marketing strategy.</p> <p>Takes into account the dynamic properties of stock returns.</p>	<p>Requires detailed marketing data at the brand or SBU level.</p> <p>Marketing measures have to reflect information that is available to market participants since the stock market reacts to public information.</p> <p>Single-equation models and hence no temporal chain leading to stock returns</p>	<p>Aaker and Jacobson (1994) (across industries)</p> <p>Aaker and Jacobson (2001) (within industry)</p> <p>Mizik and Jacobson (2003) (across industries)</p> <p>Srinivasan <i>et al.</i> (2009) (within industry)</p>	<p>Stock returns/Perceived quality</p> <p>Stock returns/Brand attitude</p> <p>Stock returns/Shifts in strategic emphasis</p> <p>Stock returns/Marketing actions</p>

Continued.

Table 3.1: Continued

Approach	Characteristics of Approach	Limitations of Approach	Representative Studies/ Sample from Approach	Dependent/Predictor Variable used in Study
5. Persistence Modeling	<p>These models use a system's representation in which each equation tracks the behavior of an important agent: the consumer (demand equation), the manager (decision rule equation), competition (competitive reaction equation), and the investor (stock price equation)</p> <p>VAR provides a flexible treatment of both short-term and long-term effects.</p> <p>Robust to deviations from stationarity.</p> <p>Provides a forecasted, expected baseline for each performance variable.</p> <p>Allows for various dynamic feedback loops among marketing and stock performance variables.</p>	<p>Requires detailed marketing data at the brand or SBU level.</p> <p>Requires time-series over a long horizon.</p> <p>Inherently reduced-form models</p>	<p>Pauwels <i>et al.</i> (2004) (within industry)</p> <p>Joshi and Hanssens (2009) (within two sets of industries)</p>	<p>Firm valuation/New product introductions, sales promotions</p> <p>Stock returns/Advertising</p>

Source: Srinivasan and Hanssens (2009a).

In addition, marketing-finance researchers employ single-equation models (as opposed to multi-equation VAR models) for firm-value level variables for Tobin's q (e.g., Kang *et al.*, 2016), for firm risk/volatility variables (e.g., Han *et al.*, 2017), and for other financial outcome variables such as credit rating (e.g., Anderson and Mansi, 2009), feedback models that incorporate the reverse effect from stock market performance to marketing actions (e.g., Park *et al.*, 2019), marketing-based valuation models (e.g., McCarthy and Fader, 2018), and structural equation models (e.g., Zuo *et al.*, 2019).

3.1 Fama-French Model

The Fama-French (1993) factor model, a foundational model, recognizes systematic sources of cross-sectional differences among firms' stock returns: the size factor, the market-to-book value factor, and the market risk factor. Such models have been used for computation of abnormal returns as well as for the calculation of systematic and idiosyncratic risk, which are then used as input in different firm-value models (e.g., Hsu *et al.*, 2016). In particular, investors can be expected to receive additional returns by investing in stocks of companies with smaller market capitalization and with lower market-to-book ratios. Both of these effects imply that riskier stocks are characterized by higher returns. Motivated by the fact that the three factor model misses the average variation in stock returns driven by profitability and investment, Fama and French (2015) added the profitability and investment factors. Carhart (1997) extended this model by including a momentum factor. Specifically, the extended six-factor explanatory financial model for stock returns is estimated as follows:

$$R_{it} - R_{r,f,t} = \alpha_i + \beta_i(R_{mt} - R_{r,f,t}) + s_iSMB_t + h_iHML_t + r_iRMW_t + c_iCMA_t + u_iUMD_t + \varepsilon_{it} \quad (3.1)$$

where R_{it} is the stock return for firm i at time t , $R_{r,f,t}$ is the risk-free rate of return in period t , R_{mt} is the average market rate of return in period t , SMB_t is the return on a value-weighted portfolio of small stocks minus the return of big stocks, HML_t is the return on a value-weighted portfolio of high book-to-market stocks minus the return

on a value-weighted portfolio of low book-to-market stocks, RMW_t is the difference between the returns on diversified portfolios of stocks with robust and weak profitability, CMA_t is the difference between the returns on diversified portfolios of the stocks of (conservative) low and (aggressive) high investment firms, and UMD_t is the average return on two high prior-return portfolios minus the average return on two low prior-return portfolios.¹ The data source for the six-factor financial model is Kenneth French's web site at Dartmouth, which provides details on all factors at the daily and weekly levels.² ε_{it} is the error term; α_i is the model intercept; and β_i , s_i , h_i , r_i , c_i and u_i are parameter estimates of the factors used in the model. If the stock's performance is "normal," the four-factor model captures the variation in R_{it} , and α_i is zero.³ Therefore, α_i is the *abnormal* return associated with firm i , and ε_{it} captures additional abnormal (excess) returns associated with time period t .

The empirical evidence around the Fama-French factors is typically positive while the evidence on the Carhart fourth factor (momentum) is ambiguous. Momentum captures the notion that a stock that has performed well in the recent past continues to do so, and vice versa (Jegadeesh and Titman, 1993). Its effect sign depends on the time period considered (see, e.g., Subrahmanyam, 2005): it is negative for one week up to one month, positive for three- to twelve-month periods (Jegadeesh and Titman, 1993), and negative for long horizons such as three to five

¹To construct momentum, six value-weighted portfolios including NYSE, AMEX, and NASDAQ stocks, formed on size and monthly prior (2–12) returns are used. The monthly portfolios are the intersections of two portfolios formed on size and three portfolios formed on prior (2–12) return. The monthly size breakpoint is the median NYSE market equity and the monthly prior (2–12) return breakpoints are the 30th and 70th NYSE percentiles. For further details, we refer the interested reader to https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_mom_factor.html.

²https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library.html.

³Related finance literature (e.g., Daniel and Titman, 1997) has proposed characteristics-based models which argue that firm characteristics, rather than the sensitivity to the four risk factors, drive stock returns. As an example, it is firm size and not the sensitivity to the size factor (SMB) that drives stock returns. However, Davis *et al.* (2000) subsequently argued that such characteristics-based effects are confined to the shorter sample used in the former study.

years (De Bondt and Thaler, 1985). Among others, Fama and French (1996) question whether the momentum effect is real and call for more empirical verification of momentum. Robustness checks of these factor effects are an area of ongoing research in empirical finance.

In marketing, Fornell *et al.* (2016) estimate the stock returns to customer satisfaction with the five-factor model suggested by Fama and French (2015). They report robust results around the overall impact of customer satisfaction on stock returns, discussed in Section 4 of this monograph.

3.2 Event Studies

Event studies are used when firm marketing actions take on the form of interventions with known time stamps. Event studies assume that markets are efficient and allow for an inference of cause and effect in a quasi-experimental setting. All event studies are joint tests of the hypothesis under consideration as well as the efficiency of capital markets (Fama *et al.*, 1969). The intuition behind the event-study methodology is that, given market efficiency, perfect information, and rationality of investors (Fama, 1991), the impact of a relevant event should be immediately reflected in stock prices. Because event studies allow for an inference of causality in a quasi-experimental setting, they have had a solid trajectory with increased use over time.

Event studies require that the firm's share-price reaction to the event of interest can be clearly isolated while controlling for other relevant information, and that an appropriate benchmark be used to compute normal and abnormal returns. Marketing applications of event studies to measure firm value impact include new-product announcements (Chaney *et al.*, 1991), corporate name changes (Horsky and Swyngedouw, 1987), brand extensions (Lane and Jacobson, 1995), celebrity endorsements (Agarwal and Kamakura, 1995), joint ventures (Johnson and Houston, 2000), internet channel additions (Geyskens *et al.*, 2002), new-product quality reports (Tellis and Johnson, 2007), market entry of a retailer (Gielens *et al.*, 2008) and motion-picture advertising (Joshi and Hanssens, 2009).

The abnormal return for a stock is the ex-post return of the stock during the course of the event window minus the normal expected return, assuming that the event had not taken place (Srinivasan and Bharadwaj, 2004). Starting with the Carhart four-factor financial model, the abnormal return for a stock is calculated as:

$$\begin{aligned} \varepsilon_{it} = & (R_{it} - R_{r,f,t}) - \alpha_i - \beta_i(R_{mt} - R_{r,f,t}) - s_iSMB_t \\ & - h_iHML_t - u_iUMD_t \end{aligned} \quad (3.2)$$

In Equation (3.2) ε_{it} , the measure of risk-adjusted abnormal return for firm i in period t , provides an unbiased estimate of the future earnings generated by the event (Fama, 1970). This abnormal return is aggregated over the length of the window after the event of interest, to arrive at the cumulative abnormal return (CAR). The statistical significance of the abnormal return is calculated by dividing the CAR by its standard error.

When the test period is short (e.g., a day or a week), the CAR measures are not overly sensitive to the financial model used to adjust for risk. For longer test periods, event studies are sensitive to the return metrics used (Fama, 1998). Therefore, it is advisable for researchers to use multiple measures of abnormal returns, such as continuously compounded abnormal return (CCAR) or buy-and-hold returns (BHAR), and to assess the sensitivity of findings to these alternative return metrics (Lyon *et al.*, 1999). Event leakage can be investigated by including pre-event periods in the event window (e.g., Chaney *et al.*, 1991).

