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VALUATION OF ATHLETE ENDORSERS – A FRAMEWORK FOR THE VALUATION OF PROFESSIONAL GOLFERS

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In marketing

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Abstract

Sports sponsorship is a field of marketing that has experienced steady growth since the 1980s. It has been used as a means for building brand awareness and differentiating from competitive brands. Even with steady growth, the field has experienced turmoil and debate, since the results it generates are not always calculable due to the multidimensional effects sponsorship may have. As a result, sponsorship lacks certain instruments for measuring the success of it as well as analyzing the direct value it may bring to a company. This being said, the purpose of this study is to develop a framework for the valuation of professional golfers based on quantitative big data.

The research was conducted by gathering data on the athletes selected into the sample group from various different sources. Media coverage was chosen as the primary data for analysis, since based on the literature review, it was seen to be an accurate measure of sponsorship success. The sample group was chosen to consist of the top 10 golfers of the world, since there was the most sufficient data about them available. The analysis of the data was divided into two parts, the first part consisted of analyzing how the success of a player affected the amount of media generated about him. In the second part of analysis, the value of the athletes' current sponsorship agreements was taken into account in order to arrive on how well the athletes had met their sponsors expectations on value. Finally, the mathematical equations used for analyzing were derived, in order to develop a final equation for the valuation of any athlete endorser of a certain sample group, given that the following metrics were available: tournament winnings, sponsorship income and media coverage.

With these findings it was suggested that more research should be conducted in the field of athlete valuation, since the results implied certain athletes were significantly under or over appreciated compared to the sample group. It was also suggested that more research was to be conducted on the accuracy of media coverage as a metric for analyzing sponsorship success.

Key words	Sports sponsorship, athlete endorsement, athlete valuation
Further information	



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Tiivistelmä

Urheilusponsorointi on markkinoinnin osa-alue, joka on kokenut tasaista kasvua 1980-luvusta lähtien. Sponsorointia on käytetty markkinoinnin keinona, jolla pystytään erottautumaan kilpailijoista sekä kasvattamaan brändin tai yrityksen tietoisuutta. Vaikkakin ala on kasvanut tasaisesti, ei sen merkityksellisyys ja tehokkuus ole välttynyt kiivailta keskusteluilta ja väittelyiltä vuosien varrella. Tämä on lähtökohtaisesti ollut lopputulemaa sille, että markkinoijat eivät ole pystyneet kehittämään yksiselitteistä mittaristoa sponsoroinnin tehokkuuden mittaamisen taikka urheilijoiden arvottamiseen. Tämän tutkielman tarkoituksena onkin luoda big dataan perustuva viitekehys urheilijoiden arvottamiseen.

Tutkimus tehtiin keräämällä dataa eri lähteistä koeryhmään valituista urheilijoista. Urheilijoiden medianäkyvyys valittiin ensisijaiseksi dataksi, sillä perustuen tutkielman kirjallisuuskatsaukseen, medianäkyvyyden nähtiin olevan tarkka mittari sponsoroinnin onnistumisesta. Koeryhmään valittiin maailman 10 parasta pelaajaa, sillä heistä oli saatavilla parhaiten tietoa tutkimusta varten. Tutkimuksen analyysi jakautui kahteen osaan, ensimmäisessä osassa analysoitiin miten urheilijan urheilullinen menestys vaikuttaa ansaittuun medianäkyvyyteen. Analyysin toisessa osassa otettiin huomioon urheilijoiden olemassa olevien sponsorisopimusten arvot, jotta voitiin arvioida, kuinka paikkansa pitäviä ne olivat analysoituna tutkimuksessa esitetyillä mittareilla. Lopuksi, analysoinnissa käytettyjä yhtälöitä yhdistettiin ja derivoitiin, jotta saatiin luotua viitekehys, jota voitaisiin hyödyntää jatkossa minkä tahansa urheilijan arvottamiseen ennalta määrätystä urheilijaryhmästä, mikäli seuraavat tiedot olisi saatavilla: urheilijan ansaitut palkintorahat, sponsorointitulot sekä medianäkyvyys.

Tutkimuksesta saaduilla löydöksillä ehdotettiin jatkotutkimusta urheilijoiden arvottamiseen, sillä tulokset indikoivat, että koeryhmässä olleet urheilijat olivat nykyisellään merkittävästi yli- tai aliarvostettuja. Lopuksi ehdotettiin myös, että medianäkyvyyden hyödyntämisestä sponsoroinnin tehokkuuden mittaamiseen tutkittaisiin laaja-alaisemmin.

