This is the accepted manuscript of the article:
Nicolau, J.L. and Santa María, M.J. (2023) "The Post-Contractual Effect of Endorsers' Sports Results on Their Sponsors' Performance: The Shark Fin Effect", *International Journal of Sport Finance*, 19, 152-163.

THE EFFECT OF ENDORSERS' SPORTS RESULTS ON THEIR SPONSORS' PERFORMANCE: THE SHARK FIN EFFECT

Abstract

While previous studies have focused on the value of the endorsement contracts at the moment they are signed, the performance during the contract has drawn limited attention, and the few studies focusing on this period have produced inconclusive results. To fill this gap, we hypothesize that the tournament type and the athlete's level of sports elitism can influence this "sport results-business performance" relationship. The inclusion of the tournament type fills a gap in the literature as most studies have examined the potential effects of endorsement strategies without observing the different levels of tournaments within a particular sport. Guided by brand equity theory and equity theory, we argue that while a greater prize won corresponds to higher stock returns, there is a certain point of "sports elitism" on part of the athlete, after which a greater prize leads to lower stock returns. Empirical results from tennis tournaments support these arguments.

Key words: celebrity endorsement; sponsorship; brand equity theory; equity theory; firm value.

1. INTRODUCTION

Endorsement activities have been widely used in recent years as reflected in the increasing investment of firms and the burgeoning research interest in the literature (Brad and Tood, 2017; Chakravarti and Boronczyk, 2021; Derdenger, 2018; Eryigit and Eryigit, 2019; Sung et al., 2016; Zhou and Scott, 2017). A *celebrity endorser* is "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement" (McCracken 1989, p. 310). Meanwhile, the *endorsing firm* is the entity that follows this strategy (Farrell et al., 2000) and is also known as *sponsor* (Knittel and Stango, 2014). The endorsement strategy is designed as a communication tool with the overall aim of contributing to the firm's objective to increase its profitability and enhance its image. The increased spending on endorsers in recent decades only shows that these activities are regarded as investments that, via image and associations with the brand, yield returns for the firm. As sports and athletes attract great media coverage, linking the firm's brand image to a sport or an elite athlete can be a valuable communication strategy. Some studies have even analyzed the effects of endorsements and sponsorships on consumer purchase intentions (Bachleda et al., 2016; Chang et al., 2018; Eddy, 2014; Ngan et al., 2011).

Firms sign endorsement contracts to promote their products on the premise that the promotion will positively influence the attitudes of consumers toward the firm and/or brand that is associated with the athlete and will consequently boost their purchase intentions. Empirical evidence shows that celebrity contracts can enhance the returns for firms that include these celebrities in their commercials (Agrawal and Kamakura, 1995; Erdogan et al. 2001). Therefore, many companies tend to invest large amounts of money in these endorsement communication strategies.

A substantial percentage of funding for professional sports comes from sponsors. Forbes Magazine ranks sports stars among its list of the 100 most famous people in the world in terms of their income and appearances in print media, television, and the Internet. Athletes have capitalized on their social influence and have used their sports activity as alternative sources of income, primarily through endorsements. Some elite athletes may receive income from their sponsors that exceeds what they earn directly from their sports achievements. In this context, the following research question emerges: while endorsement contracts tend to positively affect the endorsing firm, could there be a point at which the endorser's sports victories—according to the shareholders' expectations—reduce such positive effects due to the higher rewards that the endorser may require in the future (when renewing the contract)?

To answer this question, this article looks at the period during the partnership between an athlete and their sponsors and analyzes the effect of the endorser's sports victories and the importance of the tournament (measured by the size of the prize won) on firm value. The inclusion of the relevance of the tournament fills a research gap as previous studies have mostly examined the potential effects of endorsement strategies without observing the different levels of tournaments within a particular sport. This empirical application focuses on tennis, whose two levels of tournament, namely, Grand Slams and non-Grand Slams, allows the researchers to compare the impact of the evolution of the endorser's sports results on the sponsor's performance in each type of tournament. The endorser's sports results are defined as the number of matches won or lost, whereas the sponsor's performance is defined by the variation in the market value derived from the endorser's sports results.

The rest of this paper is organized as follows. Section 2 presents the basic conceptual framework based on brand equity theory, reviews the literature on the

endorsement-stock returns relationship, describes the link between sports results and business performance, and proposes the research hypotheses with arguments from equity theory. Section 3 describes the method, research setting, and data of this study. Section 4 presents the results. Section 5 concludes the paper and offers some managerial implications.