Event study approaches are used to measure short-term or long-term value relevance of a discrete event (e.g., Martin *et al.*, 2017). Recently, Hock and Raithel (2020) introduced event-study regression in marketing, as an alternative to the standard analysis of cumulative abnormal returns. Event-study regressions can be useful if the researcher is interested in the effect of direct firm reactions to certain marketing-related events such as celebrity-endorsement scandals. A further new trend within the event-study literature in marketing-finance research is the analysis of the change in stock price risk instead of stock returns around events (Thomaz and Swaminathan, 2015). Finally, it is standard practice to eliminate confounded events (e.g., due to earnings announcements) in short-term event studies. However, Sorescu *et al.* (2017) argue in

favor of retaining such events in the sample in order to increase the statistical power and to decrease the subjectivity regarding the choice of confounding announcements.

3.3 Stock-Return Response Models

Stock-return response models (e.g., Brennan, 1991; Lev, 1989; Srinivasan *et al.*, 2009) are similar to event studies, except the inputs are continuous rather than discrete in nature. Marketing examples include price movements, advertising spending and number of distribution outlets. Both approaches build upon the efficient-markets hypothesis, and both assess the stock-return reaction to unanticipated events, i.e., the effect of new information on investors' expectations of discounted future cash flows. Stock-return models may be specified on whatever data interval is appropriate for the marketing resources being deployed, such as weekly data for advertising or monthly data for major new-product innovations.

Stock-return response models establish whether or not investors perceive information on change in marketing activity such as advertising spending as contributing to a change in the projection of future cash flows (e.g., Mizik and Jacobson, 2004). The causal inference in stock-return models is not as straightforward as in event studies. Event studies are designed as controlled quasi-experiments, where the post-event behavior of the stock price is tested relative to the expected pre-event behavior. In contrast, stock-return models may lead to signaling interpretations as well. For instance, suppose an automobile manufacturer announces an increase in its promotional incentives, and its stock price goes down. One interpretation is that investors anticipate that these promotions would reduce the firm's future profit margins and therefore cash flows, indicative of a causal linkage from promotions to cash flows and hence to firm valuation. An alternative interpretation is that the market views the increase in promotional spending as a signal of weakening consumer demand for the firm's products and adjusts its valuation of the firm accordingly, indicative of a signaling linkage from promotional spending to firm valuation.

More broadly, both event studies and stock-return response models may be subject to omitted variable bias. For example, forecasts of downturns in demand or increases in commodity prices may lead to (a) more aggressive firm innovation spending and (b) decreased sales of existing products. If (b) is greater than (a) then a study of innovation spending could show a negative rather than a positive effect on stock returns.

In a stock-return response model, the four-factor financial model (Equation (3.1)) is augmented with firm results and actions in order to test hypotheses on their impact on future cash flows. These are expressed in unanticipated changes, i.e., deviations from past behaviors that are already incorporated in investor expectations. The stock-return response model is defined as

$$R_{it} = ER_{it} + \beta_1 U\Delta REV_{it} + \beta_2 U\Delta INC_{it} + \beta_3 U\Delta CUST_{it} + \beta_4 U\Delta OMKT_{it} + \beta_5 U\Delta COMP_{it} + \varepsilon_{i2t} \quad (3.3)$$

where R_{it} is the stock return for firm i at time t , ER_{it} is the expected return from the Fama-French model in Equation (3.1). A test of “value relevance” of unexpected changes to firm and competitive results and actions is a test for significance of the β coefficients in Equation (3.3); significant values imply that these variables provide incremental information in explaining stock returns.

The components of stock returns that are, to some extent, under managerial control are of three kinds: financial results, customer asset metrics and marketing actions. Financial results include revenues ($U\Delta REV$) and earnings ($U\Delta INC$) while customer asset metrics include measures such as customer satisfaction and brand equity ($U\Delta CUST$). Specific marketing actions are the unanticipated changes to marketing variables or strategies ($U\Delta OMKT$). In addition, competitive actions or signals in the model reflect the unanticipated changes to competitive results, marketing actions, strategy and intermediate metrics ($U\Delta COMP$), and ε_{i2t} is the error term. As an illustrative example, Srinivasan *et al.* (2009) investigate the impact of product innovations, advertising, promotions, customer quality perceptions and competitive actions on stock returns for automobile manufacturers. The findings will be discussed in Section 4.

In stock return models, the unanticipated components may be modeled as the difference (Δ) between analysts' consensus forecasts and the realized value (in the case of earnings), or via time-series extrapolations using the residuals from a time-series model (e.g., Lev, 1989). A few studies argue that analysts' forecasts could be more accurate predictors of earnings expectations than time-series models since analysts have access to broader and more current information sets (e.g., evidence and knowledge of firm actions) leading to improved quantitative models (Brown and Rozeff, 1978; Brown *et al.*, 1987).

Research in finance has relaxed the EMH assumption of investors' structural knowledge while maintaining the rationality assumption in decision making (e.g., Brav and Heaton, 2002; Brennan and Xia, 2001). This literature suggests that, with rational learning, stock prices move not only when new information becomes available, but also when investors improve their understanding of the various economic relationships that shape the market equilibrium. Hence, the short-term reaction to marketing "news" may be adjusted over time until it stabilizes in the long run and loses its ability to further adjust stock prices. Under the EMH hypothesis, there would not be any time-adjusted effects since the impact of marketing actions would be fully contained in the next period's stock price. This perspective motivates the use of persistence models instead of event windows to study marketing's impact on firm value, which we turn to next.

Overall, stock return response models typically measure long-term value relevance of continuous marketing metrics that are not fully reflected in contemporaneous accounting performance. Their goal is to establish whether investors perceive information on change in marketing activity as contributing to a change in the projection of future cash flows. Importantly, they are based on the efficient market hypothesis and recognize that investors react only to new information, which is operationalized as the difference between the actual and the expected level of the independent variable (e.g., Edeling and Fischer, 2016; Mizik and Jacobson, 2009; Srinivasan and Hanssens, 2009b).

It is important that empirical marketing-finance researchers consider the distinction between unexpected changes versus levels of marketing actions, which some (e.g., Larivière *et al.*, 2016) still ignore. Indeed,

and in line with the EMH, if a certain marketing action is a repetition of past actions, it would be anticipated and thus already incorporated in firm value. That would not be the case for surprise or unanticipated marketing actions.

Single-equation model regressions incorporate all models that relate a level firm-value dependent variable (i.e., cash flow, market capitalization, Tobin's q , and market-to-book ratio) to one or more independent marketing variables within a single-equation regression. The frequent use of these models is surprising against the backdrop of criticism focused on autocorrelation leading to downward-biased standard errors and false inferences (Edeling and Fischer, 2016; Mizik and Jacobson, 2009). In addition, the by-far most-often used metric is Tobin's q in single-equation models (e.g., Rao *et al.*, 2004). Endogeneity is also a more severe issue in these level models than in models that use stock returns, which work with unexpected marketing information (see the discussion in Mizik and Jacobson, 2008). Germann *et al.*'s (2015) paper on the firm-value effects of the presence of a CMO navigates the reader through the different econometric steps to be taken to address endogeneity, from unobserved effects models (fixed and random effects), to instrumental variable approaches (standard 2SLS and control function), and to panel internal instruments models (i.e., generalized method of moments).

3.4 Calendar Portfolio Theory

The event-study methodology has a limitation which makes it inappropriate for measuring long-term abnormal returns to events that are clustered in time: it cannot properly account for cross-sectional dependency (or overlap) among events, which could lead to misleading statistical inferences (Barber and Lyon, 1997; Kothari and Warner, 2006; Mitchell and Stafford, 2000). One way to account for such cross-sectional dependency is to compute “one-to-one matched-pair returns” by matching firms that are closest in size and market-to-book ratio to the target firm (Barber and Lyon, 1997; Joshi and Hanssens, 2010).

An alternative approach is the calendar-time portfolio method (Fama, 1998; Mitchell and Stafford, 2000; Sorescu *et al.*, 2007). It

begins with the construction of a single portfolio, called a calendar-time portfolio, to include all stocks of firms with the event as the unit of analysis—for example, a new-product introduction—and then measure the long-term abnormal returns to that portfolio using the four-factor model in Equation (3.1). The calendar portfolio method is based on a large comparison sample, so the potential omitted-variable bias resulting from industry characteristics variables is smaller as compared to the matched-pair approach (Barber and Lyon, 1997).

The calendar-time method automatically accounts for cross-sectional correlation of returns (Lyon *et al.*, 1999; Mitchell and Stafford, 2000). This is because the standard error of the abnormal return estimates of the portfolio, α_p , is not computed from the cross-sectional variance (as is the case with the event-study method), but rather from the *inter-temporal* variation of portfolio returns. Given rational investors, monthly stock returns are serially uncorrelated (Kothari and Warner, 2006), so the methodology is well specified, and statistical inferences are likely to be more accurate than those obtained with event studies in which the standard error is computed within the cross-section. However, the calendar-time portfolio approach has lower power to detect abnormal performance because it averages over months of “hot” and “cold” event activity (Loughran and Ritter, 2000). For example, the calendar-time portfolio approach may fail to identify significant abnormal returns if abnormal performance primarily exists in months of heavy event activity. Since stocks are grouped into a portfolio and a single measure of returns is obtained for the entire group, it is not possible to use a cross-section regression model to analyze the relationship between financial performance and marketing drivers (e.g., marketing actions). When the actions are continuous or repetitive rather than discrete, stock-return models are better suited for that purpose.