Asiasanat	Urheilusponsorointi, urheilijoiden arvottaminen
Muita tietoja	

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

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1 INTRODUCTION

“Nowadays people know the price of everything and the value of nothing.”
- Oscar Wilde (1890).

The quote portrayed above has the ability to condense a notable dilemma present in modern marketing. Although the total cost of marketing is often calculable, the ability to accurately arrive on the value of it is missing.

This ideology can also be used in the context of sports sponsorship. The use of sports sponsorship has grown steadily since the 1980s, from a worldwide expenditure for sponsorship of approximately \$2 billion dollars in 1984 (Meenaghan 1998), to a total spending of \$55 billion in 2014 (IEG 2014). The growth experienced in sponsorship clearly indicates that marketers see sponsorship as a trustworthy instrument in their marketing tool box. However, even though companies are seeing positive returns on their sponsorship investments, predicting ROI for the usage of athlete endorsers is still highly inaccurate. This again, is due to inaccurate valuations of the athlete endorsers in the first place. An unambiguous method for calculating the value an athlete endorser could potentially bring to a sponsor does not exist. This thesis aims to narrow the current gap in marketing research by **proposing a theoretical framework for the valuation of athlete endorsers, more precisely professional golfers**. This shall be done by analyzing various big data sources and types verified to predict the popularity and success of an athlete. The framework developed will also be tested on the sample group chosen. By doing this, we will see how the current valuations of the athletes, the amounts they are currently paid for their sponsoring rights, compare to the valuations developed from the framework introduced in this study.

1.1 History of sponsorship

The roots of sponsorship and sports marketing can be seen to lie in the late 19th century. The spark was originally lit by the tobacco industry utilizing the fame and success of national baseball players in the United States of America. As baseball grew into a professional sport in the second half of the 1800s, marketers saw the possibility to associate the positive health connotations of sport to cigarette products.

When consumers purchased cigarette packs they received a trade card along with the packet. Trade cards had portraits of the top players of the era and were collected by enthusiasts that addressed their devotion to the sport. The front of the card had a portrait of the athlete and companies used the back side of the cards to advertise information about themselves or their products. The tobacco companies would also place the logo or slo-

gan of the brand on the picture side, as can be seen in Figure 1. The main purpose of trade cards was to grow awareness and to associate themselves with the athlete in question (Shank & Lyberger 2015, 6).

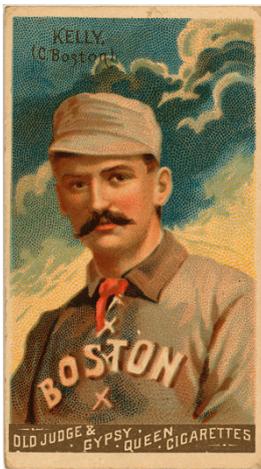


Figure 1 A cigarette card from 1888, portraying Mike "King" Kelly of the Boston Beaneaters accompanied with the logo of "Old Judge & Gypsy Queen Cigarettes".

The next major step in sports marketing was taken when broadcasting of sporting events began in 1939. The first event ever broadcasted was a college baseball game between the Princeton Tigers and the Columbia Lions. However, at the time very few individuals had access to television sets and it wasn't until the early 1950's that televised sports began to grow and was available to a broader audience. Marketers quickly understood that the new technology possessed an opportunity to reach large crowds – the means for extensive and efficient commercial advertising. However, in the beginning, companies were careful with which products and brands were to be associated with a given sport in fear of transmitting a false message. (Caldwell 2014).

With the advancement of broadcasting technology and a newly discovered reach of truly global sporting events, marketers took the initiative to commercialize large events such as the Olympics. The summer games of 1984 in Los Angeles was one of the first sporting events worldwide to truly capitalize on sponsorship. It was reported that the 1984 Olympics made a profit of more than \$200 million, a sum largely based on lucrative endorsement deals (Wilson 2014, 144). The Olympics games of 1984 was a turning point for the growth and establishment of wide scale sponsorship.