2. EFFECT OF ENDORSEMENT

2.1. Basic conceptual framework

To better illustrate the purpose of this article, Figure 1 presents the conceptual model. Firms make huge communication investments in order to influence the market (arrow 1). Through these investments, firms can generate different brand associations (arrow 2). One of these brand associations might be its link to an athlete with whom the company has signed an endorsement contract (arrow 3). Depending on the degree of the athlete's elitism and the level of tournaments, the athlete's performance will attract a certain level of media coverage (arrow 4). These public appearances of the athlete, with whom the firm has a favorable and strong brand association, should enhance the firm's brand image and increase its brand awareness, thereby reinforcing the firm's brand knowledge (arrow 5; Keller, 1993). This brand knowledge will permeate in the market (arrow 6) and affect the firm's market value via tangible (e.g., sales) and intangible components (e.g., brand equity). At the same time, shareholders form their expectations (arrow 8) based on the existing information, and these expectations will affect the firm's market value.

As indicated by arrow 4, the media coverage and its subsequent effect on brand knowledge depend on the athlete's elitism and the level of the tournaments. Accordingly, shareholders will incorporate this information into their expectations. As a consequence, they might expect different levels of brand knowledge enhancement depending on the

type of tournament (as the media coverage changes from one type to another), thereby generating distinct impacts on the firm's market value. These shareholders might also expect future negotiations of the athlete's endorsement contract contingent upon his/her sports results.

Insert Figure 1

2.2. Endorsement-stock returns relationship

Many theoretical studies have extensively examined the potential positive effects of the use of athletes in promotion activities (Reiser et al., 2012). In general, they help enhance the advertising campaign's credibility, foster brand recognition, and generate a favorable attitude toward the brand that is linked to a celebrity (McCracken, 1989; Lee and Kwak, 2017).

However, measuring the effect of this type of investment on firm returns can be complex. Analyzing the effectiveness of endorsement actions is not readily attainable, but important advancements have been made over the past few years. Some scholars have attempted to assess the impact of this strategy on stock prices by focusing on the sponsorship of sports events, such as golf, soccer, basketball, auto racing, or tennis tournaments (Bouchet et al., 2015; Fizel, McNeil and Smaby, 2008, Filis and Spais, 2012; Reiser et al., 2012). These articles have assessed the impact of supporting athletes or sporting events on the share price of the sponsor. Using the event study method, they provide a measure of the returns associated with endorsement contracts. As share prices reflect the current value of the expected future economic profits, if the announcement of signing an endorsement contract by an elite athlete is deemed to be positive for the firm, then its market value will increase. This research stream has shown that the announcements of sports endorsement contracts have significant and favorable effects on

the market value of the firm, such as sponsoring the Olympic Games (Baim et al., 2021; Miyazaki and Morgan, 2001; Samitasa et al., 2008), NASCAR races (Pruitt et al., 2004), official products in certain sports (Cornwell, Pruitt and Clark, 2005), or event sponsorship (Mishra et al., 1997). Filis and Spais (2012) reported the same positive results in their analysis of the effects of the sponsorship of 15 big sports events. Meanwhile, Reiser et al. (2012) found that the magnitude of the positive effects of sport sponsorship depends on the sport and region.

Some scholars have also investigated the endorsement of an individual athlete, such as Tiger Woods (Farrell et al., 2000) or Michael Jordan (Mathur et al., 1997). However, in their evaluation of athletes specializing in different sports, Fizel, McNeil, and Smaby (2008) found that only the elite athletes can actually create value for the firm.

However, some scholars find that the firms receive exactly what they pay for these sponsorships, which do not affect their market value (Clark, Cornwell, and Pruitt, 2009). Nufer (2010) produced inconclusive results in the analysis of the effects of sponsoring the FIFA World Cup in 1998 and 2006. Specifically, this author found that this strategy is an effective communication tool only for certain companies.

Johnston (2010) failed to detect any effect of 51 endorsement announcements on the stock prices of Australian companies. Meanwhile, Ding, Molchanov, and Stork (2010) examined the 101 endorsement announcements of US companies between 1996 and 2008 using an event study approach, and their findings were consistent with the notion that the profits generated via the promotion of products by celebrities are similar to the increase in costs resulting from such contracts.

2.3. Link between sports results and business performance

As noted above, many studies have attempted to assess how the announcements of endorsement contracts affect the stock price of firms that sponsor sports events and endorse elite athletes. As firms use this strategy to obtain returns on their investments, it is critical for these firms that such endorsement strategy generates enough returns to offset the high associated costs. Therefore, apart from examining the effects of contract announcements, the sports performance of the endorser while the contract is valid and active and the effect of such performance on the firm's value also warrant further investigation.