Calendar-time portfolio approaches tend to measure *mispricing*, or “the extent to which the financial markets fail to react to information that has long-term profit implications or overreact to information that does not have long-term profit implications” (Jacobson and Mizik, 2009, p. 837). As noted by Edeling *et al.* (2021), neither stock return response models nor calendar portfolio methods have witnessed

significant methodological advancements in recent marketing-finance applications.

3.5 Persistence Modeling

All methods reviewed so far are single-equation approaches. Persistence models, in contrast, use a system's representation (e.g., Dekimpe and Hanssens, 1995), in which each equation tracks the behavior of an important agent; for example, the consumer (demand equation), the manager (decision rule equations), competition (competitive reaction equation), and finally, the stock market participants (firm value equation). The long-run behavior of each endogenous variable is obtained from a shock-initiated chain reaction across the equations. They are quite flexible to accommodate dynamics, feedback loops from firm value to managers as well as mispricing, and accommodate deviations from the efficient market hypothesis. In addition, they can flexibly incorporate risk and other performance variables. For instance, a successful new-product introduction will generate higher revenues, which may prompt the manufacturer to reduce sales promotions in subsequent periods. The combination of increased sales and higher margins may improve earnings and ultimately firm value. Because of such chains of events, the full performance implications of the initial product introduction may extend well beyond its immediate effects. A persistence model, estimated as a vector autoregressive model (VAR), can be specified for a firm's brand as follows:

$$\begin{aligned}
 \begin{bmatrix} \Delta FV_t \\ \Delta INC_t \\ \Delta REV_t \\ MKT1_t \\ MKT2_t \end{bmatrix} &= C + \sum_{n=1}^N B_n \times \begin{bmatrix} \Delta FV_{t-n} \\ \Delta INC_{t-n} \\ \Delta REV_{t-n} \\ MKT1_{t-n} \\ MKT2_{t-n} \end{bmatrix} + \Gamma \times \begin{bmatrix} X_{1t} \\ X_{2t} \\ X_{3t} \end{bmatrix} \\
 &+ \begin{bmatrix} u_{FV_t} \\ u_{INC_t} \\ u_{REV_t} \\ u_{MKT1_t} \\ u_{MKT2_t} \end{bmatrix} \tag{3.4}
 \end{aligned}$$

with B_n , Γ vectors of coefficients, $[u_{FV_t}, u_{INC_t}, u_{REV_t}, u_{MKT1_t}, u_{MKT2_t}]' \sim N(0, \Sigma_u)$, N the order of the system based on Schwartz' Bayes Information Criterion (SBIC), and all variables expressed in logarithms or their changes (Δ). The first, second and third equations explain the changes in, respectively, an appropriate firm value metric (FV), bottom-line (INC), and top-line financial performance (REV) of firm i . The fourth and fifth equations represent two marketing actions, i.e., ($MKT1_t$) and ($MKT2_t$). For example, Pauwels *et al.* (2004) considered a brand's new-product introductions and sales promotions. The exogenous variables in this dynamic system ($X_{1t}, X_{2t}, X_{3t} \dots$) could include controls such as the Carhart four factors and the impact of stock-market analyst earnings expectations (Ittner and Larcker, 1998). The impact of contemporaneous shocks is incorporated through the elements of Σ_u .

Persistence models provide baseline forecasts of each endogenous variable, along with estimates of the shock or surprise component in each variable. If the EMH holds and all relevant new information is incorporated immediately, then the lagged terms in the firm value of Equation (3.4) will be zero. By contrast, lagged effects indicate that information is incorporated only gradually. For example, Pauwels *et al.* (2004) show that investors in the automotive industry need about ten weeks to fully incorporate the impact of a new-product introduction on stock returns.

The system's representation of persistence models makes these models more comprehensive than the single-equation approaches, yet VARX models are not without limitations. First, persistence models are inherently reduced-form models, unless structural restrictions are imposed on the contemporaneous causal ordering. Second, VAR models can result in over-parameterization, which may affect the quality of individual parameter estimates. Finally, the data requirements are substantial, and the data-generating process is assumed constant over time. To alleviate this concern, the stability of results over time needs to be tested, which may lead to moving-window estimation to capture response shifts (e.g., Pauwels and Hanssens, 2007).

Persistence models involving time-series methods have been well suited to firm value metrics and their sensitivity to new marketing

information (e.g., Colicev *et al.*, 2018). There have been several applications of VAR models in the finance literature (e.g., Campbell and Shiller, 1988; Dufour and Engle, 2000; Vuolteenaho, 2002). The past few years have witnessed a growth in panel-VAR applications in marketing-finance research, which exploit cross-sectional variation to supplement temporal fluctuations. Kang *et al.* (2016) model the interactions among CSR, corporate social irresponsibility and firm value using a structural panel-VAR model that allows contemporaneous effects among some of the endogenous variables, using annual data on more than 4,500 firms for nineteen years (i.e., a large cross section and short time series).⁴ Huang and Trusov (2020) investigate how the interrelationship between firm financial performance and executive compensation varies with productivity and customer satisfaction levels, by incorporating interactions in a panel-VAR model. Overall, persistence models are likely to gain importance in the toolkit for marketing-finance researchers, given the increased availability of granular data such as weekly or even daily observations (e.g., Colicev *et al.*, 2018).

3.6 Feedback Models

Feedback models incorporate the reverse effect from stock market performance to marketing actions (see Edeling *et al.*, 2021). The central premise with feedback models is that managers look at stock returns for information, actively respond to that information, and do so differently, depending on whether the information is “good news” or “bad news.” If the manager has both public and private information on a firm’s investment opportunities while investors in stock markets only have public information, market signals provide no new knowledge to managers. However, as noted by Park *et al.* (2019, p. 39), “a growing literature stream in financial economics (e.g., Bai *et al.*, 2016; Edmans *et al.*, 2017) documents that investors also have some private information that managers do not have, and thus capital market prices affect the

⁴Note that a bias in estimation may occur in panel VAR models, due to the presence of lagged endogenous variables on the right-hand side of the equations. The bias becomes negligible for longer time series (e.g., $T > 30$), see e.g., Kennedy (2003). A well-known bias correction method is due to Arellano and Bond (1991).

real economy through the managerial learning channel (for a literature review, see Bond *et al.*, 2012).”

Prior literature suggests that there are two reasons that stock prices are informative to managers. First, although an individual investor may be less informed than the manager, the market aggregates diverse pieces of information from many different traders who, collectively, may be more informed (Glosten and Milgrom, 1985; Kyle, 1985). Second, optimal marketing decisions depend not only on internal information managers may have but also on external market information they do not have, such as the demand by consumers, the competitive landscape, the state of the economy, etc. As a result, stock prices can reveal traders’ private information that is otherwise not available to managers and, thus, affect managers’ beliefs about their own firms’ prospects. Consistent with these ideas, Luo (2005) finds that merging firms extract information from the market reaction to merger announcements and consider it in subsequent deal closing decisions.

Park *et al.* (2019) formulate investor feedback models in the context of pharmaceutical marketing. Prior to FDA approval, pharmaceutical firms use market research to attempt to predict consumer demand for a drug under development, but managers are often uncertain about how responsive their new drug sales will be to marketing activities. Since investors may be current or potential consumers of the drug, their reactions (i.e., changes in stock purchases/sales) to new drug approval may reflect consumers’ preferences and marketing responsiveness for the drug. Therefore, it is likely that abnormal stock returns at drug approval include substantial unanticipated information about the drug’s excess sales potential. Signals received from the capital market reaction at drug approval help managers update their beliefs, which in turn, leads firms to react at and after the drug approval event with changes to marketing expenditures. Their findings are discussed in Section 4 of this monograph.

3.7 Customer Relationship Models

Recently, a new strategic approach to firm valuation has emerged from the marketing-finance literature, which monetizes the expected value of

a firm's customer relationships as a proxy for the firm's future financial outlook. This is achieved by deriving the *customer equity* of the firm, the sum of expected net revenues from current customers and future customer acquisitions. Gupta *et al.* (2004) pioneered this approach and applied it to the valuation of several high-technology firms. They report a high customer retention \rightarrow firm value elasticity (around 5), which draws attention to the strategic importance of generating high customer satisfaction levels. Schulze *et al.* (2012) expanded on this work by incorporating debt and non-operating assets in the calculations. They, too, report a higher-than-unity elasticity of customer equity on shareholder value. McCarthy *et al.* (2017) demonstrated that publicly disclosed customer data are sufficient to derive customer-based corporate valuations and that this can be done even for non-contractual products and services (McCarthy and Fader, 2018). Section 4 will elaborate on this important development in marketing metrics.

Edeling *et al.* (2021) also examined the extent to which the papers used multi-method approaches. In total, they identify 384 methods used in the 248 papers surveyed. Such multi-method studies contribute to both a more robust assessment of the relationship between marketing and finance and broader insights from a single paper.

4

Marketing and Firm Value Findings

Using the various metrics and methods described above, marketing scholars have investigated marketing's impact on firm value in a variety of ways. These studies are important because they *highlight the extent to which marketing provides firm value signals* to the investor community above and beyond the firm's short-term earnings. Thus, any discovered positive effect may be viewed as investors recognizing the *investment* quality of marketing, i.e., any resulting benefits are expected to materialize in the future.

