



Marketing Spending to Firm Value: A Systematic Literature Review of Brand Equity as a Strategic Mechanism in Pharmaceutical Firms

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ABSTRACT

Pharmaceutical firms invest heavily in professional promotion, consumer communication, digital engagement, and corporate branding, yet the financial consequences of these expenditures remain difficult to isolate. This study systematically reviews how marketing spending contributes to firm value and examines brand equity as the principal strategic mechanism connecting expenditure with shareholder outcomes. A structured integrative review was conducted using SPAR-4-SLR and PRISMA principles. Forty-five substantive publications were synthesized from marketing, finance, branding, and pharmaceutical research, supported by five methodological sources. The evidence shows that marketing spending rarely creates firm value as a simple contemporaneous expense-to-return relationship. Its contribution is stronger when repeated and credible communication accumulates into brand awareness, perceived quality, differentiation, trust, and loyalty. These brand assets improve revenue growth, pricing power, cash-flow persistence, resilience, and capital-market expectations while reducing demand volatility and selected forms of firm risk. In pharmaceutical markets, however, the mechanism depends on clinical evidence, regulatory legitimacy, product life-cycle stage, and coordination across patients, prescribers, payers, regulators, and distributors. Excessive or poorly substantiated promotion can weaken trust and destroy value. The study proposes an evidence-based spending-brand equity-firm value framework and a research agenda for longitudinal mediation tests, portfolio-level measurement, and cross-country regulatory comparison. Managers should evaluate marketing through brand-equity and risk-adjusted value metrics rather than short-term sales response alone.

Keywords: promotional accountability; intangible assets; shareholder returns; healthcare branding; regulatory legitimacy

1. INTRODUCTION

Marketing expenditure is one of the most visible but contested corporate investments. It is recorded as a current-period expense in conventional accounting, while its economic effects may persist by creating awareness, preference, relationships, data, distribution support, and reputational capital. The resulting mismatch between accounting treatment and economic duration makes marketing vulnerable during budgeting and financial review. Senior executives can observe the amount spent, but they often cannot demonstrate whether the expenditure created an enduring market-based asset or merely produced temporary sales. This accountability problem is especially important in industries where communication is expensive, adoption is uncertain, and value depends on several stakeholders rather than a single buyer.

The pharmaceutical industry offers a demanding setting for examining this problem. Firms communicate with prescribers, pharmacists, patients, payers, regulators, hospitals, distributors, and investors. Their spending may include professional detailing, medical education, disease-awareness activity, direct-to-consumer communication where permitted, digital content, congress participation, patient-support programs, corporate reputation initiatives, and portfolio branding. These activities can expand category demand, influence product choice, improve treatment

knowledge, and strengthen stakeholder confidence. At the same time, pharmaceutical promotion is constrained by scientific evidence, product labeling, safety disclosure, reimbursement rules, ethical expectations, and country-specific advertising restrictions. Communication that appears commercially effective in the short run can create legal, reputational, and financial exposure when claims exceed evidence or when promotional intensity weakens public trust.

Marketing-finance research provides a broad explanation of why marketing can affect shareholder value. Market-based assets such as brands and customer relationships influence the level, timing, persistence, and risk of future cash flows (Srivastava et al., 1998). Advertising can affect firm value indirectly by increasing demand and profitability and directly by expanding public information, signaling managerial confidence, or changing investor expectations (Joshi & Hanssens, 2010; Du & Osmonbekov, 2020). However, the empirical association between spending and value is not uniformly positive. Meta-analytic evidence indicates that marketing assets have substantially larger value elasticities than advertising expenditure itself, suggesting that spending matters primarily when it is converted into an asset (Edeling & Fischer, 2016). Other studies similarly show that advertising may have weak profitability effects unless it supports genuine customer value creation, innovation, or a differentiated brand position (Tackx et al., 2017).

Brand equity is a plausible strategic mechanism for resolving this inconsistency. Customer-based brand equity arises when brand knowledge produces a differential response to marketing (Keller, 1993). Its principal dimensions include awareness, perceived quality, associations, differentiation, trust, and loyalty (Aaker, 1991; Yoo et al., 2000). From a financial perspective, these dimensions are not ends in themselves. They can increase acquisition, retention, price realization, cross-selling, negotiation power, and cash-flow persistence while lowering vulnerability to competitive action and adverse market conditions. Empirical research links brand equity and brand value to market capitalization, profitability, acquisition value, lower risk, and stronger investor performance (Madden et al., 2006; Bahadir et al., 2008; Rego et al., 2009; Ha et al., 2021). Brand equity therefore represents an accumulated stock through which repeated marketing activity may become financially productive. In the Indonesian over-the-counter medicine market, brand and price cues were likewise associated with purchase decisions, alongside halal labeling (Ismail et al., 2022).

The mechanism is more complex in pharmaceutical markets than in conventional packaged goods. The user, decision maker, payer, and regulator may be different actors. A patient may recognize a product but lack decision authority; a physician may prescribe but not bear the full cost; a payer may determine access; and a regulator may restrict the claims that create differentiation. Product-level equity is also affected by clinical outcomes, safety, patent protection, generic or biosimilar entry, manufacturing reliability, and corporate reputation. Consequently, pharmaceutical brand equity is partly consumer based, partly professional, partly institutional, and partly scientific. It must be supported by evidence and legitimacy rather than communication intensity alone.