However, empirical evidence on the correlation between the sports performance of the endorser and the business performance of the firm remains inconclusive. For instance, Burgwal (2010) did not find any correlation between the results of soccer games and the stock prices of sponsors. Specifically, Burgwal investigated whether the endorser's victory is more valuable to the sponsor than just taking part in the endorsement strategy and garnering publicity and eventually concluded that the best returns for a sponsor might not be linked directly to the sports results of its endorser. Cohoon, Extejt, and Melton (2007) detected a positive relationship in some sports but a non-significant relationship in others. However, Farrell et al. (2000) found a direct positive correlation between sports results and firm value. Depending on the position that Tiger Woods achieves in a tournament, the value of his sponsor (i.e., Nike) changes accordingly. Positive results were also obtained in the case of motor racing (Huth, 2007). Specifically, the sponsors of the five finalist cars in NASCAR 2005 registered positive returns. Cornwell et al. (2001) examined the impact of the Indianapolis 500 and found that those firms that are linked to the automotive industry obtain significant, positive returns when their endorsers win. In a general context, Frick and Semmelroth (2021) confirmed the

relationship between sports results and firm performance in their analysis of the Borussia Dortmund soccer team, whereas Nicolau (2011) found that the soccer performance of Real Madrid significantly influenced its sponsor company ACS; both the company and the soccer team are ruled by the same president. Nicolau (2012) found positive relationships between the market value of tourism firms and the results of the 2010 FIFA World Cup; however, this effect was not universal across all World Cup seasons (Nicolau and Sharma, 2018). While these articles did not involve any formal endorsement contracts, they still found a relationship with the caveat that the connection between "soccer results" and the "global market value" is, in general, not conclusive (Geyer-Klingeberg et al., 2017). Gerritsen and van Rheenen (2017) analyzed the value of victories in individual sports and detected its positive effect on the endorsed brands, whereas Jensen (2017) examined the costs of sponsorship, detecting agency conflicts, and differences in the types of activity, with sport-related actions being the costliest.

Given these indecisive results, we hypothesize that the type of tournament and the athlete's level of sports elitism might moderate the impact of sports results on firm value. To justify this hypothesis, the next section presents the mechanism through which the firm's market value reacts to sports results via the brand associations outlined previously and highlights the potential moderating effects of the type of tournament and athlete's level of sports elitism.

2.4. Hypothesis development

The generation of brand associations represents a central strategic element as they become evocative drivers that might have a cognitive effect on consumer attitudes when evaluating the brand and consequently influence the firm's value (Cornwell et al., 2003; Joshi and Hassens, 2010). In this regard, the generation of favorable publicity and the creation of brand recognition derived from the victories of an endorser can diminish

information asymmetries. Joshi and Hassens (2010) suggested the existence of a spillover effect, which was also found empirically by Sung et al. (2016), such that the activities that convey information (signaling effect) can help create intangible assets (e.g., brand equity) and thus affect shareholder behavior. In this case, the larger amount of news a victory can generate, the more positive publicity will be created for the firm. If the prize won in the victory can signal the importance of a sports event, then a greater prize can be perceived to have higher importance, thus attracting more media attention and generating a greater impact on firm value.

However, this increment in stock returns as a result of winning prizes is not expected to grow without any limits. There could be a point where shareholders might consider that winning huge prizes and top tournaments does not come at any cost to the firm, which must be due to the fact that upon contract renewal, the endorsers might demand more compensation for their well-done job as they have reached a certain level of sports elitism. We explain this idea through equity theory (Adams, 1962), which postulates that individuals determine how well they are paid by looking at their "perceived relationships between outcomes they receive from their organizations and the inputs that are contributed, and by comparing their own outcome-input ratios with a referent's outcome-input ratio." While this theory has had notable applications in work-related studies (Schultz et al., 2010), it can be applied to any exchange situation, such as the context of the endorser and endorsing firm. Accordingly, the four basic principles of this theory can be applied in a sports environment as follows (Huseman et al., 1987): 1) People generate an idea of fairness by mentally gaging a ratio through which they compare inputs and outputs to other people's ratios. Inputs are formed by people's knowledge, ability, time, effort, performance, or feats, whereas outcomes are defined as the rewards they receive. The "comparable other" is another athlete or, more generally, the market itself.

2) If the ratios are not regarded as equal, then there is inequity. Inequity comes in two types, namely, overpayment inequity (perception of getting paid more than expected) and underpayment inequity (perception of getting paid less than expected. For instance, an athlete might consider that, given his/her sports results, the payment from his/her endorsement contract is not fair compared with that being received by other athletes). 3) A greater difference in inequity corresponds to greater tension and distress for the individual. 4) When the tension reaches a certain level, the individuals start acting to reduce the tension and augment their equity. For example, they may request for a change in their endorsement contract to raise the amount of money they receive.