To provide a structure to this section, we organize the findings in two broad categories: the impact of marketing assets on firm value, and the impact of specific marketing actions. For marketing assets, we include brand equity, customer equity, customer satisfaction, and market leadership. Next, we consider marketing actions such as product innovation, product quality, advertising, price promotion and distribution.

We also address fundamental changes due to digital marketing, and we examine the impact of external events including product recalls and data breaches. We further consider a relatively recent form of external events – brand activism and firm's reactions to it. Given the importance of human capital factors, employees and top management team, we

include a discussion of their impact on firm value. Finally, we discuss how movements in firm value impact marketing decisions.

For each subsection we first review the available literature in detail and then formulate a *general* finding. Table 4.1, taken from Edeling *et al.* (2021) presents a quantitative summary of firm-value effects in specific studies that form the basis for our overview.

4.1 Marketing Assets and Firm Value: Brand and Customer Relationships, and Market Leadership

4.1.1 Brand Equity, Customer Equity, Customer Satisfaction and Market Leadership

Unlike sales and profits, which are *flow* metrics, these long-term measures are *stock* metrics. Chief among these are two marketing-driven assets: *brand equity* and *customer equity*. Brand equity refers to the financial value to the firm of customers' perception of the brand. For example, how much more future revenue and profit margin can Coca-Cola expect relative to a lesser known competitor brand in the same sector? Customer equity is equivalent to a firm's expected future income streams, but rather than deriving this number from a product perspective, it is derived from a customer perspective. For example, how many new customers can a firm expect to attract and what is the retention rate and profit margin of its existing and new customers?

Since both brand equity and customer equity are critically dependent on various marketing activities, these asset metrics place the marketing function front and center in the economic welfare of a business. In particular, *customer satisfaction* with a brand's offering plays a key role in driving both assets. Do investors recognize the importance of customer satisfaction? It is often assumed that investors (and, therefore, the stock market overall) react only to changes in firm's expected future earnings, which sometimes leads to a perception that "only quarterly earnings reports matter." However, careful empirical research into the determinants of stock prices and stock returns have shown otherwise. For example, Fornell *et al.* (2016) document that, over a 15-year period (2000–2014), an investment portfolio based on firms' customer satisfaction scores, would have yielded a cumulative return of

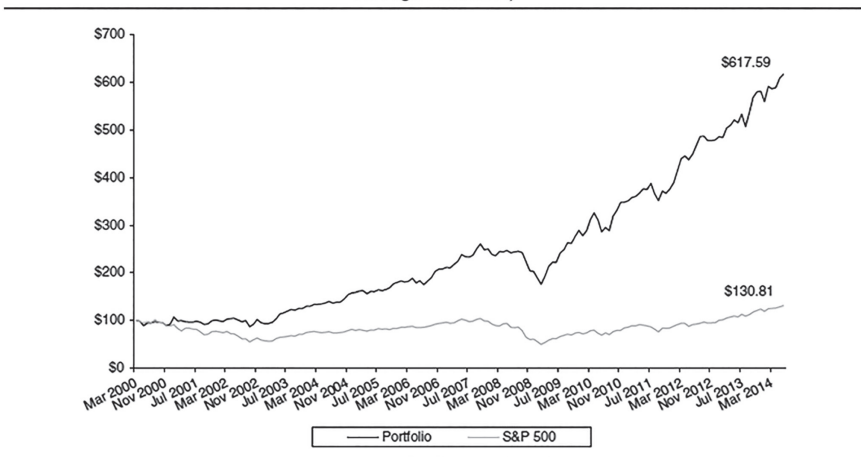
Table 4.1: Overview of results for the top ten marketing and financial-market variables

Variable (category)	Behavior of financial-market participants										Financial-market performance															
	Analysts					Investors					Level/return metrics					Risk-volatility metrics										
	Earnings forecast error	Trading volume	Stock return	Tobin's q/Market-to-book ratio	Market-capitalization	Cash flow	Idiosyncratic risk	Systematic risk	Total stock risk	Cash-flow volatility	# ^a	7	8	184	65	12	9	28	25	6	6					
1. Advertising expenditures (actions)	36	1	0	0	12	8	5	8	3	2	1	0	0	0	1	0	2	0	1	0	1	3	0	1	0	
2. Customer satisfaction (assets)	32	0	0	1	15	9	0	13	0	1	3	0	1	3	0	0	1	2	2	0	1	4	0	0	1	0
3. New product introductions (actions)	24	1	0	0	15	5	0	13	1	0							2	2	0	2	1	0	1	2	0	
4. CSR (actions)	17	0	0	1	3	4	4	6	6	1							0	1	1	0	1	1				
5. Alliances (configuration)	16	12	4	4	0	1	0										0	0	2	0	0	1				
5. Customer-based brand equity (assets)	16	8	11	0	1	0	0									2	0	0	2	3	1	1	2	0	0	1
6. R&D expenditures (actions)	15	1	2	1	6	2	1														0	0	1			
7. Product quality (assets)	8	1	0	0	5	5	0	1	0	0																
7. Financial brand equity (assets)	8	2	2	0	3	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0		
8. Product recall (actions)	6	1	2	5																						
8. Earned social media volume (assets)	6	1	0	0	7	2	0														1	3	0			
8. Earned social media negative sentiment (assets)	6	1	0	0	0	1	7														3	0	0			
9. Earned social media positive sentiment (assets)	5	0	1	0	2	1	0														0	2	2			
9. Myopic management (actions)	5	2	1	5																						

^aTotal number of studies that investigate the impact of marketing on financial variables. For example, 32 studies examine the effect of customer satisfaction on any financial variables (not just the ones listed here). Similarly, seven studies assess the effect of any marketing variables on earnings forecast error.

Source: Edeling *et al.* (2021).

Cumulative Returns on \$100 Invested in Customer Satisfaction: Portfolio Versus the S&P 500 (April 2000 Through June 2014)

**Figure 4.1:** Customer satisfaction and firm value.

Source: Fornell *et al.* (2016).

518 percent. By comparison, and as shown in Figure 4.1, investing in the S&P500 would have yielded a cumulative return of 31 percent over the same time period. Note that this long sample period includes the major financial crisis that started in 2007. The key takeaway is that customer satisfaction movements, even though they are not financial metrics, contain information about the future of a business that is *not* picked up by earnings and other financial data collected at the same time. The marketing profession offers, of course, an intuitive explanation for this phenomenon: satisfied customers are more likely to remain loyal to the brand, to increase their consumption of the brand and/or to recommend the brand to others, all of which impact future revenue generation in ways that current cash flows may not (yet) reflect.

Note that the Fornell *et al.* (2016) findings do not necessarily imply that the customer satisfaction effect on firm value is permanent. It is possible that, since that publication, financial markets have *learned* to incorporate this intangible metric in valuations, so that the customer satisfaction return premium would disappear. If so, that would demonstrate the market's ability to incorporate new findings and thus improve

its valuation reliability going forward. New research is needed to verify if there is any evidence in favor of this market learning effect.

In technical terms, customer satisfaction strengthens both *brand equity* and *customer equity*. These two marketing asset metrics, in turn, have a positive impact on firm value, holding constant other determinants of firm value. This relationship was quantified in an empirical generalizations study by Edeling and Fischer (2016). On the basis of nearly 500 estimates from 83 different scientific studies, the authors derive that the average brand strength \rightarrow firm value elasticity is **0.33**, while the customer relationship \rightarrow firm value elasticity is **0.72**. Thus, marketing actions that strengthen the brand and/or the firm's customer relationships should be viewed as *investments*, not merely expenses as they sometimes are. In comparing these elasticities, it is important to note that brand strength may well *contribute* to customer relationship strength (Calder, 2020). In some sectors where brand associations such as "prestige" are important, one metric (brand) may be a subset of the other (customer relationship), which could explain why the latter commands a higher firm-value elasticity.

The empirical generalizations in Edeling and Fischer (2016) are, by definition, restricted to publicly listed firms. However, their results were corroborated in a study on the relative importance of brand and customer relationship value for over 5000 mergers and acquisitions between 2003 and 2013 (Binder and Hanssens, 2015). These mergers and acquisitions cover both public and private firms and reflect actual prices paid for companies. The results are shown in Figure 4.2. They demonstrate the *inverse movement* of these two metrics over time. Brand importance declined from about 19 percent of purchase price to around 9 percent, whereas customer relationship value increased from about 8 percent to 17 percent over the same time period. The authors' interpretation of these trends is that the recent abundance of high-quality customer data enables companies to maintain stronger customer relationships than in the past. While brand remains an important asset, monitoring and modeling these customer data have become increasingly relevant in customer relationship management and, ultimately, in driving firm value.