Existing reviews have examined the marketing-finance interface, advertising and stock performance, and shareholder-value outcomes (Srinivasan & Hanssens, 2009; Rasul et al., 2022; Srinivasan & Hanssens, 2022; Madathil et al., 2025). Yet three gaps remain. First, the literature often treats marketing spending, brand equity, and firm value in separate streams. Second, brand equity is frequently modeled as a direct predictor of performance rather than as a mechanism that explains when spending becomes a strategic asset. Third, pharmaceutical evidence is dispersed across promotion effectiveness, prescribing behavior, direct-to-consumer advertising, corporate reputation, and over-the-counter branding, with limited integration into firm-value theory.

This study addresses these gaps through a systematic integrative literature review. It asks four questions: (1) Through which pathways does marketing spending influence firm value? (2) Which dimensions of brand equity mediate this relationship? (3) Which pharmaceutical characteristics strengthen, weaken, or reverse the mechanism? and (4) Which theoretical and empirical priorities should guide future research? The study contributes by integrating marketing productivity, market-based asset theory, customer-based brand equity, and pharmaceutical promotion research into a single explanatory framework. It also distinguishes value creation from value capture and identifies clinical evidence, regulatory legitimacy, product life cycle, and channel integration as critical boundary conditions.

The review has practical significance for pharmaceutical managers and investors. Treating marketing as a strategic investment does not imply that more spending is always desirable. It requires a traceable chain from activity to stakeholder response, brand-equity accumulation, cash-flow consequences, and risk-adjusted firm value. This perspective can improve budget allocation, portfolio governance, communication ethics, and the credibility of marketing in executive decision making.

2. LITERATURE REVIEW AND CONCEPTUAL DEVELOPMENT

2.1. Marketing Spending as an Investment in Market-Based Assets

Marketing productivity research emphasizes that expenditure should be evaluated through a chain of effects rather than a single-period sales ratio. Spending first changes stakeholder knowledge, attitudes, access, or behavior; these intermediate outcomes affect product-market performance; and product-market outcomes influence cash flows and valuation (Rust et al., 2004a; Hanssens & Pauwels, 2016). This chain helps explain why contemporaneous return-on-investment measures can be misleading. Some activities generate immediate conversion, while others build memory structures, trust, category knowledge, professional familiarity, or corporate legitimacy that influence later decisions. Evidence from Indonesian entrepreneurship settings also indicates that coordinated marketing-mix execution influences both product competitiveness and purchase intention (Ismail et al., 2025).

The market-based asset perspective formalizes this logic. Brands, customer relationships, channel relationships, and market knowledge can accelerate cash flows, increase their level, reduce volatility, and extend duration (Srivastava et al., 1998). These effects correspond directly to discounted cash-flow valuation. Faster adoption brings cash flows forward; loyalty and pricing power increase their level; retention and reputation extend their duration; and lower demand uncertainty reduces the discount rate.

Marketing spending creates value only when it improves one or more of these valuation components after considering cost and competitive response. Empirical evidence supports both indirect and direct effects. Joshi and Hanssens (2010) show that advertising can affect firm value through sales and through capital-market responses. Du and Osmonbekov (2020) identify an information pathway in which advertising increases public information flow, with analyst coverage moderating the direct valuation effect. Bayer et al. (2020) find that online display and paid search advertising contribute differently to sales and Tobin's Q relative to offline advertising. These findings imply that channel choice matters and that investors may interpret marketing signals differently from customers.

Nevertheless, expenditure alone is an unstable predictor. Edeling and Fischer's (2016) meta-analysis demonstrates that marketing-asset effects on firm value are much stronger than advertising-spending effects. Tackx et al. (2017) find that advertising does not automatically improve profitability and becomes more productive when combined with research and development that creates customer value. Belo et al. (2014) similarly conceptualize brand capital as an asset generated through advertising investment, but the productivity of that investment depends on the accumulation process and the firm's ability to protect returns. The relevant question is therefore not whether marketing spending has value, but when it is converted into defensible brand capital.

2.2. Brand Equity as the Conversion Mechanism

Brand equity connects marketing inputs with behavioral and financial outputs. Keller (1993) defines customer-based brand equity as the differential effect of brand knowledge on response to marketing. Aaker (1991) emphasizes awareness, perceived quality, associations, loyalty, and proprietary assets. Yoo et al. (2000) show that marketing-mix elements influence brand-equity dimensions, while Buil et al. (2013) demonstrate that those dimensions affect consumer responses. Together, these studies imply a mediated sequence: marketing activity changes knowledge and evaluation; these changes become brand equity; and brand equity alters choice, price sensitivity, and relationship continuity.

Brand equity should be understood as a stock rather than a campaign outcome. Awareness and associations accumulate through repeated exposure and experience. Perceived quality reflects both communication and product performance. Trust is reinforced when claims, service, safety, and organizational behavior remain consistent. Loyalty develops through successful use, reduced perceived risk, and relational continuity. This stock can depreciate when communication is inconsistent, product quality fails, adverse information is mishandled, or a competitor establishes a more relevant position. Therefore, a large budget may coexist with declining equity when execution lacks credibility or strategic coherence.

