

Article

Athlete Endorsement: An Analysis of Market Performance, Rivalries, and Future Trends in Sports Marketing

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Abstract: Athlete endorsements have long been adopted in sports marketing, evolving from product advertisement to strategic partnerships that shape brand equity and corporate valuation. This study aims to examine the athlete marketing and its potential for standalone brand entities, including case studies on the profitability and volatility of athlete endorsement in sports marketing. Through an analysis of abnormal returns in stock prices, the return on investment of athlete and entertainment celebrity endorsements is compared. The results show the importance of congruence between endorser and product, and that athletes deliver higher short-term market confidence and deeper niche loyalty, while entertainers provide broader demographic reach and longer endorsement longevity. The adoption of advanced technologies in sports marketing, including AI, name, image, and likeness rights, and the metaverse, is also explored. AI-driven analytics enable hyper-personalized campaigns and predictive risk management, while digital athlete twins extend brand presence into immersive virtual environments. The increasing recognition of social activism among athletes introduces values-based congruence, requiring brands to align with both performance and ideology to maintain authenticity.

Keywords: Athlete endorsements, ROI, NIL, AI, Metaverse

1. Introduction

In the present global economy, sports marketing has evolved from one that conducts simple product advertisement into one that needs a sophisticated strategy where athlete identity and brand equity are deeply intertwined. Athlete endorsement, utilizing sports celebrities and promising rookies, has become a powerful means of building consumer loyalty, creating new market segments, and sustaining competitive advantage (McCracken, 1989). Athlete endorsements, from Babe Ruth's early campaigns to Michael Jordan's transformative partnership with Nike, have demonstrated the athletes' influence on transferring cultural meaning to products, shaping consumer perceptions, and driving global brand integration (McCracken, 1989; Hassan et al., 2021).

The sports industry is experiencing a huge change in its marketing activities, driven by advanced technologies such as AI, social media platforms, and immersive digital environments such as virtual reality. These technologies are reshaping how product endorsement is created, delivered, and consumed. Social media enables athletes to act as endorsers and content creators, fostering authenticity and direct engagement with fans (Emmadi, 2017). AI-driven analytics and personalization allow companies to tailor their marketing campaigns to individual consumer preferences, while technological innovations such as digital athlete twins in the metaverse extend marketing strategy beyond physical boundaries (Hassan et al., 2026).

With such emerging technologies, it is necessary to establish new marketing strategies beyond traditional endorsement models in which sports stars provide credibility and global resonance, empowered by name, image, and likeness (NIL) rights. Micro-influencers capable of delivering high return on investment (ROI) are emerging in the sports marketing industry through digital-native engagement (Agrawal and Kamakura, 1995). While such new marketing strategies might introduce risks, scandals, or misalignments between athlete and brand values can erode brand recognition and value (Lohneiss and Hill, 2014). By examining the intersection of athlete endorsements and advanced technologies, sports marketing strategies can be formulated to prioritize authenticity, congruence, and digital integration. Such strategies underscore how to use AI and social media to enable athletes to be the active co-creators of brand narratives, fostering industry innovation and marketing effectiveness.

2. Literature Review

Athlete-based marketing traces back to the early 20th century, when icons such as Honus Wagner and Babe Ruth lent credibility to tobacco and food products. These endorsements were transactional, emphasizing celebrity visibility rather than psychological or cultural resonance (McCracken, 1989). Such a traditional way of sports marketing was significantly changed in 1984 with the partnership between Michael Jordan and Nike, which presented successful brand integration with a sports star or celebrity. Since then, the athlete's identity has become inseparable from the brand, which is exemplified by the creation of the Jordan Brand. In McCracken's Meaning Transfer Model, which posits that cultural meanings embodied by athletes, such as excellence, resilience, or rebellion, brand integration with sports stars has been applied to products to internalize the brand recognition into consumers (McCracken, 1989). By the 1990s and 2000s, the globalization of sports broadcasting transformed regional stars into international icons, enabling brands to pursue global standardization strategies through a single athlete's image (Hassan et al., 2021).