The Declining Value of Brands (and the Rise of Customer Relationships)

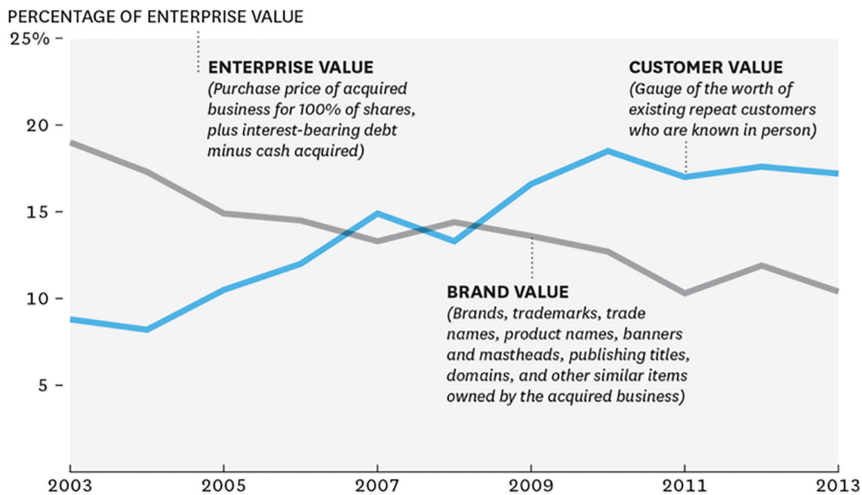


Figure 4.2: The evolution of brand value vs. customer relations value in mergers and acquisitions.

Source: Binder and Hanssens (2015).

The impact of *branding* has been studied in more detail (see the comprehensive overviews in Srinivasan *et al.*, 2012 and in Swaminathan *et al.*, 2022). Research using a commercial brand equity metric, Interbrand, has indicated that strong brands not only deliver greater stock returns than a relevant benchmark portfolio, but also do so with lower risk (Madden *et al.*, 2006). Additionally, research has suggested that the impact of marketing variables on Tobin's *q* may be moderated by the type of branding strategy adopted by a firm (Joshi and Hanssens, 2010; Rao *et al.*, 2004). A corporate branding strategy was found to offer higher returns than either a house-of-brands (HOB) strategy or a mixed-branding strategy.

Hsu *et al.* (2016) extend Rao *et al.*'s (2004) investigation of brand portfolio strategy and firm performance by (1) adding sub-branding and endorsed branding architectures, (2) clarifying the "mixed" architecture to constitute a branded house(BH)-HOB hybrid and remove sub- and endorsed branding variants, and (3) quantifying the impact of a company's brand architecture strategy on stock risk in addition to

returns. To highlight the significance of their results, they provide an illustration assuming that \$1000 is invested in January 1996 in each of five portfolios of firms with different brand architectures. By December 2006, the investment in sub-branding companies triples to \$3640; this same \$1000 investment in BH companies increases to \$1820 by year-end 2006. In contrast, \$1000 invested in the HOB increases by 50% to \$1540 and for endorsed branding and the BH-HOB hybrid, the investment yields only insignificant increases to \$1240 and \$1140, respectively. This pattern of risks and returns along the architecture continuum is nonlinear; risk/return tradeoffs do not manifest in an ordered manner moving from BH to HOB with increased distance from the corporate brand. Although there is intense discussion about the admission of brands into financial accounts in the accounting community (Barth *et al.*, 1998; Lev and Sougiannis, 1996), there is little disagreement that brands are intangible assets of a firm.

Similarly, the investor impact of customer satisfaction has been studied in more detail, using the widely used ACSI database, a customer satisfaction measure from Interbrand (Colicev *et al.*, 2018) and Amazon customer reviews (Huang, 2018). However, the routes by which customer satisfaction increases firm value can be different. For example, customer satisfaction can increase customer loyalty, as studied by Larivière *et al.* (2016). It can also generate earnings surprises (as studied by Fornell *et al.*, 2016) or analyst recommendations (analyzed by Luo *et al.*, 2010). Finally, the customer satisfaction → firm value relationship is likely characterized by industry-specific heterogeneity (Larivière *et al.*, 2016) and by interactions with other mindset metrics (Himme and Fischer, 2014). Further research is needed on the relative importance and incidence of these influence routes.

Finally, we comment on *market leadership*, an asset that is often pursued by firms. Does market share impact firm value? The answer is “weakly so”, according to an empirical generalizations study by Edeling and Himme (2018). Based on 89 prior studies, they estimate the average market share → financial performance elasticity to be **0.13**. This is an interesting result: it confirms, on the one hand, that market leadership (as quantified by market share) matters financially, but on the other hand, the relationship is weaker than that of either brand strength or

customer relationship strength. Therefore, *how* a firm obtains a high market share matters, for example is it through brand strength or through low prices? We also note that the market share \rightarrow financial performance relationship differs across subcategories, for example it is stronger for B2B than for B2C.

Overall result: Marketing assets have a positive and substantial impact on firm value. Among those, customer relationship strength trumps brand strength and market leadership.

4.2 Marketing Actions and Firm Value: Product Innovation, Product Quality, Advertising, Price Promotion and Distribution

A priori we do not expect specific marketing actions to have as strong a firm-value impact as that of the brand assets reviewed above. That hypothesis is supported by the empirical-generalizations study in Edeling and Fischer (2016): they report an overall advertising \rightarrow firm value elasticity of 0.04, which is positive but much smaller than their brand asset elasticities.

4.2.1 Product Innovation

Among marketing actions, *product innovation* is the strongest driver of firm value. This finding, in and of itself, supports the view that the stock market is long-run oriented, despite the popular belief to the contrary. Indeed, product innovation is both costly and risky, and generally results in positive cash flows well after the introduction period. Despite these realities, investors generally react positively to new-product announcements and the reaction holds in the long run (i.e., one year later).

The former result, due to Sood and Tellis (2009), is based on over 1000 innovation announcements made in the *Wall Street Journal* and results in an average 0.5% abnormal return for the innovator. Interestingly, the finding is limited to product innovations that are significant enough to warrant a press release by the innovator. The one-year after result, described in Sorescu and Spanjol (2008), is based on over 20,000

innovations introduced by 153 consumer packaged goods firms. The long-term effect is found to be greater for *radical* rather than *incremental* innovations, which is in line with the Sood and Tellis (2009) finding, in the sense that radical innovations are more likely to receive press coverage than incremental ones.

Studying firm value impact of product innovation also reveals an interest pattern in the *timing* of these reactions. According to the efficient market hypothesis (EMH) in finance, investors act immediately and fully to any value-relevant new information about the firm. However, on the consumer side, product innovations take much longer to reach their full commercial potential. For example, new automotive models typically have a six-year life span, with a mid-life minor innovation around the third year. The question arises as to how long it takes the investor community to fully absorb the firm-value impact of an automotive innovation.

According to a study by Pauwels *et al.* (2004), the answer is *about ten weeks* from initial product launch, at least in the U.S. market. In this market, detailed numbers on sales and average prices by brand and model are communicated to the auto and financial communities on a weekly basis. Thus, under these reasonably transparent conditions, investor (stock price) reaction is much faster than consumer reaction. On the other hand, the reaction is not fully efficient, as it takes approximately ten weeks of accurate sales and price data for investors to fully absorb the financial value impact of an innovation (illustrated for one major automotive innovation in Figure 4.3).

Srinivasan *et al.* (2009)'s results, also within the context of the automobile industry, highlight the stock market benefits of pioneering innovations. Compared with minor innovations, they find that pioneering innovations have a greater impact on stock market valuation.

Related to the product-related marketing action, Kurt *et al.* (2021) recently propose that changes in firms' warranty payments are informative signals that enable investors to form timely expectations about potential changes in *product quality*. Their survey shows that warranty payments affect potential investors' product quality assessments and stock investment likelihood. Their quantitative analysis reveals an asymmetric stock market reaction: unanticipated increases in warranty

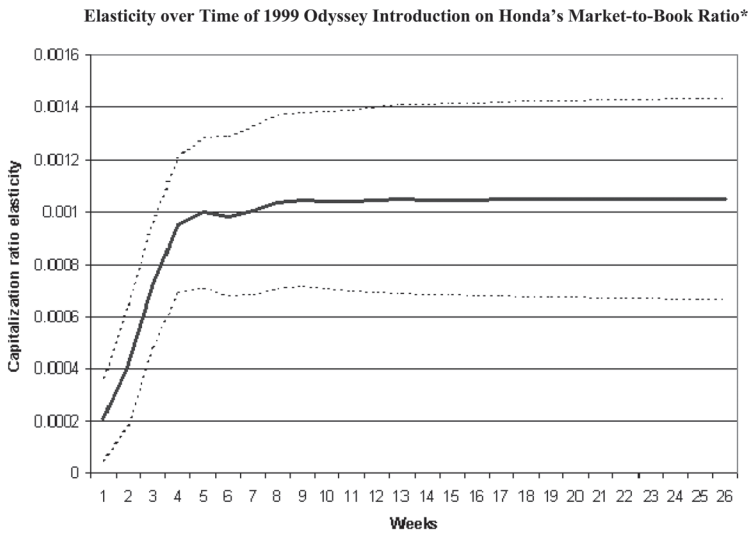


Figure 4.3: Product innovation and firm value.

Source: Pauwels *et al.* (2004).

payments (which signal quality “losses”) lower stock returns but unanticipated decreases do not affect stock returns. The authors also caution that offering warranties in general does not ensure greater firm value. Firms whose product quality declines can experience lower firm value even if they offer warranty programs.