Accordingly, those athletes who are performing well might reach a point of success—sports elitism—such that they perceive that their feats are too relevant to themselves (in terms of the prize won) and to the sponsor (in terms of the hype generated), thereby leading to a perceived inequity. Moreover, a bigger prize may lead to more tension and distress, hence driving athletes to act more intensively to diminish their distress and increase their perceived levels of equity. In other words, the more important the tournament won, the more likely it is for athletes to ask for larger payments. Given that such request would increase the costs for sponsors, their returns could be affected. Therefore, we hypothesize the following:

H.1. A greater prize won in a tournament corresponds to a higher impact on stock returns.

H.2. Beyond a certain point of elitism on part of the athlete, a greater prize corresponds to lower stock returns.

3. METHOD

To analyze the effect of the endorser's sports victories (prizes) on the sponsor's value, we choose the optimum specification of the market model to estimate the abnormal returns resulting from winning a prize.

Choice of the optimum specification

To capture the changes in share prices for each day, we use Sharpe's (1963, 1964) market model:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \qquad (1)$$

where R_{it} denotes the returns on the firm's share i on day t, and R_{mt} is the rate of returns on the market portfolio on day t. Meanwhile, the coefficients α_i and β_i denote the constant and systematic risk on share i, and ε_{it} is the error term.

To deal with the kurtosis and heteroskedasticity in the error term, we estimate autoregressive conditional heteroskedasticity models in the empirical application. In expression (1), the returns defined through an ARCH(*p)* model (Engle, 1982) are obtained as

$$\varepsilon_{it} = h_{it}^{1/2}\eta_{it} \text{ and } \varepsilon_{it}/\varepsilon_{it-1}, \varepsilon_{it-2}, \ldots \sim N(0, h_{it})$$

being

$$\eta_{it} \text{ i.i.d. with } E(\eta_{it})=0 \text{ and } E(\eta^2_{it})=1$$

and h_{it} is the conditional variance, which is defined as

$$h_{it} = c_i + \sum_{j=1}^{p} \lambda_{ij} \varepsilon^2_{it-j} \qquad (2)$$

where c_i and λ_{ij} are the parameters to be estimated, and p is the number of lags.

With q denoting the lags of the autoregressive part, the GARCH(p,q) model presents the conditional variance as (Bollerslev, 1986)

$$h_{it} = c_i + \sum_{j=1}^{p} \lambda_{ij} \varepsilon_{it-j}^2 + \sum_{k=1}^{q} \gamma_{ik} h_{it-k} \qquad (3)$$

To account for the different degrees of sensitivity depending on whether the events are good or bad, the EGARCH(p,q) model is defined as follows (Nelson, 1990):

$$h_{it} = \exp\left\{ c_i + \sum_{j=1}^{p} \left(\lambda_{ij} \left| \frac{\varepsilon_{t-j}}{h_{it-j}^{1/2}} \right| + \delta_{ij} \frac{\varepsilon_{t-j}}{h_{it-j}^{1/2}} \right) + \sum_{k=1}^{q} \gamma_{ik} \ln(h_{it-k}) \right\} \quad (4)$$

Meanwhile, the TGARCH(p,q) model posits (Glosten et al., 1993; Zakoïan, 1994)

$$h_{it} = c_i + \sum_{j=1}^{p} \lambda_{ij} \varepsilon_{it-j}^2 + \phi_i \varepsilon_{it-1}^2 D_{it-1} + \sum_{k=1}^{q} \gamma_{ik} h_{it-k} \qquad (5)$$

where $D_{it-1} = 1$ if $\varepsilon_{it-1} < 0$ and $D_{it-1} = 0$ otherwise.

We use the Akaike and Schwarz information criterion to identify the optimal model.

Estimation of the abnormal returns

Following Karafiath's (1988) methodology for estimating the abnormal returns derived from the prizes won, we include a vector of dummy variables to analyze the effect on the results of a victory. Specifically, we introduce a dummy variable D_{itF} that takes a value of 1 the day of the finals and is accompanied by the variable $prize_t$, which represents the amount of money that the winner receives. Consequently,

$$R_{it} = \alpha_i + \beta_i R_{mt} + \xi_i D_{itF}\, prize_t + \varepsilon_{it} \quad (6)$$

where the parameter ξ_i is greater than 0 if the prize has a positive effect. To distinguish the impacts of the two levels of tournaments, namely, non-Grand Slams ($prize_{tNGS}$) and Grand Slams ($prize_{tGS}$), as well as their quadratic effects (to capture potential nonlinearities), the final model is defined as

$$R_{it} = \alpha_i + \beta_i R_{mt} + \xi_{i1} D_{itF}\, prize_{tNGS} + \xi_{i2} D_{itF}\, prize_{tNGS}^2 + \xi_{i3} D_{itF}\, prize_{tGS} + \xi_{i4} D_{itF}\, prize_{tGS}^2 + \varepsilon_{it} \quad (7)$$

3.1. Case study setting and data

We test the hypotheses in a tennis context, where, as indicated below, two levels of tournaments exist, thereby facilitating the testing of equity theory. At an international level, some sponsors of tennis games are directly linked to the realm of sports as in the case of Lacoste, Adidas, or Intersport, but there may also be firms from other industries that sponsor events or tennis players, such as BNP-Paribas, Canon, IBM, Peugeot, and Perrier. In any case, when making the decision, these firms seek to associate their brands with the image of tennis.