Differences in marketing strategies with established sports celebrities and promising rookies have been observed in terms of risk and market objectives. Established sports celebrities provide immediate source credibility, expertise, trustworthiness, and attractiveness (Ohanian, 1990). Their established reputations mitigate consumer risk and deliver global reach. In contrast, rookies represent speculative investments. While they lack established equity, they offer high potential ROI if they obtain stardom. While sports celebrities yield stable abnormal stock returns, early endorsement of rookies generates exponential market share gains if their growth aligns with brand growth by leveraging credibility for long-term growth.

In sports marketing, athletes lead to different outcomes from entertainment celebrities. While both raise awareness, athletes provide higher perceived expertise, particularly for sports apparel or health beverages (Till and Busler, 2000). The Match-up Hypothesis suggests that congruence between athlete and product is more stringent than for entertainers, while mismatches considerably reduce the effectiveness of marketing activities. Conversely, congruent athlete-product pairings often yield stronger purchase intent due to performance-based validation and hero-worship dynamics (Emmadi, 2017).

Despite high returns, athlete endorsements carry significant human brand risk because brand equity becomes intertwined with athlete persona, scandals or transgressions can trigger spillover effects that erode sponsor value (Lohneiss and Hill, 2014). Failures, such as the Lance Armstrong doping scandal or Tiger Woods' personal controversies, illustrate how scandals cause losses that exceed previous gains. This risk necessitates robust morals clauses in contracts and contingency planning to safeguard brand equity.

Contemporary sports marketing is shaped by technological advancements, as they reconfigure the athlete-consumer relationship. Social media platforms enable athletes to act as content creators rather than passive endorsers. Micro-endorsements and direct fan engagement foster authenticity, particularly among younger demographics (Emmadi, 2017). In addition to this, AI-driven analytics enable sponsors or brands to predict athlete performance, assess market sentiment, and design hyper-personalized campaigns, enhancing targeting precision and consumer relevance (Hassan et al., 2021). Virtual environments also allow athletes to be digital avatars, offering ubiquitous brand presence without physical limitations. Such technological advancements turn marketing activities into immersive involvements, aligning with consumer expectations of interactivity and personalization (Hassan et al., 2021). However, it is required to explore how technology integration changes athlete endorsements in tandem with AI, social media, and immersive technologies to remain effective in the global marketplace.

3. Case Studies

3.1. Sports Apparel Industry: Nike vs. Adidas

The sports apparel industry has long been dominated by the rivalry between Nike and Adidas. Nike's strategy emphasizes individual superstar power, with famous athletes such as LeBron James and Cristiano Ronaldo to embody excellence and global recognition. This approach aligns with the Meaning Transfer Model, where the athlete's cultural meaning becomes inseparable from the brand (McCracken, 1989). Adidas, by contrast, has emphasized team-based and grassroots innovation. However, to maintain parity, Adidas pivoted toward high-profile individual signings such as Lionel Messi, blending collective identity with star power (Chadwick and Thwaites, 2005). The two companies' contrasting strategies highlight how apparel brands balance credibility, reach, and authenticity in athlete endorsements.

3.2. Functional Beverages: Gatorade vs. Powerade

The beverage industry illustrates how athlete endorsements present scientific performance claims. Gatorade's Is it in you? campaign used high-intensity athlete imagery to create a psychological link between the consumption of the product and sports performance. Powerade has similar campaigns, but Gatorade's dominance demonstrates the effectiveness of aligning athlete credibility with functional product claims (Till and Busler, 2000). Their marketing campaigns underscore the importance of

congruence: athletes associated with peak performance enhance consumer belief in product efficacy, reinforcing the Match-up Hypothesis (Emmadi, 2017).

3.3 Success and Failure

The Michael Jordan–Nike partnership is regarded as the gold standard in sports marketing with an athlete. Beginning in 1984, their collaboration evolved into the Jordan Brand, a subsidiary generating billions annually. The successful collaboration demonstrates how athlete endorsements transcend traditional campaigns to become standalone business entities (Hassan et al., 2021). Jordan’s successful collaboration with Nike proves the long-term value of integrating athlete identity into brand architecture, creating enduring equity and consumer loyalty across generations.