4.2.2 Advertising

The rationale for the advertising \rightarrow firm value effect is visually represented in Figure 4.4 (Joshi and Hanssens, 2010). Conceptually, there are two reasons for this effect to occur: spillover and signaling. *Spillover* occurs when the advertising not only generates incremental revenue and profits (the direct effects in Figure 4.4), but also contributes to brand strength (the indirect effects in Figure 4.4), which we know is a driver of firm value. *Signaling* occurs when advertising is perceived by investors as a sign of the financial well-being or competitive viability of the firm. It is, however, important that the *level* of advertising is perceived as reasonable, as opposed to excessive. Indeed, Joshi and Hanssens (2010) show that, in two industries (personal computers and

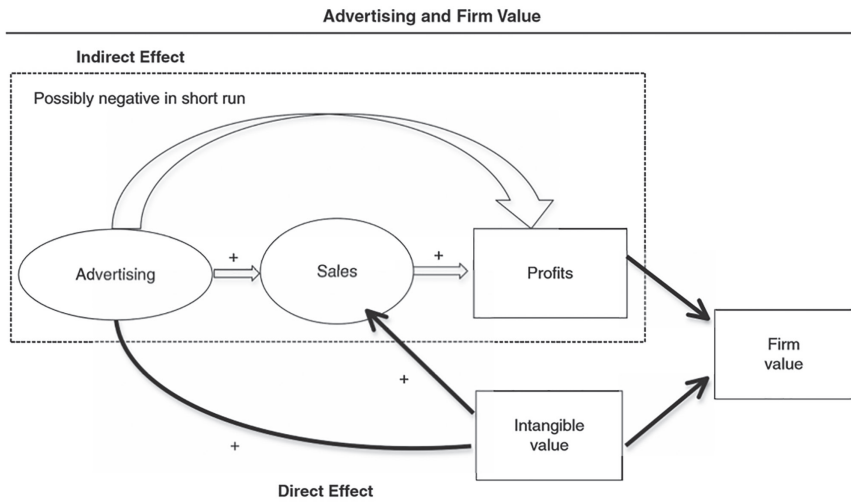


Figure 4.4: Advertising and firm value.

Source: Joshi and Hanssens (2010).

sporting goods) a positive advertising → firm value impact occurs only when two conditions are met: the direct effect (on consumer demand) is positive, and the advertising spending level is in the vicinity of the profit-maximizing (Dorfman-Steiner) level. The latter finding is corroborated in the movie industry (Joshi and Hanssens, 2009): motion pictures with high production budgets are often advertised very heavily before and during the opening week of their theatrical release. Even when the resulting opening-weekend box-office results are strong, the studio stock returns on the following Monday are typically negative, suggesting investor disappointment after a “great expectations” week that was induced by the aggressive advertising.

Relatedly, in the context of the automobile industry, Srinivasan *et al.* (2009) find that advertising support for new products (through the interaction effect) has a positive stock return impact beyond general-purpose advertising (i.e., the main advertising effect). Because advertising and innovation are at the brand (or vehicle model) level, advertising support will draw consumer attention to the brand’s innovation to subsequently drive customer traffic and new product sales to the dealer.

In the context of the pharmaceutical industry, Osinga *et al.* (2011) focuses on the shareholder value effects of direct-to-consumer advertising (DTCA) and direct-to-physician (DTP) marketing efforts. Results suggest that investors value DTCA positively because it leads to higher stock returns and lower systematic risk (e.g., McAlister *et al.*, 2007). DTCA increases idiosyncratic risk, which does not affect investors who maintain well-diversified portfolios. In contrast, DTP marketing has only modest positive effects on stock returns and idiosyncratic risk. Their outcomes indicate that evaluations of marketing expenditures should include a consideration of the effects of marketing on multiple stakeholders, not just the sales effects on consumers.

An important additional insight on the advertising → firm value effect was provided by Du and Osmonbekov (2020). They find that advertising spending connects more strongly with firm value for public firms that are not being tracked by financial analysts. Thus, to some extent, advertising acts as a source of information about the financial well-being of firms, absent more objective financial-analyst reports. Similar insights were provided by Liaukonyte and Zaldokas (2022), using minute-by-minute TV advertising data for a large sample of firms. They find that, within 15 minutes of airing, an average TV ad leads to an 8 percent increase in Google searches for financial information about the advertiser. These searches translate into larger trading volumes for the advertiser's stock. Thus advertising that is typically intended for consumers can have a measurable impact on financial markets.

4.2.3 Price Promotion

There is *one exception* to the general pattern that marketing initiatives are generally evaluated positively by the investor community: the effects of sales promotions (involving temporary price cuts) were found to have a negative impact on firm value in the automotive sector (Srinivasan *et al.*, 2004). This may be surprising at first, because of the well-known positive and strong effects of price promotions on brand sales. However, the investor community is more sensitive to the *reduction in profit margins* that these promotions entail, and to the fact that the use of these promotions may well *signal a weakness in future demand* for the

Table 4.2: Product innovation, sales promotion and firm value

Impact of Product Introduction and Rebates on Performance and Firm Value (Mean Values)				
	New Product Introductions		Sales Promotions	
	Short Run	Long Run	Short Run	Long Run
Top-Line Performance				
Firm revenue	2.39	4.30	1.48	7.94
Bottom-Line Performance				
Firm income	.37	.60	1.09	-1.28
Firm Value				
Ratio of market capitalization to book value	.02	1.14	.12	-.78

Notes: For readability, we multiplied elasticity estimates by 1000.

Source: Pauwels *et al.* (2004).

brand. The contrasting effects of innovation vs. price promotions on firm value are illustrated in Table 4.2. It provides yet another example of the fundamental long-term nature of investor behavior.

4.2.4 Distribution

Despite the fact that distribution has a sizeable effect on firm revenue, with elasticities ranging from 0.8 to 1.7 (Hanssens, 2015), not much research has been conducted on the distribution→ firm value relationship. Geyskens *et al.* (2002) report a positive relationship of channel additions on firm value, indicating that investors perceive the gains of such additions to outweigh their costs. On the other hand, negative stock returns are observed for firms that may be hurt by internet channel cannibalization.

Franchising is a form of distribution that has received special attention on its firm value impact. Franchisors seek to maximize firm value by managing investments both in tangible and intangible assets and in the mix of company and franchised outlets, yet little is known about how investors respond to shifts in these strategic decisions.

Srinivasan (2006) examines the relationship between a firm's dual distribution strategy and its intangible value. She proposes that a firm's dual distribution strategy (measured by the proportion of its franchised units to its total units) affects its intangible value (measured by Tobin's q), both independently and jointly with a set of firm characteristics. Using panel data on 55 publicly listed U.S. restaurant chains for the period 1992–2002, findings suggest that dual distribution increases intangible value for some firms (e.g., large firms such as IHOP Corporation, McDonald's Corporation, and Wendy's International) but decreases intangible value for others (e.g., smaller firms such as California Pizza Kitchen and Diedrich Coffee), both independently and in conjunction with other firm characteristics.

Franchisors seek to maximize firm value by managing investments both in tangible and intangible assets and in the mix of company and franchised outlets. Hsu *et al.* (2017) assess how investors respond to shifts in both of these strategic decisions within franchise systems. They provide evidence on how investors in publicly traded franchises evaluate both the ownership structure and the strategic investment emphasis between intangible assets (e.g., brand) and tangible assets (e.g., plant and property), using data from 73 franchised firms in multiple industries from 1999 to 2008. They find that an increase in the proportion of franchised units is negatively associated both with stock returns and idiosyncratic risk. In contrast, an increase in the emphasis on strategic investments in intangible assets is positively associated, both with stock returns and idiosyncratic risk. Moreover, strategic investment emphasis moderates the strength of the effect of franchise ownership structure when firms franchise internationally. Their findings shed light on the influence of franchisors' strategies in investor decision making and serve as a guide for franchisors in the formation of ownership structure and investment emphasis strategies and policies.

Overall result: Product innovation generally has a positive effect on firm value. Other marketing actions have a small positive or neutral effect on firm value, except price promotions, which can have a negative impact.

4.3 Digital Marketing

The digital marketing age provides an unparalleled mechanism for the rapid and wide dissemination of new information and for gauging audience reactions to it. In addition, new performance metrics have become available, including consumer search and consumer chatter measures and social media postings. Thus it is worthwhile to allocate a separate discussion of investor effects that are unique to the digital age.

Despite the dominant role of digital marketing in recent practice, few studies have examined the relationship between digital marketing and firm value. In terms of online communication actions, the limited published evidence suggests that the firm-value impact of online advertising lies between the effect of offline national and regional advertising (e.g., Sridhar *et al.*, 2016). They observe that a 1% increase in national advertising (1) decreases regional advertising effectiveness by .08% and (2) decreases online advertising effectiveness by .43%. Furthermore, a 1% increase in regional advertising (1) decreases national advertising effectiveness by .35% and (2) decreases online advertising effectiveness by .36%. And, a 1% increase in online advertising (1) decreases national advertising effectiveness by .15% and (2) decreases regional advertising by .03%. Such negative interaction effects among these three media types hint at weak communication integration or a ceiling effect of the impact of advertising in general.

Bayer *et al.* (2020) show that paid search advertising has a more positive effect on *sales* than offline advertising, consistent with paid search being closer to the actual purchase decision and having enhanced targeting abilities. They also find that display advertising has a relatively more positive effect on *Tobin's q* than offline advertising.

In the social media sphere, firms' owned social media has both direct and indirect (via its effect on mindset metrics) effects on abnormal stock returns (Colicev *et al.*, 2018). Both the volume of earned social media and the negative sentiment of social media affect stock prices significantly. In addition, the financial market highly values the introduction of mobile apps, where the intended purpose of the app (e.g., social interaction vs. purchase) plays a moderating role (Boyd *et al.*, 2019; Cao *et al.*, 2018). App designs emphasizing social-oriented features enhance the

positive effect of branded apps on firm value. In contrast, app designs that emphasize transaction-oriented features have a significant, negative effect on the effect of branded apps on firm value.