Financial research demonstrates several forms of value capture. Ailawadi et al. (2003) propose revenue premium as an outcome-based brand-equity measure. Stahl et al. (2012) show that brand equity affects acquisition, retention, and profit margin, indicating that different dimensions may create value through different customer processes. Madden et al. (2006) report superior shareholder returns for strong brands, while Mizik and Jacobson (2008) show that brand strength contains information relevant to financial markets. Brand value also affects merger and acquisition outcomes (Bahadir et al., 2008), portfolio performance (Morgan & Rego, 2009), and firm value in emerging markets (Konuk et al., 2025).

Risk is equally important. Strong brands can stabilize demand, reduce customer defection, and provide a temporary buffer during turbulence. McAlister et al. (2007) link advertising and research and development to lower systematic risk through intangible-asset creation. Rego et al. (2009) connect consumer-based brand equity with firm risk, while Ha et al. (2021) show that brand-equity dimensions have asymmetric effects on upside potential and downside risk. Tuli and Bharadwaj (2009) similarly demonstrate that customer satisfaction can reduce stock-return risk. Thus, brand equity can raise firm value even when its short-term sales effect appears modest because lower risk reduces the required return on future cash flows.

2.3. Pharmaceutical Branding and Multiple Stakeholders

Pharmaceutical marketing differs from many consumer categories because purchase and use decisions are distributed across stakeholders. Professional promotion can inform physicians about evidence, indications, dosing, and safety, but it can also shape prescribing preferences. Direct-to-consumer communication can increase awareness and encourage physician consultation, yet its social value depends on informational balance and appropriate demand. Payers and procurement organizations influence access through formulary, reimbursement, and tender decisions. Regulators establish the legitimate boundaries of claims. Distributors and pharmacies affect availability. Investors interpret commercial capability, pipeline potential, and reputational exposure. A pharmaceutical brand therefore operates simultaneously in clinical, commercial, institutional, and financial markets.

Research on pharmaceutical promotion shows that spending categories interact. Narayanan et al. (2004) find that professional detailing and direct-to-consumer advertising can be synergistic and that their returns differ. Narayanan et al. (2005) show that marketing communication has changing roles during the evolution of a new product category. Shapiro (2018) identifies both business-stealing effects and positive category spillovers from prescription-drug advertising. Larkin et al. (2017) demonstrate that institutional restrictions on detailing can alter prescribing behavior. These studies caution against evaluating a channel in isolation and support a portfolio view of communication.

Pharmaceutical brand equity depends heavily on perceived quality, credibility, and trust. Basile (2019) illustrates how brand equity can be developed in the over-the-counter segment, where consumers have greater decision involvement. Prescription products require additional professional and institutional equity: confidence in evidence, safety monitoring, manufacturer reliability, access support, and scientific engagement. Corporate brand equity can also transfer across products by signaling quality systems, research competence, and supply reliability, while a major safety or compliance failure can create negative spillovers across a portfolio.

Ethical and regulatory conditions are not peripheral controls; they are part of the value mechanism. Schwartz and Woloshin (2019) document the scale and evolution of medical marketing in the United States, while DiStefano et al. (2023) show that direct-to-consumer spending varies with product characteristics. Ventola (2011) reviews both claimed benefits and concerns surrounding pharmaceutical advertising. The evidence indicates that communication can improve awareness and information, but promotional excess may encourage inappropriate demand, increase scrutiny, or damage trust. In financial terms, legitimacy influences both cash-flow expectations and risk.

2.4. Conceptual Position and Review Questions

The literature supports a three-stage strategic mechanism. Marketing spending is the resource commitment; brand equity is the accumulated market-based asset; and firm value is the risk-adjusted financial outcome. Spending can also create a direct information or signaling effect, but the more durable pathway is mediated by brand equity.

In pharmaceutical firms, the pathway is conditional on evidence quality, regulatory legitimacy, product life-cycle stage, and consistency across professional, consumer, payer, and corporate channels. The review therefore organizes evidence around the following questions:

- RQ1. What direct and indirect pathways connect marketing spending with firm value?
- RQ2. Which brand-equity dimensions convert spending into revenue, margin, cash-flow, and risk outcomes?
- RQ3. How do pharmaceutical market structures and regulatory conditions affect the mechanism?
- RQ4. Which research designs and measures are needed to establish causal and managerial relevance?

3. RESEARCH METHODOLOGY

3.1. Research Design and Review Protocol

This study uses a systematic integrative literature review. An integrative approach is appropriate because the research question spans marketing, finance, brand management, health policy, and pharmaceutical promotion and includes conceptual, econometric, meta-analytic, and review evidence. The protocol follows the transparency principles of PRISMA 2020 and the assembling, arranging, and assessing logic of SPAR-4-SLR (Page et al., 2021; Paul et al., 2021). Guidance on rigorous review design and framework-based synthesis was also drawn from Snyder (2019), Paul and Criado (2020), and Paul et al. (2024).

Structured searches were undertaken in July 2026 across Google Scholar, PubMed, Crossref-indexed records, and publisher databases, supplemented by backward and forward citation chaining from seminal marketing-finance and pharmaceutical-promotion studies. Search strings combined four concept groups: marketing input (marketing spending, advertising expenditure, promotion, detailing, digital advertising), strategic asset (brand equity, brand value, brand capital, customer-based brand equity), financial outcome (firm value, shareholder value, Tobin's Q, stock return,

risk, profitability), and industry context (pharmaceutical, prescription drug, over-the-counter, healthcare). Searches were limited to English-language scholarly works published from 1993 through July 2026, while a small number of foundational books and earlier conceptual contributions were retained when essential to construct definition.