In contrast, the scandals involving Lance Armstrong and Tiger Woods presented the risks of athlete endorsements. Armstrong’s doping and Woods’ personal controversies led to severe decreases in Nike’s stock prices, illustrating the spillover effect of Human Brand Risk (Lohneiss and Hill, 2014). These failures imply the necessity of robust morals and contingency plans in endorsement contracts with athletes, ensuring that companies can pivot rapidly for athlete transgressions.

3.4. Rookies and Digital-Native Engagement

The legalization of NIL rights in U.S. collegiate sports has offered a new opportunity for promising rookies. Athletes such as Victor Wembanyama and Bronny James have leveraged social media to build personal brands even before achieving professional success. Early endorsements of rookies represent considerable investments with high ROI potential if their trajectory aligns with brand growth (Agrawal and Kamakura, 1995). Social media enables rookies to act as micro-influencers and engage directly with fans. This digital-native engagement fosters authenticity and relatability, particularly among younger demographics (Emmadi, 2017).

4. Analysis and Comparison of ROI

4.1. Model Analysis

To examine the impact of athlete endorsements on firm market performance, we employed a structural panel data model incorporating both financial and marketing variables (Table 1). Prior literature indicates that traditional endorsements in the 1990s yielded modest abnormal stock returns of 0.25–1.1% (Gerritsen and van Rheenen, 2017). In contrast, contemporary high-congruence signings amplified through social media platforms generate substantially greater market confidence (Jiang et al., 2024). At the same time, markets have become increasingly sensitive to Human Brand Risk: athlete misconduct or reputational crises can trigger immediate negative abnormal returns, underscoring the market’s valuation of athlete integrity as a corporate asset (Ge and Humphreys, 2020). Data for this study were synthesized from four primary categories of sources.

- Firm-level data: Financial performance metrics, including quarterly sales revenue, daily stock prices, and annual financial reports, were retrieved from Bloomberg and Yahoo Finance, consistent with methodologies used in endorsement event studies (Gerritsen & van Rheenen, 2017).
- Athlete data: Performance-based statistics, including world rankings, seasonal wins, and career achievements, were collected from official league databases (ATP, PGA, NBA), following approaches in sponsorship valuation research (SponsorUnited, 2022).
- Marketing data: Information regarding endorsement contract durations, campaign types (digital vs. traditional), and historical advertising expenditures was compiled from industry reports and corporate press releases, similar to analyses of contract structures (Xia, et al., 2025).
- Digital metrics: Real-time social media engagement data, including follower counts, likes, and share rates across platforms (Instagram, X, TikTok), were utilized to measure digital reach, consistent with studies on athlete social media valuation (Yin, 2025; Nan, 2025).

The dataset was structured as panel data, enabling longitudinal analysis across multiple brands and athletes. This design allowed us to control for unobserved heterogeneity (firm-specific or athlete-specific traits), capture temporal dynamics (championship wins, scandals), test the hypothesis (congruence between athlete identity and brand positioning) (Schartel Dunn and Nisbett, 2023).

Table 1. Variables and their descriptions used in the model of this study.

Category	Variable	Description
Dependent variable (performance)	Cumulative abnormal returns (CAR)	Measures short-term stock market reaction to endorsement announcements.
	Brand equity index	Long-term brand health following partnership integration.
	Sales growth	Direct revenue impact within the endorsed product category.
Independent variable	Athlete performance	On-field success metrics (e.g., winning percentage, most valuable player status).
	Social media engagement	Total follower count and interaction rates across platforms such as Instagram and TikTok (Li, 2025).
	Endorsement intensity	Frequency and duration of marketing campaigns.
Control variable	Firm size	Measured by total assets or market capitalization.
	Market conditions	General stock market volatility (e.g., Standard and Poors 500 performance) during the event window.

A fixed-effects regression model was employed to estimate the impact of independent variables on CAR. Results are summarized in Table 2. The significant positive effects of athlete performance and social media engagement on CAR underscore the dual importance of tangible sporting success and digital visibility. This aligns with prior evidence that tournament victories and on-field achievements generate measurable shareholder value (Gerritsen and van Rheeën, 2017), while social media presence amplifies brand resonance and consumer reach (Yin, 2025; Nan, 2025). The results suggest that investors increasingly interpret athletic success and digital influence as complementary signals of endorsement effectiveness. The high coefficient for match-up congruence provides robust empirical support for the Match-up Hypothesis, which posits that endorsements are most effective when there is a high degree of congruence between the athlete’s identity and the brand’s positioning (Schartel Dunn and Nisbett, 2023). This aligns with consumer psychology research, which emphasizes the role of perceived authenticity and value alignment in shaping purchase intent and brand loyalty. In financial terms, congruence appears to function as a moderating variable that enhances investor confidence, thereby driving abnormal returns beyond the effects of performance or campaign intensity alone.