Earned online buzz has been researched more extensively. Negative chatter hurts firm performance, but positive chatter does not improve firm value to the same extent in absolute value (Colicev *et al.*, 2018; Tirunillai and Tellis, 2012). Negative chatter is also likely to affect competitor stock returns positively in general, though negatively during product recalls (Borah and Tellis, 2016; Tirunillai and Tellis, 2012). However, social media is a stronger predictor of stock returns and stock risk than more traditional online buzz metrics, such as online search and web traffic (Luo *et al.*, 2013). Twitter tweets and Amazon product reviews are especially important predictors of abnormal returns (Bartov *et al.*, 2018; Huang, 2018).

Overall result: Digital marketing provides several new customer-generated metrics that can have positive or negative firm-value effects.

4.4 Impact of External Events: Product Recalls, Data Breaches, and Brand Activism

4.4.1 Product Recalls and Data Breaches

So far we have uncovered that companies' strongest marketing-related stock-return levers are new-product introductions and improvements in critical market-based assets such as customer relationships, brand equity, and perceived product quality. In our digital age, these result in higher volumes and positive sentiments of online buzz which, in turn, exert a positive influence on firm value.

At the same time, the digital age enables an increasing number of external messages about firm performance problems such as **product recalls**. In particular, Borah and Tellis (2016) and Hsu and Lawrence (2016) demonstrate that the impact of product recalls is amplified by online chatter that increases their negative stock return effects. Similar patterns have been reported in the context of publicized **data breaches**, which threaten consumers' privacy. Customer data breaches have been found to harm the stock return of both the affected firms and their

competitors (Kashmiri *et al.*, 2017; Martin and Murphy, 2017). Firms can mitigate such negative consequences by giving customers control of their data via opt-out options (Martin *et al.*, 2017) and by investing in stronger marketing capability and IT know-how in the top management team (Kashmiri *et al.*, 2017).

Overall, the firm-value impact of negative external events such as product recalls and data breaches is strong, in part because it deviates in tone from the typically positive messages that dominate the marketing ecosystem. As a recent illustration, when soccer star Ronaldo removed two bottles of Coca-Cola from his desk in a widely televised press interview, favoring bottled water instead, The Coca-Cola Company reportedly suffered a \$4 billion loss in market value overnight.

A relatively recent form of external events is firm's reaction in the form of **brand activism**. Given rising investor expectations of political and socio-economic issues such as immigration, gender and race equality, political ideology, income inequality, climate change, and gun control, firms often find themselves in situations—whether by deliberate action or by unintended association—in which they confront bad publicity, consumer protests, value-damaging boycotts, and legal action (Cohen and Gurun, 2018). Increasingly salient are socio-economic and political issues that have the potential to affect brands and firm value (see Bhagwat *et al.*, 2020; Chen *et al.*, 2021; Fournier *et al.*, 2020 and 2021; Josephson *et al.*, 2019).

Moorman (2020) defines “brand political activism” as public speech or actions focused on partisan issues made by or on behalf of a company using its corporate or individual brand name. An essential feature of political activism is the partisan nature of the issue on which the activities are focused. It implies there will be firm stakeholders — investors, consumers, employees, policy makers — who may want to maintain the status quo on these issues and who may not align with the firm's actions. Therefore, when the firm engages in brand activism, it risks the support of stakeholders who disagree. Brand activism could have significant effects on firm value and stock market performance, which vary depending on how the activism aligns with the views of a firm's customers, employees and state regulators.

Bhagwat *et al.* (2020) examined a dataset of 293 instances of corporate activism between January 2011 and October 2016 by 149 firms throughout the United States. The hot-button sociopolitical issues were selected based on the Pew Research Center's 2014 Political Polarization in the American Public report and Political Polarization and Typology Survey. The researchers measured changes in stock market value in the five-day window surrounding a corporate activism event and found that, if a company's action was misaligned with its key stakeholders (e.g., customers and employees), the company's stock market value decreased 2.45% on average, compared to market expectations; if aligned with their stakeholders' values, stock prices increased by 0.71%.

Overall, it is important for firms to understand how external events affect brand and stock performance and to learn how to respond. Done well, firms can uncover firm value-creating opportunities but done badly, it creates firm risk events that need to be managed.

Overall result: With increased information flows, certain problematic external events – such as product recalls and data breaches – can have a pronounced negative impact on firm value. Corporate activism as a reaction to external developments needs to be approached carefully, as it, too, can backfire on investor sentiment.

4.5 Impact of Employee Satisfaction

With the service sector now comprising over 80 percent of the economy of advanced nations, much of marketing activity is channeled through customer-facing employees. This raises an important question about the role of employee satisfaction, in addition to that of customer satisfaction. In this context, Edmans (2011) studied the yearly abnormal return to the intangible asset *employee satisfaction*, as measured via Fortune's "100 Best Companies to Work for in America" ranking. He reported an abnormal return of 3.5%, which is approximately one-third of the yearly abnormal return to customer satisfaction of 10.8% (Fornell *et al.*, 2016). In addition, Green *et al.*'s (2019) study finds that firms with improving online employee reviews on Glassdoor.com also outperform firms that experience declines in these crowdsourced ratings.

Firms' activities to improve their human capital must be considered *in parallel* to their customer-focused marketing initiatives. Vomberg *et al.* (2015) find significant human-capital effects on Tobin's q, cash flow, and cash flow volatility *only when* the customer-based brand equity of a firm is high. Specifically, they find a significant and positive interaction term between human capital and brand equity for Tobin's q and cash flow but a negative interaction term for cash flow volatility. In the presence of a strong brand, employees are motivated to use their human capital to create greater customer value, which increases customer loyalty and firm financial performance. They argue that resulting customer immobility ultimately leads to more stable cash flows. Similarly, Groening *et al.* (2016) show that positive (negative) actions toward employees are an especially positive (negative) signal for investors when they co-occur with positive (negative) customer-related achievements. In addition, online job postings by firms, especially those that signal hiring for growth, have positive effects on stock prices (Gutiérrez *et al.*, 2020).

In conclusion, research shows that, insofar as employee satisfaction is an enabler of higher customer satisfaction, it is evaluated positively by the investor community.

Overall result: When employee satisfaction is viewed as important for generating customer satisfaction, it can have a measurable impact on firm value.

4.6 Top Management Characteristics: CEO and CMO Characteristics

4.6.1 CEO Characteristics

As we have shown above, firm value impact of marketing actions and marketing assets has received a great deal of attention in the marketing literature. However, firms are not faceless corporations; individuals such as CEOs set their strategies. Upper echelon and strategic leadership theories hold that chosen strategies derive from these individuals' opinions, which are a function of their personalities, demographics, experiences, and values. Building on recent literature, Ya *et al.* (2020)

conduct a systematic review on how CEO characteristics can influence innovation and stock returns. Their systematic review focuses on four main characteristics—personality, demographics, experience and compensation—to arrive at a set of propositions on innovation and stock returns. Several of these propositions have been tested in the literature. Among the most salient findings in this area are: investor markets react positively to outside CEO appointments and to increases in the proportion of CEO's equity-based compensation. A complete list of empirical findings may be found in Ya *et al.* (2020).

4.6.2 CMO Characteristics

Compared with CEOs, research on CMOs and firm value is relatively limited. Nascent literature in marketing has focused on the presence of a CMO in a firm and its relationship to firm performance. Recent research finds that CMO presence improves firm performance (e.g., Germann *et al.*, 2015; Nath and Bharadwaj, 2020). In terms of CMO characteristics, Table 4.3 summarizes the early research, similar to that for the CEO variables discussed previously.

With respect to demographics, Wang *et al.* (2015) find that CMOs with MBA degrees increase abnormal stock returns. They argue that management education enhances the CMO's ability to build and integrate organizational resources and competencies that increase cash flows and, thus, firm performance.

Research has also investigated the impact of CMO experience and tenure. The accumulated CMO knowledge of informational tasks gives investors “the comfort of knowing the firm is being led by those who have done it before” (Cohen and Dean, 2005, p. 686). Examining nonlinear effects, Wang *et al.* (2015) document a U-shaped relationship between CMO tenure and abnormal returns. They explain their U-shaped findings as follows. First, investors penalize firms that hire CMOs with low levels of experience, highlighting the importance of the marketing function and the individual occupying the CMO position. Second, compared to an inexperienced CMO, an experienced CMO may be better able to navigate organizational structures and processes and fight organizational inertia to bring about strategic change. Wang *et al.* (2017)

Table 4.3: CMO characteristics and stock returns: Overview of findings

Characteristic	Illustrative Article	Explanatory Variable Operationalization	Focal Variable Operationalization	Findings
Demographics				
Education	Wang <i>et al.</i> (2015)	MBA degree	Abnormal returns	CMO's MBA degree is positively associated with firm's abnormal stock returns.
Education	Homburg <i>et al.</i> (2014)	MBA degree	Venture capital funding	CMO's MBA degree is positively related to the likelihood of funding.
Experience				
Tenure	Wang <i>et al.</i> (2017)	Length of time executives have been involved in their current firm's strategies and activities	Tobin's q	A central network position in a CMO's mobility network (information reach) is positively associated with firm performance if CMO tenure is high.
Tenure	Wang <i>et al.</i> (2015)	Total number of years the new CMO has worked in any position or organization before taking the new position	Abnormal returns	The relationship between CMO experience and firm's abnormal stock returns is U shaped.