The predominantly individual character of tennis makes the athletes become the target of those firms that are trying to link themselves to certain values that are traditionally associated with the sport. Certain athletes are used to promote their products because they have acquired a critical impact on the social level as a result of their success in their sports. These athletes enjoy public recognition, which they use to influence consumer behavior through their appearances in product advertisements, and firms seek a consistent association of their brands with tennis. The presence of their trademarks on the clothing of athletes and microphones in press conferences ensures that sponsors receive great exposure for their brands in the media; a presence that is reinforced by their appearance on the tennis court. These athletes can also attract an even wider audience as there might be people who are not into tennis but like watching a successful athlete. A paradigmatic example is the tennis player Rafael Nadal, a Spanish athletes with the greatest visibility and image for the general public, thereby making him a safe bet for those firms seeking athlete endorsements.

In 2012, the consulting and marketing company Media Personality identified Nadal as the best known and most appreciated Spanish athlete among Spanish consumers. The company surveyed more than 40,000 consumers to understand their preferences on

1,900 personalities. Specifically, they were asked which among these personalities is best suited for commercial activities. Among the 10 most cited personalities, 6 are athletes. In 2022, Nadal was listed by Forbes as the world's highest-paid athlete, partly owing to his endorsements from Nike, Babolat, Kia Motors, Sabadell Bank, Banesto Bank, Mapfre, Mueller Sports Medicine, Tommy Hilfiger, and Richard Mille.

Grand Slams are top-tier tennis tournaments whose prizes usually exceed $1 million. Nadal plays different types of tournaments and, most importantly, has a *referent other* to be compared with (in line with equity theory), namely, Roger Federer, who, irrespective of his position in the ATP ranking, tends to double Nadal's endorsement income (El Mundo, 2010; Expansión, 2017; Forbes, 2022).

Two of Nadal's sponsors are listed on the Spanish Stock Exchange, namely, Banesto and Mapfre. On October 24, 2007, the bank Banesto reached an agreement with the Spanish tennis player to use his image in its corporate advertising campaigns and for the creation and promotion of financial products under his name. The aim is to link the company to a set of values that are shared with the athlete, namely, "talent, effort and, especially, winning spirit." On February 16, 2009, the insurance company Mapfre reached an endorsement agreement with Nadal to bring a product to the market bearing his name, in which the firm singled out his "honesty, hard work, humility, effort, sacrifice, assertiveness and winning spirit."

In this article, we consider the achievements of Nadal in his tournaments from October 24, 2007 to March 17, 2012, including the Grand Slams (US Open, Wimbledon, Roland Garros, and Australian Open), ATP Master (Tome, Monte Carlo, Miami, Indian Wells, Hamburg, Shanghai, Cincinnati, Madrid, Paris, Montreal, and Toronto), International Series, ATP World Tour, Year-End Championship, and Davis Cup, amounting to a total of 260 matches (of which 85 are in Grand Slams).

We create an aggregated index for the above two firms by calculating their average daily returns during their common endorsement period (from February 16, 2009 to March 17, 2012). The results of the tournaments and the amount of prizes won are extracted from Tennis Navigator and the Worldwide Tennis Database. For the Grand Slam tournaments, the prizes range from $1.35 million to $1.7 million, whereas for non-Grand Slams, the prizes range from $133,000 to $750,000. Given that the purpose of the amount of money won is to determine the level of the tournament, we focus on the total amount of money obtained after winning the final match. For this objective, we define the prize as the money received for winning the tournament. However, in order to carry out a more comprehensive analysis, in line with Ashton et al. (2011), we also examine the effect of the won matches over the tournament in order to understand the potential impacts of the non-final matches on the market value.

4. RESULTS

At the first stage (*Choice of the optimum specification*), we run several Garch-family models to identify the best specification. The Akaike and Schwarz information criterion (Table 1) suggests EGARCH(1,1) as the optimal specification for analyzing the effect of the prize won in a tournament (see the numbers in boldface in Table 1).

Insert Table 1

At the second stage (*Estimation of the abnormal returns*), the excess returns are obtained. Table 2 presents different models that show the parameters for the effect of prizes. To check for robustness, we estimate the effects of each type of tournament (Grand Slam vs. non-Grand Slam) simultaneously in Models 1 and 4 and separately in Models 2 and 3.