The most explosive growth in sponsorship has happened in the last couple of decades. A good example of the exponential increase in the sums of money involved in sponsorship can be found in professional basketball. In 1984, Nike signed a five-year \$2.5 million dollar contract with Michael Jordan (Ruihley et al. 2010). At the time, Jordan was beginning his professional career after completing a successful college basket-

ball career. Not yet an established superstar, but definitely holding great potential. The magnitude of his deal is considered comparable to the ones of the superstars of the 21st century. In comparison, approximately 20 years later in 2003, LeBron James, also signed a contract with Nike, seven years for \$90 million dollars (LeBron James hits jackpot – 2003). This was in the same year LeBron graduated from high school and a month before he was even drafted into the NBA.

The most expensive sponsorship deals originate from the sports that are the most widely recognized and have the largest groups of followers. Currently, the highest valued athletes come from basketball, auto-racing, American football and golf (IEG 2012). With the progress of the sports marketing industry, we have seen the creation of the first billionaire athletes.

The evolution and growth of sponsorship clearly indicate its power and functionality when used in the right context and targeted to a relevant audience. Sponsorship has grown to a multi-billion-dollar industry. Even though the market for sponsorship is growing and evolving rapidly, we still do not hold a full comprehension of the tangible and intangible effects and possibilities that lie within sponsorship. Also, the rise in the sums of endorsement deals has brought the need to rationalize these investments to stakeholders and investors. Even though sponsorships have been known to advance such things as brand equity, brand awareness, increase in market share with addition to short- and long-term sales (Henseler et al. 2011, 12), the precise measurement of sponsorship ROI has always been difficult to calculate. This is due to sponsorship having more indirect effects, and implications on a wider range than the traditional marketing mix may have.

1.2 Purpose of the thesis

Return on investment, or ROI, delivers a coefficient for how effective an investment has been. However, ROI calculations do not express if the investment was valued at a correct level to begin with. If the valuation of an investment is done poorly in the first place, how precise can ROI calculations actually be?

Currently, most academic publications on sponsorship focus more on the outcome and the effects of the investment than any other aspect in the sponsorship lifecycle. There are very few academic articles written on the actual commencement of an endorsement deal, the valuation.

This being said, *the purpose of this thesis is to develop an initial framework for the valuation of professional golfers*, with hope to utilize the framework in other sports disciplines in the future.

The framework will be based on data collected of an athlete's online media coverage. Media coverage was chosen as the dominant metric for this framework, since it has been recognized as a reliable indicator for measuring one of the most important sponsorship objectives – increased brand awareness. More specifically, in this thesis, media coverage is defined as articles where the athlete in question is mentioned in the title of the article. The empirical study is performed with the intention to broaden the views and practices in current athlete valuation.

The sub-questions of this study are defined as follows:

- What is sports sponsorship?
- What are the risks and benefits of sports sponsorship?
- How to manage a successful sponsorship program?
- What are the methods currently used for the valuation of athlete endorsers?
- How does the performance of an athlete affect his or her media coverage?

1.3 Structure of this thesis

This thesis aims to contribute in the field of sponsorship valuation by building a framework for the valuation of professional golfers.

In order to do so, in chapter 2 the main reasons and motivation for the use of sports sponsorship are examined as well as the potential risks and benefits of sponsorship. This chapter will introduce basic concepts as well as the different levels of sponsorship guiding the reader into a deeper understanding of the phenomenon.

Chapter 3 will examine the lifecycle of a strategically effective sponsorship program. This chapter consists of analyzing the objectives a company might have for sponsorship and how to execute them. Also, different methods for measuring the success of a sponsorship program are discussed.

Chapter 4 concentrates on the methods currently used for the valuation of sponsorships. Valuation of a sponsorship has to do with predicting the monetary value a company might get from using an athlete endorser to promote its brand or products over a given time.

Once the relevant literature for this study has been reviewed, a research design with the intention to answer the purpose of this thesis are introduced. After this, data is gathered and analyzed with a goal to arrive on an equation that will explain whether athletes chosen for this study are under or over appreciated based on the framework introduced. The equation derived from the analysis will work as a foundation for the valuation of athlete endorsers.

The quantitative data of this thesis will be gathered with the use Meltwater's global media monitoring software. Meltwater is a leading company in the field of tracking

online media worldwide, it has more than 23,000 customers in 108 countries. The company specializes in providing its customers with the ability to track online content and news articles as well as social media outlets such as Facebook, Instagram and Twitter.