Continued.

Table 4.3: Continued

Characteristic	Illustrative Article	Explanatory Variable Operationalization	Focal Variable Operationalization	Findings
Role-specific experience/firm-specific experience	Boyd <i>et al.</i> (2010)	Appointee has past experience as a CMO and with appointing firm	Abnormal stock returns	The abnormal stock return when a firm faces high customer power is higher if the appointed CMO has past CMO experience; returns from a CMO appointment when a firm faces high customer power are lower if the appointee has past experience working for the appointing firm.
Functional experience	Homburg <i>et al.</i> (2014)	Marketing experience: number of years in marketing-related jobs Industry experience: number of years the executive has worked in the respective industry	Venture capital funding	CMO marketing and industry experience are positively related to the likelihood of funding.
Compensation				
Compensation	Bansal <i>et al.</i> (2016)	Deviations in CMO compensation	ROA; stock returns	Deviations from CMO's predicted compensation is negatively related to firm performance.
Equity incentive	Kim <i>et al.</i> (2016)	CMO equity incentive	Market value	Greater equity incentives allocated to CMO are positively related to firm value.

Source: Ya *et al.* (2020).

find that as CMO tenure increases, the positive relationship between information reach and stock returns grows stronger, implicitly indicating lower cash volatility. Past marketing experience endows CMOs with tacit knowledge and strategic insights that enable them to enrich the organization with fresh perspectives early in their tenure, resulting in improved cash flows and higher firm residual value (e.g., Ya *et al.*, 2020). Boyd *et al.* (2010) find that, when the CMO has greater role-specific experience, the negative effect of customer power on the firm's market value is lower.

Research has paid little attention to how CMO personality and incentives affect stock returns or innovation activities, with two notable exceptions. First, Kim *et al.* (2016) demonstrate that CMO equity compensation has an impact on firm value over and above that of other top management team members and that the CMO's strategic discretion, which focuses on a CMO's latitude in choosing the objectives marketing seeks to achieve, positively moderates this relationship. Specifically, greater the CMO's strategic discretion, higher is the impact of CMO equity compensation on firm value. Second, Fabrizi (2014) ties CMO equity incentives to Tobin's q to find that the positive effect that CMO's equity incentives have on shareholder value is partially mediated by marketing intensity. He argues that the increase in firm value from incentivizing the CMO can be due to the long-term marketing investments such CMOs make. In other words, CMOs incentivized on the long-term value of the firm are likely to focus marketing investments strategically on projects that create firm value in the long run.

Overall, research on CMO personality, demographics, experience, and compensation is sparse, especially when compared with the wealth of knowledge on these factors for CEOs.

Overall result: Several CEO and CMO characteristics have been found to influence investor sentiment and therefore firm value.

4.7 Firm Value and Marketing Decisions: Reverse Causality

Last, but not least, we address the reverse causal flow between marketing and firm value, i.e., do movements in firm value have an impact on the

nature and intensity of marketing decisions? Intuitively, it makes sense that, at least in public companies, movements in stock price would influence marketing decisions. For example, a declining stock price (relative to overall market movements) may incentivize management to change course in their marketing. One option is to cut spending, another is to engage in riskier innovation initiatives.

Overall, extant research has established that managers adapt their managerial decision making in response to stock returns and volatility signals (Chakravarty and Grewal, 2011; Focke *et al.*, 2020). This reverse causal flow has been demonstrated mainly in the areas of *marketing budget setting* and *innovation*. A major finding, due to Mizik (2010), is that managers have a tendency to engage in *myopic marketing management* and cut marketing and R&D spending to inflate earnings in the short term, to the detriment of long-term performance (Bendig *et al.*, 2018). This tendency is more visible when the firm's stock price is declining in relative terms: by marketing cost cutting and thus inflating short-term earnings, managers assume that the firm value decline will be reversed. This is an interesting finding, in light of the earlier insight that the stock market is fundamentally long-run oriented. Thus the question arises to what extent managers' fundamental misinterpretation of investor behavior undermines their companies' performance.

Second, in the area of innovation, Markovitch *et al.* (2005) find that, when their stock prices underperform relative to competition, pharmaceutical firms implement more high-risk innovation strategies than their peers. Another important insight, due to Wies and Moorman (2015), is that, after going public, firms introduce more new products but fewer breakthrough innovations. While more research is needed on the financial performance → marketing behavior connection, we can already conclude that the relationship does not always serve the best interest of the firm. There may be a disconnect between investor behavior and managers' *perception* of investor behavior.

Fortunately, there are some documented cases where firm value impact influences subsequent marketing decisions in a positive way. A case in point is the study of pharmaceutical marketing behavior by Park *et al.* (2019). They reveal that positive capital market signals lead to higher marketing spending and, importantly, higher marketing

effectiveness. In other words, when facing uncertain consumer demand for their new products, firms “listen” to investor reactions and use them as motivation to invest more marketing funds in the new product.

The findings in Park *et al.* (2019) are similar to those of Mian *et al.* (2018): firms increase their advertising expenditures significantly when the general investor sentiment (measured by variables such as number of initial public offerings in the market) is high. However, unlike the results in Park *et al.* (2019), this behavior does not serve the firm’s best interest, as advertising is found to be less effective when general investor sentiment runs high.

Finally, a recent meta-analysis in the organizational behavior literature (Porto and Foxall, 2019) documents that, across a large sample of nearly 12,000 public firms in the US and UK, financial gains only partially feed back to subsequent marketing investments. Thus, “marketing is effective in generating financial gains, but it is not a sustainable activity, requiring managers to inject more money to do more marketing” (Porto and Foxall, 2019, pp. 138–139).”

This overview reveals the need for more research on the investor signal → marketing action relationship. In particular, we need more insight on the conditions under which firm-value-driven marketing decisions are beneficial (as in Park *et al.*, 2019) vs. not beneficial (as in Mian *et al.*, 2018).

Overall result: There are several documented cases of stock-prices movements driving changes in marketing managerial decisions. However, these decisions do not necessarily serve the best interest of the firm.

Table 4.4 summarizes our overall results on the impact of marketing-related drivers on firm value.

4.8 Conclusions

The discipline of marketing is intensely focused on customer value creation that serves the interest of the firm and its stakeholders. The discipline of finance is uniquely positioned to value firms and thus provide important guidance for investors. Marketing can help finance obtain a better understanding of the determinants of firm value, and

Table 4.4: Marketing and firm value findings

Marketing Driver	Overall Result on Firm Value
1. Brand Equity, Customer Equity, Customer Satisfaction and Market Leadership	Marketing assets have a positive and substantial impact on firm value. Among those, customer relationship strength trumps brand strength and market leadership.
2. Marketing Actions: product innovation, product quality, advertising, price promotion and distribution	Product innovation generally has a positive effect on firm value. Other marketing actions have a small positive or neutral effect on firm value, except price promotions, which can have a negative impact.
3. Digital Marketing	Digital marketing provides several new customer-generated metrics that can have positive or negative firm-value effects.
4. Product recalls & data breaches	With increased information flows, certain problematic external events – such as product recalls and data breaches – can have a pronounced negative impact on firm value. Corporate activism as a reaction to external developments needs to be approached carefully, as it, too, can backfire on investor sentiment.
5. Employee Satisfaction	When employee satisfaction is viewed as important for generating customer satisfaction, it can have a measurable impact on firm value.
6. CEO and CMO characteristics	Several CEO and CMO characteristics have been found to influence investor sentiment and therefore firm value.
7. Reverse Causality	There are several documented cases of stock-prices movements driving changes in marketing managerial decisions. However, these decisions do not necessarily serve the best interest of the firm.

finance can help marketing better understand firm value impact of various marketing actions and assets. Thus the interface of these two disciplines provides an important bridge between value creation and value measurement in management.

This monograph has delved into the components of this interface. First, we have presented the academic and managerial reasons why the marketing-finance interface is an important endeavor. Next, we have reviewed the various research methods by which firm value can be assessed and connected with marketing. Third, we have organized and reviewed the extensive number of findings that have emerged in the literature. We have structured this material along key questions such as: what is the impact on firm value of marketing assets and specific marketing actions? How have the digital age and certain external events changed or augmented these effects? What is the role of human capital in the firm, specifically that of employee satisfaction, and CEO and CMO characteristics? Finally what do we know about the reverse impact, i.e., how do movements in firm value impact certain marketing decisions?

Not only has academic research on the marketing-finance interface revealed important conceptual and empirical findings, but it has also started to influence marketing practice. In this context we refer to an excellent book by Chris Burggraeve (2021), a former CMO of several large international firms. The book lays out a framework – called Alpha M – for firms to diagnose and improve the quality of their marketing and, in so doing, relies heavily on the scholarly findings on marketing and firm value.

We end with an important observation by Fornell *et al.* (2006): “The tacit link between buyer utility and the allocation of investment capital is a fundamental principle on which the economic system of free market capitalism rests.” Research on the marketing-finance interface is ideally positioned to test this premise in a marketing context and to point to areas that are in need of improvement. While several major patterns have emerged from this body of knowledge, they also point to some important areas in need of future research. It is our hope that this monograph will stimulate researchers in finance and marketing to tackle these and other pressing questions.

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