Insert Table 2

Model 1 presents the different effects of prizes in Grand Slams and non-Grand Slams, with the former exerting a significantly positive impact on returns and the latter exerting a significant yet negative effect. Models 2 and 3 introduce quadratic terms in the previous model one at a time, with a significantly negative quadratic term (concave effect) for Grand Slams and a significantly positive quadratic term (convex effect) for non-Grand Slams.

After introducing all the terms together in the same equation, we find the best-fitting model (Model 4), which confirms the previous results (i.e., concavity for Grand Slams and convexity for non-Grand Slams), thereby resulting in a shark-fin-shaped effect (Figure 2).

Insert Figure 2

These results support Hypotheses 1 and 2. For prizes below $1 million (i.e., non-Grand Slam tournaments), it holds that a greater prize won corresponds to higher stock returns. Negative returns are reported at the beginning as the shareholders are not yet confident about the returns on investments from the endorsement contract, and the media attention generated by such a low prize may not be able to compensate for their investment. However, the rise in the value of prizes also increases the value of returns as the tournament attracts more media attention. In line with the findings of Joshi and Hassens (2010), this activity can enhance brand equity, which can spillover into investment behavior (*spillover effect*) and help reduce uncertainty (*signaling effect*).

However, we only observe these increasingly positive reactions up to a certain point ($1 million). At this point, we find a discontinuity that splits into different patterns of reactions. First, this discontinuity represents a jump in the level of prizes (according to the change from non-Grand Slams to Grand Slams). Second and more importantly, we observe a decreasing pattern of positive reactions. While winning a Grand Slam starts

with a greater impact on returns compared with winning a non-Grand Slam tournament, shareholders might foresee an increment in the costs of maintaining the endorsement contract. According to equity theory, excellence in performing could lead the endorser to perceive that the victories attained deserve greater compensation, which in turn increases the costs for the sponsor. Therefore, after a certain point of elitism in sports performance, a greater prize level corresponds to lower stock returns.

For robustness checks, we estimated alternative window lengths. Specifically, Models 5 and 6 in Table 3 show t+1 and t+5 windows, and the results are similar to the event day. Additionally, to control for potential confounding effects, we used the Factiva database to check for events that could affect the companies. We detected two events (Banesto's announcement of a dividend payment and Mapfre's acquisition of the insurance company Atlas) that occurred on the same days as tournament finals. After removing these observations from the sample and replicating the estimation, we found that the significance values remained the same. Models 7, 8, and 9 in Table 3 present the parameter estimates without confounding effects.

5. CONCLUSIONS

In recent years, several top athletes have become household names, and firms have seen a great potential in them as tools for promoting their products and improving their brand image. Firms use this strategy to obtain returns on their investments. Therefore, the elite endorsers need to generate enough returns to offset the high costs associated with the endorsement strategy.

This article empirically supports a positive relationship between the prizes won in second-tier tournaments (non-Grand Slams) and the firm’s market value, which confirms that the investment made is worth it, that is, the cost of the endorsement contract is lower than the expected revenue. However, when the prize is won in top-tier tournaments

(Grand Slams), there is an initial positive *jump* in the returns reactions starting with greater returns compared with second-tier tournaments; however, the shareholder's perceptions of future costs derived from the progression of the endorsers and their feeling of inequity, can lead to a decrease in positive returns.

These results contribute to the literature on the effect of endorsement contracts on the market value of sponsors in two key ways. First, this study underscores the importance of not only examining the effects of contract announcements but also investigating the sports performance of the endorser during the active contract period and its impact on the firm's value. Prior research has predominantly focused on contract announcements, leaving potential factors explaining the effect on firm value unexplored. This may help explain why existing empirical evidence on the correlation between an endorser's sports performance and a firm's business performance remains inconclusive. Recall that several studies have yielded mixed results, with some finding positive relationships between sports results and firm value (e.g., Farrell et al., 2000, and Gerritsen and van Rheenen, 2017), while others have observed non-significant relationships (e.g., Burgwal, 2010). Second, this study has hypothesized, tested and shown that the type of tournament and the athlete's level of sports elitism moderate the impact of sports results on firm value. These findings offer insights into the dynamic nature of endorsement contracts and their varying impacts on a firm's market value, thereby enhancing the literature by shedding light on the complexities and nuances of the relationship between tournament performance and market value.