2 SPORTS SPONSORSHIP

The goal of this chapter is to answer and discuss the first two sub questions:

- What is sports sponsorship?
- What are the risks and benefits of sports sponsorship?

In order to answer these questions, the different models currently used in sponsorship will be discussed.

2.1 Conceptual models of sponsorship

The main objective in sponsorship is usually quite straightforward: to increase awareness of a company or brand and thereby promote sales and other aspects of business. Athlete endorsers are seen to be role models for the greater public, and have the ability to alter the thoughts and decisions of consumers (Dix, et al. 2010, 43). In order to accomplish this, their message must be persuasive and it must be able to reach a large crowd.

In figure 2 Henseler et al. (2011) illustrate a sports sponsorship index. This figure collects the components that sports sponsorship is based on.

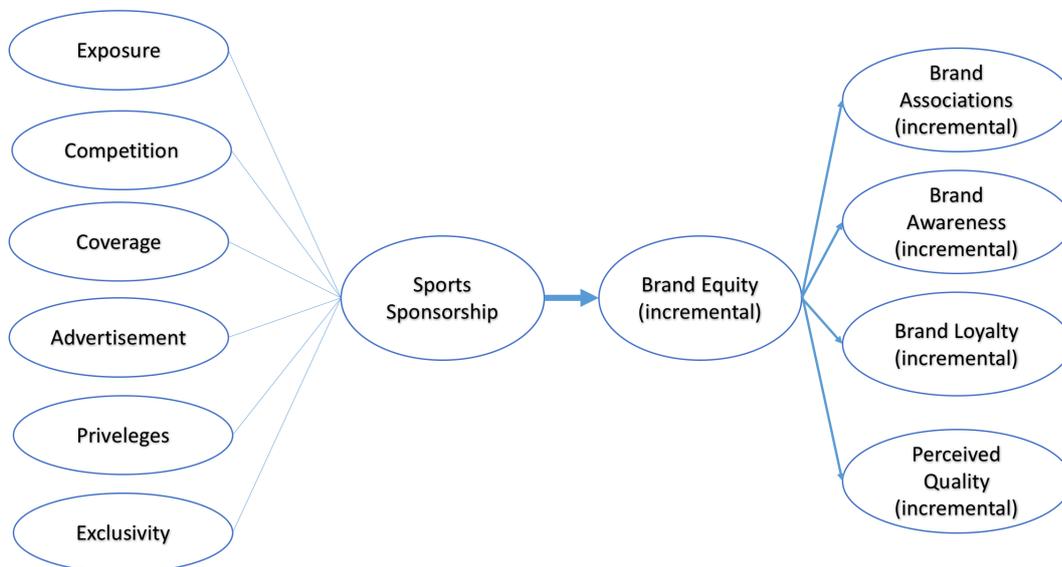


Figure 2 Conceptual model of sports sponsorship components (Henseler et al. 2011)

The six main components that make a foundation for the model are: exposure, competition, coverage, advertisement, privileges and exclusivity. Each of these components

contribute to the overall effectiveness of the sponsorship and therefore serve the main purpose of any company engaging in sponsorship – to increase brand equity of the company. The more effective any one of these six components is, the more powerful the overall effect of sponsorship will be. Sponsorship then again transforms into brand equity for the sponsoring company. When sponsorship is successful the sponsoring company's brand associations, brand awareness, brand loyalty and perceived quality rise. The purpose of this model is therefore to illustrate from which factors value is built, constructed and transmitted in sponsorship.

Depending on the objectives and use case, sponsorship can have a variety of different meanings and definitions. A simplistic view of sponsorship portrays a one-way model of value transfer, in which the entity is compensated for the transfer of goodwill from the athlete brand to the sponsor brand, as is illustrated in Figure 3 (Halonen-Knight & Hurmerinta 2010, 454).