A publication was eligible when it met at least one of three criteria: it directly examined marketing expenditure and financial outcomes; it explained how brand equity affects customer, accounting, or capital-market outcomes; or it provided pharmaceutical-specific evidence about promotion, branding, prescribing, or regulatory communication that could clarify the mechanism. Studies limited to purchase intention without a brand-equity or financial pathway were excluded. Duplicate records, incomplete citations, non-scholarly promotional material, and studies whose findings could not be connected to the review questions were also excluded.

The final synthesis comprised 45 substantive publications and five methodological sources. The substantive corpus included conceptual studies, meta-analyses, systematic or bibliometric reviews, panel and time-series models, event studies, brand-

valuation studies, and pharmaceutical-market analyses. Each study was coded for marketing input, brand-equity construct, financial outcome, theoretical pathway, context, research design, and boundary condition. Evidence was then compared through a theory-context-characteristics-methodology logic. The objective was analytical generalization rather than vote counting because constructs, time horizons, and outcome measures varied substantially across studies.

Quality assessment emphasized publication in peer-reviewed outlets, construct clarity, data-source transparency, temporal ordering, treatment of endogeneity, and correspondence between the empirical design and the claimed mechanism. Greater interpretive weight was assigned to meta-analyses, longitudinal designs, quasi-experimental studies, and studies that explicitly separated intermediate marketing outcomes from firm value.

Pharmaceutical findings were interpreted cautiously when derived from one therapeutic category or one regulatory jurisdiction. No claim of exhaustive coverage of every proprietary database is made; instead, the review provides an auditable corpus and replicable search logic that can be updated as database access and new studies become available.

Table 1. Systematic Review Protocol

Protocol Element	Operational Decision	Rationale
Review design	Systematic integrative review using SPAR-4-SLR and PRISMA transparency principles.	Allows synthesis across marketing, finance, brand, and pharmaceutical evidence.
Time period	1993-July 2026, with foundational earlier books retained where required.	Begins with the modern customer-based brand-equity formulation and captures current marketing-finance work.
Sources	Google Scholar, PubMed, Crossref-indexed records, publisher databases, and citation chaining.	Combines broad interdisciplinary coverage with health-specific retrieval.
Core search concepts	Marketing spending/promotion; brand equity/value/capital; firm/shareholder value/risk; pharmaceutical/healthcare.	Directly maps the input-mechanism-outcome-context structure.
Inclusion	Peer-reviewed or foundational scholarly work with a clear link to at least one review question.	Prioritizes theoretical and managerial relevance.
Exclusion	Duplicates, incomplete records, non-scholarly material, and consumer-only outcomes without a strategic asset or financial pathway.	Prevents conceptual drift and unsupported inference.
Final corpus	45 substantive publications plus five methodological sources.	Provides an auditable evidence base for thematic synthesis.
Synthesis	Coding by theory, context, constructs, methods, mechanisms, outcomes, and boundary conditions.	Supports comparison despite heterogeneous measures and designs.

Source: Authors' review protocol based on PRISMA 2020 and SPAR-4-SLR principles.

4. RESULTS AND DISCUSSION

4.1. Finding 1: Marketing Spending Has Multiple and Time-Dependent Value Pathways

The strongest cross-study conclusion is that marketing spending cannot be represented by a universal contemporaneous elasticity. Effects differ by channel, objective, time horizon, competitive response, product maturity, and outcome measure. Performance advertising can generate observable short-term response, whereas corporate reputation or scientific communication may operate through slower changes in trust and risk. A campaign can increase current sales but reduce long-run value if it relies on discounting, attracts low-retention customers, or creates regulatory exposure. Conversely, spending with a small immediate sales coefficient may still create value by informing investors, supporting future launches, or stabilizing cash flows. The literature identifies two broad routes. The operating route runs from spending to stakeholder response, sales, margin, and cash flow.

The information route runs from spending to public visibility, information availability, and investor expectations. Joshi and Hanssens (2010), Osinga et al. (2011), and Du and Osmonbekov (2020) provide evidence that advertising can influence valuation beyond measured sales response. This direct pathway is particularly relevant when financial markets possess incomplete information about demand potential or commercial capability. However, signaling is credible only when subsequent performance and product value support the message.

Channel differences also matter. Bayer et al. (2020) demonstrate that display, paid search, and offline advertising have distinct associations with performance and value. Pharmaceutical firms face even greater channel heterogeneity because professional promotion, patient communication, payer evidence, medical education, and corporate reputation have different audiences and decision roles. The implication is that aggregate selling, general, and administrative expenditure is an inadequate proxy for the strategic content of pharmaceutical marketing.

4.2. Finding 2: Brand Equity Explains Why Similar Spending Produces Different Financial Returns

Across the corpus, brand equity is the most consistent explanation for variation in spending productivity. Marketing expenditure that produces only exposure is easily copied and rapidly depreciates. Spending that creates distinctive, favorable, credible, and accessible knowledge changes the probability of future choice and builds an asset. This distinction is consistent with the large difference between advertising-spend and marketing-asset elasticities identified by Edeling and Fischer (2016). It is also consistent with the finding that advertising works more effectively when it supports innovation and customer value rather than attempting to substitute for them (Tackx et al., 2017).