These results have important managerial implications. First, apart from the positive effects of endorsement contracts on the firm's performance, the victories of the endorser also affect the firm's market value. Second, firms should expect their shareholders to perceive a feeling of inequity on part of their endorsers; therefore, these

firms should foresee and take measures to mitigate the effects of inequity. Given that outcomes do not have to be only monetary according to equity theory, firms can try to diminish such inequity by using non-monetary enticements. Third, in line with equity theory, people can be classified into three groups based on their equity sensitivity (Huseman, et al., 1987), namely, benevolents (with greater under-rewarding tolerance), equity sensitives (seeking equity in ratios), and entitleds (prone to over-rewards). Consequently, those firms looking for endorsers should pay attention to the athletes' attitudes and focus on those athletes that can be categorized as either benevolents or equity sensitives. Fourth, shareholders assume everyone to be equity sensitive, which means that endorsers might look for equity in ratio (in line with equity theory). However, if the firm understands the real perceptions of the endorser (which may differ from the shareholders' beliefs about the endorser's attitude), then the firm can communicate to the shareholders that the endorser is satisfied with his/her current contractual conditions. Fifth, managers can look at the evolution of prices to gauge the appropriateness of the decision to contract an endorser not only at the moment of signing but along throughout the entire contract duration. Sixth, a firm that intensively implements its endorsement strategy and has several endorsers can rank these endorsers in terms of their equity sensitivity as perceived by its shareholders.

Several limitations of this work may open up new avenues for further research. First, we only focus on one sport and one athlete, thereby making this research a case study. This study can be replicated in other contexts to see whether its results hold in any other sports. Second, as this study analyzes only one athlete, examining an endorser-studded firm may be an interesting direction that can reveal whether these endorsers can act as a diversification strategy. For instance, the good performance of one endorser may offset the poor performance of other endorsers.

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Table 1. Selection of the model specification

Model	AIC	SIC
OLS	-5.840	-5.814
ARCH (1)	-5.920	-5.885
ARCH (1,1)	-5.709	-5.670
ARCH (2,1)	-5.750	-5.707
ARCH (2,2)	-5.773	-5.726
ARCH (1,2)	-5.746	-5.702
ARCH (3,2)	-5.791	-5.739
ARCH (3,3)	-5.803	-5.747
ARCH (2,3)	-5.790	-5.738
ARCH (3,1)	-5.775	-5.727
ARCH (1,3)	-5.771	-5.723
ARCH (4,4)	-5.819	-5.754
TGARCH (1,1)	**-5.697**	**-5.654**
TGARCH (2,1)	-5.741	-5.693
TGARCH (2,2)	-5.766	-5.714
TGARCH (1,2)	-5.736	-5.688
TGARCH (3,2)	-5.784	-5.728
TGARCH (3,3)	-5.797	-5.736
TGARCH (2,3)	-5.784	-5.727
TGARCH (3,1)	-5.768	-5.715
TGARCH (1,3)	-5.763	-5.711
TGARCH (4,4)	-5.814	-5.745
EGARCH (1,1)	-5.836	-5.792
EGARCH (2,1)	-5.835	-5.783
EGARCH (2,2)	-5.823	-5.767
EGARCH (1,2)	-5.823	-5.775
EGARCH (3,2)	-5.826	-5.761
EGARCH (3,3)	-5.807	-5.737
EGARCH (2,3)	-5.802	-5.741
EGARCH (3,1)	-5.836	-5.775
EGARCH (1,3)	-5.800	-5.748
EGARCH (4,4)	-5.783	-5.700

Table 2. Effect of prizes derived from victories in final matches

(Standard error in parentheses)

Variables	Model 1	p-value	Model 2	p-value	Model 3	p-value	Model 4 (t=0)	p-value
Market portfolio (R_m)	0.904130[a] (0.037208)	p<1E-10	0.903679[a] (0.037269)	p<1E-10	0.903695[a] (0.037119)	p<1E-10	0.903158[a] (0.037116)	p<1E-10
Prize (in non-Grand Slams)	-3.78E-09[a] (7.83E-10)	p<1E-10	-2.79E-08[a] (1.58E-09)	p<1E-10			-2.77E-08[a] (1.58E-09)	p<1E-10
Prize^2 (in non-Grand Slams)			4.58E-14[a] (5.04E-21)	p<1E-10			4.57E-14[a] (5.03E-21)	p<1E-10
Prize (in Grand Slams)	3.13E-09[a] (1.05E-10)	p<1E-10			6.21E-08[a] (1.6p<1E-10)	p<1E-10	6.21E-08[a] (1.6p<1E-10)	p<1E-10
Prize^2 (in Grand Slams)					-3.80E-14[a] (8.16E-23)	p<1E-10	-3.80E-14[a] (8.16E-23)	p<1E-10
α	-0.000391 (0.000863)	0.6396	-0.000350 (0.000864)	0.6752	-0.000404 (0.000861)	0.6275	-0.000385 (0.000861)	0.6548
R^2	0.632774		0.632655		0.633497		0.633702	
AIC	-5.763542		-5.698742		-5.700250		-5.697453	
SIC	-5.728744		-5.663944		-5.665452		-5.653956	

a=prob<0.001

Table 3. Effect of prizes derived from victories in final matches

(Standard error in parentheses)