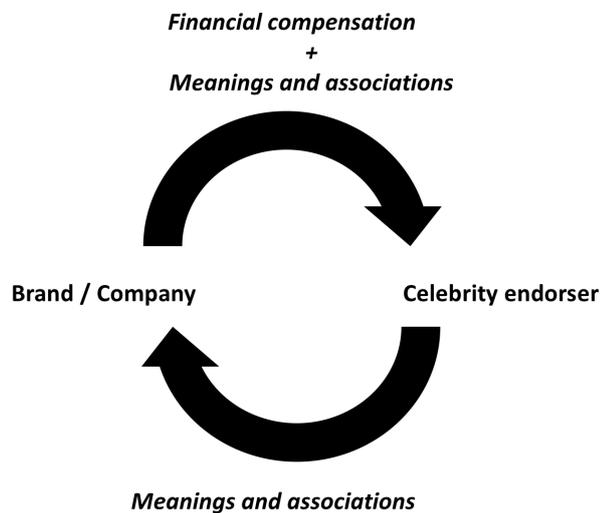


Figure 3 One-way meaning transfer (Halonen-Knight & Hurmerinta 2010, 454)

In a one-way meanings transfer hardly any resources are invested in the activation of the sponsorship. The athlete only receives financial support from the sponsoring company and the company receives increased visibility, for instance from a logo on the athlete's sports outfit. In addition, there is a transfer of meanings and associations the sponsored athlete possesses to the sponsor. Since resources aren't used to increase the awareness of the sponsoring relationship, these types of sponsorships are usually less effective, but also less expensive. (Halonen-Knight & Hurmerinta 2010).

Another definition of sponsorship given by Sleight (1989) sees sponsorship as “a business relationship between a provider of funds, resources or services and an individual event or organization which offers in return some rights and association that may be used for commercial advantage”. Thus, sponsorships do not solely involve athletes

or athletic teams. Sponsorships and endorsements extend to other celebrities and events as well. In sponsorship however, athletes are used as the medium more than in any other category, 60% of celebrity-endorsed advertisements feature an athlete (Carlson & Donovan 2008, 154). In this study the emphasis will specifically be on sports sponsorships and individual athletes.

Athletes have been used as endorsers from the end of the 19th century (Erdogan 1999, 292). During the long course of sports sponsorship there is evidence in the shift of sponsorship objectives (Lee et al. 1997, 160). Studies conducted early on in the field suggest improving awareness to being the first priority (Kahuni et al. 2009, 55). However, during the last few decades the evolvement of sponsorship has significantly modified the desired outcomes. More recent studies have found the highest priorities being concentrating on broad corporate objectives, for instance the effects of co-branded sponsorship relationships and the role of multichannel communications (Kahuni et al. 2009, 62).

The different models for the execution of sponsorship are highly dependable on objectives and intended outcomes. Thus, sponsorship can be used at different levels a broad corporate or a more precise brand level (Meenaghan & Shipley 1999, 329). Although the main external purposes of sponsorship are to increase awareness, enhancement and reputation (Motion et al. 2003), sponsorship can also be used to enhance internal goals. These include retention, engagement and staff recruitment (Greenhalgh & Greenwell 2013, 103).

One of the strengths of sponsorship is, that it provides a company the opportunity to restructure from conventional marketing methods, such as commercial advertising. It broadens the repertoire for conveying strong corporate branding messages and ways of differentiating the brand (Meenaghan & Shipley 1999).

The rudimentary level of sponsorship includes direct financial support to the entity. In this scenario, the sponsorship is not necessarily linked to the overall branding strategy of the sponsor and can even be seen as a form of goodwill (Gwinner & Swanson 2003). In the highest level of sponsorship, the endorser and sponsor have been well fitted and balanced into each other's long term branding strategy. These types of relationships can be better identified as co-branded ones (Motion et al. 2003). Figure 4 illustrates a sponsorship relationship where the sponsoring entity has accounted for the activation of the sponsorship, e.g. paid advertising. The beneficial effects of sponsorship can be increased significantly, when the activation of a sponsoring relationship is done successfully.