Five brand-equity dimensions are especially relevant. Awareness and salience reduce search costs and increase consideration. Perceived quality and scientific credibility reduce uncertainty. Differentiation creates preference and weakens direct price comparison. Trust lowers perceived clinical and relational risk. Loyalty and stakeholder preference increase retention and cash-flow persistence. These dimensions are related but not interchangeable. Ha et al. (2021) show that brand-equity dimensions have different risk effects, implying that a single aggregate index may obscure the mechanism. Pharmaceutical measurement should therefore separate patient awareness, physician confidence, payer acceptance, and corporate trust.

Brand equity also reconciles short- and long-horizon evaluation. Campaign-level metrics capture reach, engagement, requests, or prescriptions. Brand metrics capture the cumulative state created by multiple campaigns and experiences. Financial metrics capture the value of expected future outcomes. A strategic measurement system should connect all three levels. Without the intermediate brand state, managers cannot determine whether a strong campaign response created a durable asset or merely shifted demand temporarily.

4.3. Finding 3: Brand Equity Creates Firm Value Through Five Financial Mechanisms

The first mechanism is demand expansion and acquisition. Awareness, relevance, and credible communication increase the probability that stakeholders consider, request, prescribe, reimburse, stock, or recommend a product. In pharmaceuticals, category expansion can occur when communication encourages diagnosis or consultation, while brand-level acquisition occurs when a product is preferred within the category. Shapiro (2018) demonstrates that

prescription advertising can produce both category spillovers and business-stealing effects, indicating that the firm-level return depends on competitive structure.

The second mechanism is margin and pricing power. Strong perceived quality and differentiation reduce direct comparability and may support price realization, preferred access, or lower promotional dependence. In regulated pharmaceutical markets, price is often negotiated or administered, so pricing power may appear as formulary position, tender success, reduced rebates, or a favorable product mix rather than unrestricted list-price increases. Brand equity can still improve economic value by making evidence and service benefits more credible to decision makers.

The third mechanism is cash-flow persistence. Loyalty, professional familiarity, treatment continuity, and corporate confidence can increase retention and extend product use. Stahl et al. (2012) show that brand equity affects acquisition, retention, and profit margin through different routes. For pharmaceutical firms, persistence also depends on clinical suitability, adherence, supply continuity, and switching costs. Brand equity cannot compensate for poor therapeutic outcomes, but it can strengthen continuity when products are clinically comparable and stakeholder confidence matters.

The fourth mechanism is risk reduction. Brands can buffer competitive shocks, reduce demand volatility, and support recovery after market turbulence. Rego et al. (2009), McAlister et al. (2007), and Ha et al. (2021) provide evidence connecting brand-related assets with risk.

Risk reduction is economically important because firm value depends on both expected cash flows and the discount rate. For pharmaceutical companies, trust and corporate reputation can reduce uncertainty around launch acceptance and portfolio resilience, although safety events or compliance failures can reverse this benefit rapidly.

The fifth mechanism is capital-market interpretation. Brand strength can provide incremental information about future performance, particularly when accounting statements omit internally generated intangible assets. Mizik and Jacobson (2008), Madden et al. (2006), and Konuk et al. (2025) indicate that brand measures can be associated with investor valuation. Marketing spending may also signal confidence or increase information availability, but investors are likely to distinguish spending supported by innovation, evidence, and market outcomes from spending that merely inflates current demand.

Table 2. Results Synthesis of the Marketing Spending-Brand Equity-Firm Value Chain

Stage	Core Mechanism	Representative Evidence	Pharmaceutical Interpretation
Marketing input	Spending creates communication, access, experience, data, and visibility.	Rust et al. (2004a); Bayer et al. (2020); Du and Osmonbekov (2020).	Detailing, medical education, patient communication, digital engagement, market-access evidence, and corporate branding should be separated.
Brand-equity formation	Repeated credible activity builds awareness, quality perceptions, differentiation, trust, and loyalty.	Keller (1993); Yoo et al. (2000); Buil et al. (2013).	Equity is stakeholder specific and must be evidence based; patient awareness alone is insufficient.
Demand and margin	Equity improves consideration, acquisition, retention, and price or mix realization.	Ailawadi et al. (2003); Stahl et al. (2012).	Value may appear through prescription choice, formulary access, tender success, adherence, or reduced discount pressure.
Cash-flow persistence	Loyalty and confidence extend relationship duration and reduce churn.	Morgan and Rego (2009); Keller and Lehmann (2006).	Continuity depends jointly on brand trust, clinical suitability, and reliable supply.
Risk and resilience	Strong equity lowers volatility and buffers adverse conditions.	McAlister et al. (2007); Rego et al. (2009); Ha et al. (2021).	Corporate credibility can protect a portfolio, but safety or compliance failures create rapid negative spillovers.

Stage	Core Mechanism	Representative Evidence	Pharmaceutical Interpretation
Capital-market value	Marketing outcomes provide information about future cash flows and strategic capability.	Madden et al. (2006); Mizik and Jacobson (2008); Konuk et al. (2025).	Investors evaluate commercial capability together with pipeline, patent life, regulation, and evidence quality.

Source: Authors' synthesis of the reviewed literature cited in the table.