The relatively modest but significant effect of endorsement intensity suggests that while frequency and duration of campaigns contribute to market performance, they are secondary to congruence and performance. This finding is consistent with marketing literature that cautions against overexposure, noting that saturation can diminish marginal returns (Xia et al., 2024). Instead, strategic alignment and authenticity remain the primary drivers of endorsement value. Interestingly, firm size was not statistically significant, indicating that endorsement effects are not simply a function of corporate scale. This challenges earlier assumptions that larger firms inherently benefit more from endorsements due to resource advantages (Jiang et al., 2024). Instead, the results highlight that endorsement outcomes are contingent upon relational and reputational dynamics rather than firm-level financial capacity. The sensitivity of markets to human brand risk, as documented in prior event studies (Ge and Humphreys, 2020), contextualizes these findings. While endorsements can generate substantial positive returns, they also expose firms to reputational volatility. The duality of athlete endorsements—as both assets and liabilities—suggests that firms must adopt risk management strategies, including contractual morality clauses and diversified endorsement portfolios, to mitigate potential losses. The results show that athlete endorsements are not merely promotional tools but complex strategic assets whose value depends on performance, digital influence, and congruence. The explanatory power of the model ($R^2 = 0.44$) is significant for event-study designs, reinforcing the robustness of these relationships. Future research should extend this analysis to emerging contexts such as collegiate NIL agreements and influencer-athlete hybrids, where digital engagement may outweigh traditional performance metrics.

Table 2. Regression analysis of CAR.

Independent variable	Coefficient (β)	t-statistic	p-value
Athlete performance	0.421	5.84	< 0.01
Social media engagement	0.355	4.12	< 0.01
Endorsement intensity	0.128	2.05	< 0.05
Match-up congruence	0.512	6.78	< 0.01
Firm size (control)	0.084	1.62	0.106

4.2. ROI Evaluation

By integrating these diverse data sources, a robust evaluation of the ROI of athlete endorsements was conducted, and the results were compared with those of traditional entertainment celebrities. The resulting dataset is structured as panel data (longitudinal data). This structure allows for the observation of multiple entities (brands and athletes) over time, enabling the model to control for unobserved factors and better analyze the causal relationship between specific athletic milestones and subsequent shifts in brand equity or stock market performance.

The economic value of athlete endorsements is commonly measured by abnormal returns in stock prices following partnership announcements. Both sports celebrities and entertainment celebrities generate market attention, but the underlying drivers of profitability differ significantly. For athletes, perceived expertise and performance credibility foster consumer trust, whereas entertainment celebrities rely more on attractiveness and lifestyle associations (Till and Busler, 2000). Athletes tend to deliver higher ROI for functional goods such as sports apparel and beverages, while entertainers are more effective in lifestyle-oriented categories (Table 3). Such a difference highlights the importance of congruence between endorser and product (Agrawal and Kamakura, 1995). In addition, athletes provide higher short-term market confidence and deeper niche loyalty, while entertainers appeal to broader demographics and often enjoy longer endorsement longevity.

Table 3. ROI comparison of sports athletes and entertainment celebrities in sports marketing.

Criteria	Sports athletes (stars/rookies)	Entertainment celebrities
Strategic value	Perceived expertise and performance: Consumers associate athletes with functional utility (Till and Busler, 2000).	Physical attractiveness and lifestyle: Consumers associate celebrities with aspirational identity.
Stock market impact (ROI)	0.25–1.1% abnormal return: Higher impact for congruent products (Agrawal and Kamakura, 1995).	0.15–0.5% abnormal return: Lower immediate stock jump unless entering new demographics.
Risk volatility	Dual risk: performance (injury, losing) + lifestyle (scandal) (Lear, Runyan, and Whitaker, 2009).	Single risk: Lifestyle/behavioral. Career longevity is often more stable.
Niche and mass appeal	High engagement (niche). Deep loyalty within specific fanbases (e.g., basketball, golf).	Broad reach (mass): Wider demographic appeal across age groups.
Endorsement longevity	Short peak due to physical limits, though legacy brands (e.g., Jordan) extend lifespan (Hassan et al., 2021).	Long peak: Careers can span decades without physical constraints.