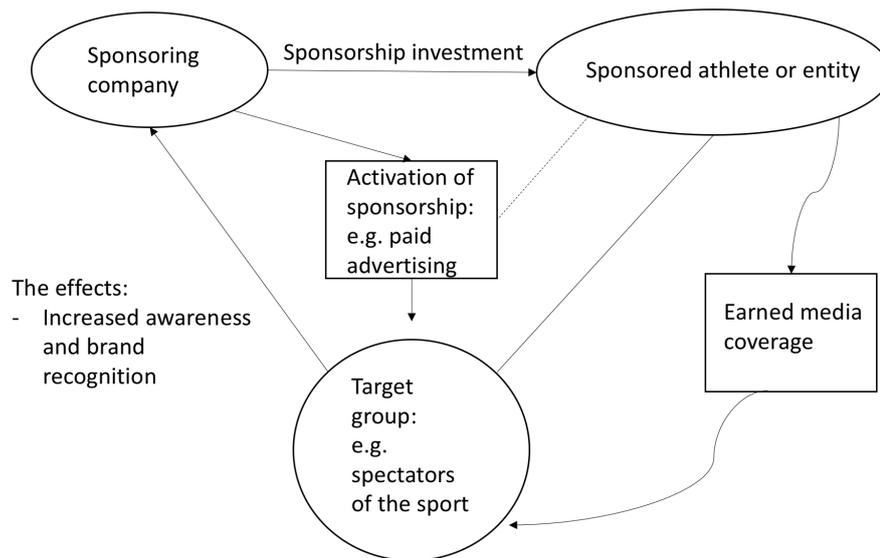


Figure 4 Sponsorship paradigm (Vuokko 2002, 319)

As can be seen from the figure, the sponsoring company pays for the use of the sponsored athlete as a marketing medium. There are three different ways this sponsoring relationship is communicated to the identified target group: paid advertising by the sponsoring company, earned media coverage based on the athlete's performance and direct communication from the athlete to his or her fans for instance through social media.

When the sponsor invests time and resources into the activation of a sponsoring relationship, the results are much better. Building a credible story and being able to associate the athlete brand with the corporate brand is key in making an impact on the target group.

2.2 Different levels of sponsorship

The figures portrayed earlier represent two different models of sponsorship. In the first model, a high return on investment is hard to come by, since there is very little involvement and activation of the sponsorship. These types of sponsorships are seen more as a "logo on a t-shirt", making it fairly difficult to evaluate the effectiveness. In professional sports, these types of sponsorship relationships are usually initiated by athletes that compete in a sport with minor advertising potential, and with a small crowd to begin with, for instance a minor league level (amateur, collegiate or regional).

When the potential for broader recognition and activation of a sponsorship is scarce, endorsement contracts can be seen to be merely a charitable donation to the athlete. For the athletes competing at a lower level, this can however be a very important means of

2.3 Benefits of sports sponsorship

Corporate investments in sponsorship have increased rapidly over the last decades. In 2009, one of the biggest spenders was Nike, paying out over \$4 billion for the rights of having the world's best athletes endorse their brand (Kaplan 2010). In this segment, some of the benefits companies are looking for as a reward for their investments are covered.

In a sponsor relationship the benefits of athlete endorsement can be seen to:

- Develop brand image
- Build brand awareness
- Create brand loyalty
- Provide an experience for the consumer and other stakeholders
- Increase financial value.

There are numerous cases in sports sponsorship where this has been the case, next evaluation is done on which aspects companies can benefit from and how.

2.3.1 *Role-model influence*

Athletes and sports celebrities usually make up for the best endorsers. This is because their achievements are admired by children and young adults (Chan & Zhang 2007). Although fans might not be in personal contact with the sports celebrities, they tend to mimic and replicate their behavior (Bush et al. 2001).

According to a study by Dix et al. (2010, 40), when consumers see famous athletes as role models, the following positive influences on the sponsor company's products may be found:

- An athlete's role model influence is positively related to product switching and complaint behavior
- An athlete's role model influence is positively related to positive word-of-mouth behavior
- An athlete's role model influence is positively related to brand loyalty

The match-up hypothesis by Kamins (1990) is well in line with with this. The hypothesis suggests endorsements are most effective when the product and the endorser possess a natural fit. When an athlete endorses a product or brand that stands for similar values and beliefs of the athlete it feeds the credibility of the endorsement and makes the message more persuasive.

2.3.2 Brand equity

One of the major benefits of successful sponsorship is building brand equity. Brand equity is an intangible asset, which can be seen as the sum of complex interaction of the brands reputation, performance and meanings transfer (Motion et al. 2003). Equity can be obtained in many ways. Motion et al. (2003) describe the potential sources of equity in sponsorship relationships as follows:

- Equity is developed through access to the brand strategy and associations of the co-branded partner
- Equity is developed through the alignment of corporate brand values
- Equity emerges from the marketing communications association
- The corporate co-brand reach offers equity

A sponsorship relationship can even offer a gateway to the brand strategy of the new or existing brand or partner. As a result, each partner has the possibility to pursue and to put strategies that have been previously determined highly functional into practice. When both brands share certain values, they may be associated more powerfully by the newly formed co-brand (Motion et al. 2003). In the case of a co-branding relationship consisting of a large company and an individual world-class athlete, the values each company shares may be superiority in the field of interest. Thus, sponsoring a hard working world-class athlete may increase the perceptions of the sponsor company to also have these types of attributes.