Variables	Model 5 (t+1)	p-value	Model 6 (t+5)	p-value	Model 7 (t=0)	p-value	Model 8 (t+1)	p-value	Model 9 (t+5)	p-value
Market portfolio	0.969163[a]	p<1E-10	0.970301[a]	p<1E-10	0.970435[a]	p<1E-10	0.969955[a]	p<1E-10	0.970162[a]	p<1E-10
(R_m)	(0.024434)		(0.024305)		(0.024287)		(0.024249)		(0.024480)	
Prize	-5.15E-09[c]	0.0445	1.17E-10	0.9257	-2.59E-08[a]	p<1E-10	-1.17E-08[a]	p<1E-10	1.19E-09	0.3764
(in non-Grand Slams)	(2.56E-09)		(1.26E-09)		(3.94E-09)		(2.53E-09)		(1.35E-09)	
Prize^2	9.83E-15[a]	p<1E-10	2.25E-15[a]	p<1E-10	4.76E-14[a]	p<1E-10	2.07E-14[a]	p<1E-10	5.17E-16[a]	p<1E-10
(in non-Grand Slams)	(6.91E-21)		(3.44E-21)		(1.17E-20)		(6.84E-21)		(3.63E-21)	
Prize	2.32E-08[a]	p<1E-10	4.67E-09[a]	p<1E-10	4.63E-08[a]	p<1E-10	2.21E-08[a]	p<1E-10	3.22E-09[a]	p<1E-10
(in Grand Slams)	(8.17E-10)		(6.72E-10)		(1.32E-09)		(7.45E-10)		(7.26E-10)	
Prize^2	-1.36E-14[a]	p<1E-10	-2.58E-15[a]	p<1E-10	-2.79E-14[a]	p<1E-10	-1.33E-14[a]	p<1E-10	-1.48E-15[a]	p<1E-10
(in Grand Slams)	(2.94E-22)		(2.41E-22)		(4.83E-22)		(2.67E-22)		(2.58E-22)	
α	-0.000508	0.110	-0.000567	0.0762	-0.000488	0.1211	-0.000482	0.1280	-0.000584	0.0672
	(0.000317)		(0.000320)		(0.000315)		(0.000317)		(0.000319)	
R^2	0.629361		0.629022		0.630081		0.629292		0.629057	
AIC	-6.025804		-6.025369		-6.025869		-6.026063		-6.025164	
SIC	-5.982307		-5.981872		-5.982371		-5.982566		-5.981666	

a=prob<0.001; b=prob<0.01; c=prob<0.05

Figure 1. Effect of the endorsement strategy on the firm's market value

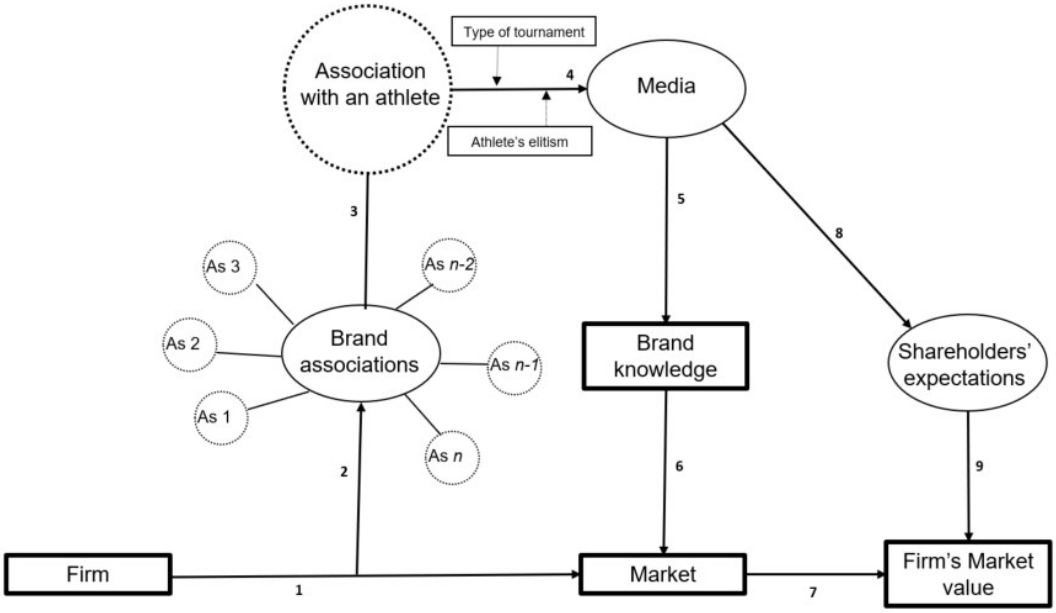

Figure 2. Effect of tournament prizes: The shark fin