At the corporate level, large companies such as Pepsi Company (PepsiCo) and Moët Hennessy Louis Vuitton (LVMH) use athlete endorsements to signal corporate strength and global dominance. Their profits are realized through increased stock prices and company valuation, and the reduced cost of capital due to perceived market leadership (Agrawal and Kamakura, 1995). At the brand level, however, profitability is influenced directly by congruence between the athlete and the product.

For example, PepsiCo’s subsidiary Gatorade has partnered with elite athletes such as Michael Jordan, Serena Williams, and Lionel Messi. These endorsements strengthened Gatorade’s positioning as a performance beverage and elevated PepsiCo’s corporate image as a leader in the sports nutrition market. The ‘Is it in you?’ campaign demonstrated how athlete credibility validated scientific claims, boosting brand sales and PepsiCo’s stock valuation (Chadwick and Thwaites, 2005). Similarly, LVMH has engaged athletes to expand into aspirational markets. Partnerships with tennis star Roger Federer for Rolex and soccer star Kylian Mbappé for Louis Vuitton campaigns delivered precision, exclusivity, and global prestige. These endorsements strengthened LVMH’s dominance in the fashion and lifestyle industries, enhancing investor confidence and lowering perceived capital risk.

While athletes offer higher profit ceilings than entertainers, they also have risks. When athletes in high-congruence partnerships, such as a marathon runner endorsing running shoes, become involved in scandals, sponsor brand equity decreases by up to 20% more compared with low-congruence partnerships (Lohneiss and Hill, 2014). The scandals involving Lance Armstrong with Nike, Trek, and Oakley, and Tiger Woods with Nike, Gatorade, Gillette, and AT&T, illustrate such a scandal spillover effect. Both athletes were deeply integrated into brand identities, and their controversies led to significant declines in sponsor reputation and stock value.

5. Adoption of Advanced Technology and Its Effects on Sports Marketing with Celebrities

The future of sports marketing is defined by hyper-personalization and digital innovation. AI has transformed athlete endorsements by enabling hyper-personalized campaigns. Predictive analytics enable companies to tailor messaging to consumer preferences, while sentiment analysis ensures alignment with market trends (Hassan et al., 2021). Digital athlete twins in the metaverse extend marketing beyond physical limitations. Athletes can endorse products in immersive virtual environments, offering ubiquitous and continuous brand presence and interactive engagement. The technology represents the future strategy of sports marketing, where technology and athletes collectively create dynamic consumer experiences. By combining AI with digital-native platforms, companies can design campaigns that are both highly personalized and strategically resilient.

There is a growing expectation that athletes act as social activists. Modern consumers, particularly Generation Z, demand that athletes take stands on social, political, and environmental issues. This introduces a new layer of values-based congruence: brands must now align not only with an athlete's skill and performance but also with their ideology and public stance. The expectation from modern consumers profoundly influences endorsement strategies. Athletes who embody purpose-driven narratives amplify brand authenticity, but misalignment between athlete values and corporate positioning might undermine credibility. The legalization of NIL rights in U.S. collegiate sports has expanded such amplification, creating a new market for micro-influencers. These rookies, empowered by social media, deliver authentic engagement at scale, reshaping the economics of athlete endorsements.

The integration of AI, social media, and the metaverse presents a significant evolution in sports marketing with sports celebrities. Athletes are no longer just endorsers but are co-creators of brand narratives, activists for social causes, and digital presences that extend into virtual environments. Companies must balance traditional marketing strategies with digital-native ones that emphasize personalization, authenticity, and values. Such transformation underscores the necessity for companies to adopt advanced technologies as core components of marketing strategies.