4.4. Finding 4: Pharmaceutical Brand Equity Is Multilevel and Evidence Constrained

The review indicates that pharmaceutical firms require at least three levels of brand equity. Product equity concerns awareness, perceived efficacy, safety, convenience, and differentiation. Corporate equity concerns trust in the manufacturer, research quality, ethical behavior, pharmacovigilance, and supply reliability. Portfolio equity concerns the credibility of a therapeutic franchise or platform and can influence the reception of line extensions and new launches. These levels can reinforce one another, but they can also conflict. A strong corporate reputation may accelerate acceptance of a new product, while a major product failure can damage the corporate and portfolio brands.

Stakeholder equity is also heterogeneous. Patients may value comprehensibility, accessibility, reassurance, and treatment experience. Prescribers emphasize evidence, clinical relevance, safety, and professional support. Payers evaluate comparative effectiveness, budget impact, and population value. Regulators emphasize accuracy, balance, and compliance. Distributors and providers value reliability and service. An activity that strengthens equity with one stakeholder can weaken it with another if the message appears promotional, incomplete, or inconsistent. Effective brand strategy therefore requires a common evidence core with stakeholder-specific value articulation.

Clinical evidence acts as the foundation of credible differentiation. Marketing can make evidence visible and relevant, but it cannot create sustainable equity when the underlying benefit-risk profile is weak. This explains why marketing and research and development are complementary in value creation. The interaction identified by Tackx et al. (2017) has particular force in pharmaceuticals: communication captures value from innovation, while innovation legitimizes communication. The strongest brand asset is created when scientific performance, patient experience, access support, and communication tell the same story.

4.5. Finding 5: Product Life Cycle and Channel Integration Determine Return Quality

The productivity of marketing changes across the product life cycle. Before and during launch, communication reduces uncertainty, supports category education, and accelerates trial. During growth, it can build differentiation, expand access, and reinforce experience. During maturity, spending may defend loyalty, extend indications, support adherence, or maintain salience. Near patent expiry or generic entry, the economic value of product-level spending depends on remaining exclusivity, switching behavior, corporate transfer effects, and the possibility of portfolio migration. Narayanan et al. (2005) show that communication roles change over category development, supporting life-cycle-specific allocation rather than fixed spending ratios.

Channel integration is equally important. Narayanan et al. (2004) identify interaction between consumer and professional promotion. A patient message that increases consultation may create little product value if physicians lack evidence or payers restrict access. Professional promotion may have weak conversion when patients cannot obtain or afford therapy. Digital activity may improve reach but create compliance risk when content is inconsistent or difficult to monitor. The relevant unit of analysis is therefore an integrated stakeholder journey, not a stand-alone channel.

Integration should not imply message uniformity. Stakeholders require different evidence and language, but the claims must be mutually consistent and traceable to the same value proposition. Integrated planning also requires coordination between marketing, medical affairs, market access, regulatory, legal, digital, sales, pharmacovigilance, and finance. This organizational capability is itself a source of value because it reduces duplication, accelerates learning, and lowers the probability of costly inconsistency.

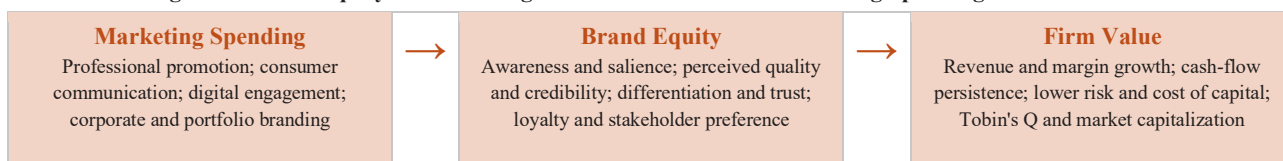
4.6. Finding 6: More Spending Can Destroy Value When Legitimacy Is Weakened

The literature does not support an unconditional positive relationship between spending and value. Promotional intensity can destroy value through low incremental response, cannibalization, competitor retaliation, short-term discounting, compliance costs, reputational damage, or inappropriate demand. In pharmaceutical markets, these risks are amplified because the product affects health and because information asymmetry is substantial. Communication that minimizes uncertainty for stakeholders can create value; communication that exploits uncertainty can generate short-term response but weaken trust and increase future risk.

Regulatory legitimacy therefore moderates both stages of the model. It affects whether spending creates credible equity and whether equity is translated into sustainable financial returns. Transparent risk communication, evidence balance, privacy protection, separation of scientific and promotional roles, and documented approval processes protect the asset. Schwartz and Woloshin (2019), Ventola (2011), and DiStefano et al. (2023) show why pharmaceutical marketing must be evaluated within a public-health and policy context rather than solely through commercial response.

The managerial implication is a disciplined optimal-spending perspective. The objective is not to maximize communication but to fund the combination of activities with the highest expected contribution to stakeholder equity and risk-adjusted cash flow. Marginal spending should be reduced when it merely repeats reach, targets low-value audiences, lacks access support, or cannot be connected to an equity objective. Spending should be increased when it resolves an evidence or information barrier, supports a valuable launch, strengthens trust, or improves channel coordination.

Figure 1. Brand Equity as the Strategic Mechanism Between Marketing Spending and Firm Value



Source: Authors' integrative synthesis based on the marketing-finance, brand-equity, and pharmaceutical-promotion literature reviewed in this study.