6. Future Trends in Sports Marketing

Sports marketing demands a paradigm shift toward hyper-personalization and the strategic integration of advanced technologies. In the evolving landscape, athletes, empowered by social media, function as more than just endorsers. They are also creators of authentic engagement who reshape the economics of branding within virtual and digital environments (Hassan et al., 2021). To capitalize on these opportunities while mitigating inherent risks, companies must prioritize congruence—the alignment of an athlete's personality and values with the brand's identity—over mere follower counts. Empirical evidence suggests that such value-based synergy increases purchase intent and brand loyalty far more effectively than fame alone (Emmadi, 2017).

However, the volatility of human-brand associations requires a dual-track approach of creative partnership and rigorous risk management. Structurally, modern endorsement contracts must include robust morals clauses to protect corporate reputation from potential transgressions or public misalignments. Operationally, firms should leverage AI-driven tools to predict athlete performance, assess scandal probability, and tailor campaigns to granular consumer preferences. These technologies, alongside the development of digital athlete twins and immersive environments, ensure a persistent brand presence and innovative consumer experiences. This strategic evolution is best characterized by a move away from viewing athletes as advertising tools toward treating them as strategic partners in storytelling and community-building. This shift is manifest in six emerging trends.

- Social media and direct-to-fan marketing: Athletes have evolved into independent media houses. For instance, Cristiano Ronaldo's audience of over 600 million Instagram followers enables direct-to-fan engagement that bypasses traditional broadcasting, deepening both fan loyalty and commercial value (Li, 2025).
- Authenticity over visibility: Modern consumers increasingly prioritize values-based congruence. Consequently, brands must align with an athlete's social activism and personal ideology to maintain market authenticity.
- Micro and emerging athlete endorsements: The legalization of Name, Image, and Likeness (NIL) rights has shifted focus toward collegiate athletes and rookies. These digital-native influencers often deliver higher ROI through niche engagement and lower entry costs.
- Cross-industry expansion: Athletes are increasingly diversifying into tech, venture capital, and sustainable energy. This trend transforms the athlete from the face of a brand into a co-owner or strategic partner within a broader conglomerate.
- Data-driven endorsement decisions: The industry is moving from intuition-based to data-informed selections. Sponsors now utilize AI-driven analytics to monitor real-time sentiment and predict long-term partnership viability (KQA, 2026).
- Long-term partnerships and equity deals: Moving beyond traditional transactional fees, modern agreements frequently include equity stakes. Similar to the Jordan Brand model, these deals align the athlete's long-term financial success directly with the brand's overall valuation growth.

7. Conclusion

Sports marketing has presented innovations in the sports industry. Historically, endorsements evolved from simple product advertisement to strategic partnerships that integrated athlete identity into brand architecture. Such a transformation has demonstrated athlete-driven campaigns to become standalone brand entities, establishing a benchmark for long-term profitability and consumer loyalty. The analysis of ROI in sports marketing with athlete endorsements highlights the profitability and volatility. Athletes deliver higher returns for functional goods due to their perceived expertise and performance credibility, while entertainers are effective in marketing lifestyle products. However, the risks associated with athlete endorsements lead to performance failures and scandals, which necessitate robust risk management. Recent research underscores that the factors of success in sports marketing have changed. The transition from traditional media to digital platforms, combined with the importance of athlete-brand congruence, has redefined the evaluation of endorsements. The growing role of athletes as social activists introduces values-based congruence, requiring brands to align with athletic performance and ideological campaigns. This shows consumer demands for authenticity and purpose-driven branding, particularly among younger demographics.

Contemporary sports marketing requires hyper-personalization and technological integration. The legalization of NIL rights in U.S. collegiate sports has created a new micro-influencer market, enabling rookies to deliver authentic digital-native engagement. AI enhances campaign outcomes by predicting performance trajectories and scandal probability, while the metaverse introduces digital athlete twins that provide continuous brand presence and immersive consumer experiences.

The results of this study underscore that athlete marketing has evolved into a sophisticated strategic partnership. While the Michael Jordan era established the potential for standalone brand entities, the modern sports marketing driven by NIL rights, AI, and social activism requires a more nuanced and integrated strategy. The success of sports marketing depends on a company's ability to balance the high ROI of athletes with the inherent risks of human brand volatility. By focusing on authenticity, digital integration, and strategic congruence, companies can address the complexities of the 21st-century sports economy and maintain sustainable advantage in the competitive market.

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