4.7. Proposed Integrative Framework

Figure 1 summarizes the synthesis. Marketing spending affects firm value primarily through the accumulation of brand equity, represented by awareness, perceived quality and credibility, differentiation and trust, and loyalty or stakeholder preference. Brand equity then changes revenue, margins, cash-flow persistence, and risk. A secondary direct pathway captures information and signaling effects on capital markets. The strength and direction of these relationships depend on clinical evidence, regulatory legitimacy, product life cycle, and channel integration.

The framework yields six propositions for empirical testing. First, marketing spending has a positive but heterogeneous effect on stakeholder-based brand equity. Second, brand equity mediates the effect of spending on operating and market-based firm value. Third, perceived quality, trust, and differentiation have stronger long-term financial effects than awareness alone. Fourth, the mediated effect is stronger when clinical evidence and communication are aligned. Fifth, regulatory legitimacy strengthens the persistence and risk-reduction benefits of brand equity. Sixth, integrated professional, patient, payer, and digital communication produces greater equity per unit of spending than disconnected channel investment.

Table 3. Pharmaceutical Spending Activities, Brand-Equity Objectives, and Value Metrics

Spending Activity	Primary Equity Objective	Intermediate Measures	Financial and Risk Measures
Professional promotion and medical education	Clinical credibility, familiarity, and appropriate preference.	Evidence recall, engagement quality, adoption among eligible patients, prescriber confidence.	Incremental contribution, adoption speed, persistence, compliance risk.
Patient and disease communication	Awareness, relevance, trust, and activation.	Qualified consultation, comprehension, support-program use, adherence indicators.	Category growth, acquisition cost, lifetime contribution, reputational exposure.
Market-access and payer communication	Institutional credibility and value recognition.	Formulary acceptance, evidence requests resolved, access time, tender qualification.	Net price, covered population, rebate burden, cash-flow timing.
Digital engagement	Accessibility, responsiveness, and relationship continuity.	Verified reach, content usefulness, opt-in quality, cross-channel progression.	Cost per qualified action, data value, retention, privacy and compliance risk.
Corporate and portfolio branding	Manufacturer trust, scientific reputation, and transferability.	Reputation, employer and partner preference, launch credibility, stakeholder trust.	Portfolio resilience, financing conditions, market capitalization, downside risk.
Patient-support and service programs	Experience quality, trust, and loyalty.	Enrollment, completion, service resolution, adherence, satisfaction.	Persistence, reduced churn, health-outcome value, program contribution.

Source: Authors' synthesis of the reviewed pharmaceutical marketing and brand-equity literature.

4.8. Theoretical Contributions

The first contribution is to specify brand equity as a strategic mediator rather than a parallel marketing outcome. This position explains why spending coefficients are often small or inconsistent while brand-asset coefficients are stronger. Expenditure is an input; equity is the accumulated capability to produce favorable stakeholder response; and firm value is the outcome of value creation and capture. The model therefore connects customer-based brand theory with discounted cash-flow and risk logic.

The second contribution is the distinction between operational and informational pathways. Marketing can change real demand and cash flow, but it can also change the information environment faced by investors. These pathways may occur at different speeds and can diverge. An expenditure increase may generate a favorable signal even before sales respond, but the valuation effect will not persist if brand and operating outcomes fail to materialize.

The third contribution is a pharmaceutical extension of brand equity. The review shows that equity in this industry is multilevel, multistakeholder, and evidence constrained. Patient awareness is only one element. Professional confidence, payer acceptance, regulatory legitimacy, corporate reputation, and supply reliability are integral parts of the asset. This extension helps prevent the

inappropriate transfer of consumer-goods measures into pharmaceutical research.

The fourth contribution is to place legitimacy inside the value mechanism. Ethical and regulatory quality does not merely limit promotion; it determines whether communication becomes trust or risk. This insight connects marketing accountability with public-health responsibility and suggests that compliance quality should be modeled as a productive capability rather than only a control cost.

4.9. Managerial Implications

Pharmaceutical firms should replace a budget-to-sales view with a spending-to-equity-to-value architecture. Every major activity should identify the stakeholder problem, the intended equity dimension, the behavioral indicator, the expected cash-flow effect, and the principal risk. For example, professional education may target clinical credibility, which should be measured through evidence comprehension and appropriate adoption before it is connected to contribution margin or persistence. Corporate branding may target trust and portfolio transfer, requiring reputation and launch-acceptance measures rather than immediate product sales.

Budget allocation should use marginal rather than average returns. Historical spending ratios can preserve inefficient channels and ignore changes in access, digital behavior, or product maturity.

Managers should estimate the next unit of spending against a specific equity gap and compare it with alternative uses. Controlled experiments, matched markets, physician- or account-level models, marketing-mix models, and longitudinal brand tracking can improve causal inference. Financial evaluation should include cash-flow timing and risk, not only revenue.

Brand dashboards should be stakeholder specific. Patient awareness, physician trust, payer value recognition, regulator confidence, and corporate reputation should not be collapsed without evidence that they form a common construct. At the same time, governance must ensure consistency across these measures. A cross-functional brand-equity council can connect marketing, medical, market access, regulatory, finance, data science, and pharmacovigilance and can review whether claims, experiences, access, and supply support the same value proposition.

Managers should also distinguish product, corporate, and portfolio effects. Spending on a late-life-cycle product may be justified when it supports adherence, reputation, or migration to a new therapy, but not when it simply defends volume at a negative incremental return. Corporate communication may have slower direct response but greater portfolio and risk effects. Investment decisions should therefore be made at both product and portfolio levels.

4.10. Future Research Agenda

The review reveals substantial opportunities for stronger causal and context-specific research. Future studies should move beyond cross-sectional associations and test the complete mediated chain. They should also use measures that recognize the multiple stakeholders and regulatory features of pharmaceutical markets. Table 4 organizes the agenda through theory, context, characteristics, and methodology.

Table 4. Research Agenda for Marketing Spending, Brand Equity, and Pharmaceutical Firm Value

Dimension	Priority Question	Recommended Design or Measure
Theory	Does brand equity fully or partially mediate spending effects, and when does a direct signaling pathway remain?	Longitudinal mediation, distributed-lag models, and structural models linking marketing, brand, accounting, and market data.
Theory	How do value creation and value capture differ across patient, prescriber, payer, and investor audiences?	Multistakeholder models with separate equity constructs and cross-level effects.
Context	How do advertising restrictions, reimbursement systems, and regulatory enforcement alter the mechanism?	Cross-country natural experiments and difference-in-differences designs.
Context	How does the mechanism differ for prescription medicines, over-the-counter products, generics, biosimilars, vaccines, and consumer health?	Therapeutic-class and business-model comparisons with life-cycle controls.
Characteristics	Which equity dimensions protect against downside risk and which increase upside potential?	Disaggregated brand-equity measures combined with asymmetric beta, volatility, and default-risk metrics.
Characteristics	How do product, corporate, and portfolio equity transfer across launches and adverse events?	Hierarchical brand models, event studies, and portfolio spillover analysis.
Methodology	What is the causal return of digital, professional, payer, and patient channels?	Randomized or quasi-experimental tests, granular exposure data, and channel-interaction models.
Methodology	How should internally generated pharmaceutical brand assets be valued?	Residual-income, revenue-premium, conjoint, and discounted-cash-flow approaches triangulated with market valuation.

Source: Authors' research agenda derived from the systematic integrative review.

4.11. Limitations

This review has four limitations. First, the evidence base is heterogeneous in constructs, industries, countries, and time horizons, preventing a meaningful pooled effect size. Second, pharmaceutical studies often examine prescriptions or promotional response rather than firm value, requiring careful theoretical connection rather than direct equivalence. Third, the executed search relied on broad scholarly and health databases and citation chaining rather than a single proprietary export environment; future updates should reproduce the protocol in Scopus and Web of Science and report full deduplication counts. Fourth, publication bias may favor statistically significant marketing effects, while failed campaigns and internal brand measures remain proprietary.

These limitations do not invalidate the synthesis, but they constrain causal claims. The framework should be treated as an evidence-informed model requiring direct empirical testing with matched spending, stakeholder-equity, product-market, and financial data.

5. CONCLUSION AND RECOMMENDATIONS

The review concludes that marketing spending contributes to pharmaceutical firm value when it is transformed into credible and defensible brand equity.

Spending alone is neither a strategic asset nor a guarantee of return. Its durable value arises when communication, access, service, and experience build awareness, perceived quality, differentiation, trust, and loyalty among the stakeholders who influence treatment, access, and investment decisions. These assets raise revenue and margins, extend cash-flow duration, reduce selected forms of risk, and improve capital-market expectations.

Brand equity is therefore the central mechanism that connects marketing accountability with shareholder value. In pharmaceutical firms, however, this mechanism is conditional. Clinical evidence must support the promise; regulatory and ethical legitimacy must protect trust; spending must reflect product life cycle; and professional, patient, payer, digital, and corporate channels must be coordinated. Where these conditions are absent, promotional intensity may increase short-term activity while destroying long-term value.

Managers are recommended to institutionalize a five-step evaluation process: define the stakeholder and decision barrier; specify the intended brand-equity dimension; select causal intermediate metrics; translate expected effects into cash-flow and risk measures; and compare the marginal value of alternative channels.

Boards and financial leaders should review marketing as an intangible-asset investment portfolio rather than only as a current-period expense, while maintaining strict evidence, compliance, and public-health safeguards.

Researchers should test the complete spending-equity-value chain with longitudinal, product-level, and portfolio-level data. Priority should be given to mediation, channel interaction, life-cycle change, regulatory variation, and asymmetric risk. Such work can move the field from debating whether marketing spending matters to explaining precisely how, when, and for whom it creates sustainable pharmaceutical firm value.

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Author Contributions

Conceptualization, M.I.I., M.S., and D.S.; methodology and literature synthesis, M.I.I. and D.S.; framework development, M.I.I., M.S., and D.S.; writing—original draft, M.I.I.; writing—review and editing, D.S. and M.S. All authors have read and agreed to the submitted version of the manuscript.

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Conflict of Interest

The authors declare no conflict of interest.

Data Availability

No new empirical dataset was generated. All sources analyzed in this review are identified in the reference list; the coded review matrix is available from the corresponding author upon reasonable request.

Ethical Approval

Ethical approval was not required because the study did not involve human participants, animals, personal data, or confidential corporate information.

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