The third source of equity comes from the fact that whenever one of the partners is the target of positive discourse, the other partner is also associated to the matter. For instance in the case of an athlete receiving extensive media coverage for exceptional athletic performance (Motion et al. 2003). Other attributes of brand equity that can be positively affected as a result of sponsorship are: perceived quality of products and loyalty towards a brand.

2.3.3 Financial impact

Sponsorship relationships may pursue an increase in brand equity and new markets, but if there are no tangible results to show for the investments, sponsorships may be abandoned.

The positive actions of athletes can sometimes have immense financial implications that are not necessarily noticeable to all crowds. On March 9th, 1995, rumors began to arise regarding the return of NBA-superstar Michael Jordan to continue playing for the Chicago Bulls after retiring a few years earlier (Mathur et al. 1997). At the time, Jordan was sponsored by various companies, and was endorsing brands such as Wheaties,

McDonald's, Nike, Gatorade and Sara Lee. According to the study of Mathur et al. (1997), *“the anticipation of Jordan's return to the NBA, and the related increased visibility for him, resulted in an average increase in the market adjusted values of his client firms of almost 2 percent, or more than \$1 billion in stock market value.”* This goes to show how profitable sponsorship relationships can be, given that Jordan made approximately \$32 million with endorsements in 1993 (Mathur et al. 1997).

A successful sponsorship relationship can produce profitable financial results even after they are concluded. In 1999, Michael Jordan's effect on the economy, including sales of drinks, cereals, tickets and sports shoes, was estimated to be \$10 billion (A brand unlike any other 1999).

These large returns are the justification investors look for when weighing the risks and benefits of sponsorship. Even with the evidence found in a few cases, and the inability to be able to calculate the actual full range of effects, it is obvious that sports sponsorship can be highly profitable in many cases. However, as any investment, sponsorship also bears risks and a significantly higher percentage of sponsorships fail to turn a profit than succeed. There are numerous cases in which sponsorship agreements and attempts to build brands have failed. In the next chapter some of the pitfalls of sponsorship are discussed.

2.4 Risks of sports sponsorship

The demand for high-profile athletes as endorsers, and co-branding partners, for major corporations has increased significantly over the past decades. Even though these strategic partnerships can bring significant profits, they do not come without risks (Miller & Laczniak 2011).

Research on the topic suggests failure rates of close to 50 percent (Farrelly et al. 2006). Statistics of this manner definitely show the amount of gamble involved in sports sponsorship. This is why, before selecting a certain athlete or sports entity as a partner in an attempt to build a sponsoring relationship, it is crucial to recognize the possible risks involved.

Sports celebrities are people like anyone else, and they encounter problems in their personal lives that affect their performance in competition and the perception of them as a public figure. We live in a world where the media and social media follows every step of the lives of celebrities. One inconsiderate tweet or a statement given ill-tempered can escalate into an international scandal. These missteps in many times may have substantial effects on both the athletes and the companies working around them.

2.4.1 Consumer perceptions

The list of events that can affect an athlete or their sponsor negatively is fairly long. To start with, researchers have found that “*people have a ‘negativity bias in evaluating individuals’ moral behaviors*” (Gupta 2009). In other words, people tend to judge negative actions more severely than what the impact of the actual event is. This itself gives reason for athletes to be extremely conscious of how they present themselves to the greater public.

Also, when undesired events occur it is important to address how negative and the level of negatively perceived the particular events are. People tend to rate crimes at different levels (Louie & Obermiller 2002), and therefore a significant misdemeanor may have significantly stronger effects on one target group than another.

The perception of an athlete is crucial in order to maintain or enhance brand equity. The better we understand how consumers formulate negative and positive opinions about athletes, the more effectively it can be controlled (Akturan 2011). When negative information arises, consumers tend to react in different ways (Akturan 2011). Figure 6 proposes how a negative message integrates into the consumer perception of the athlete as well as the consumer perception of the brand.

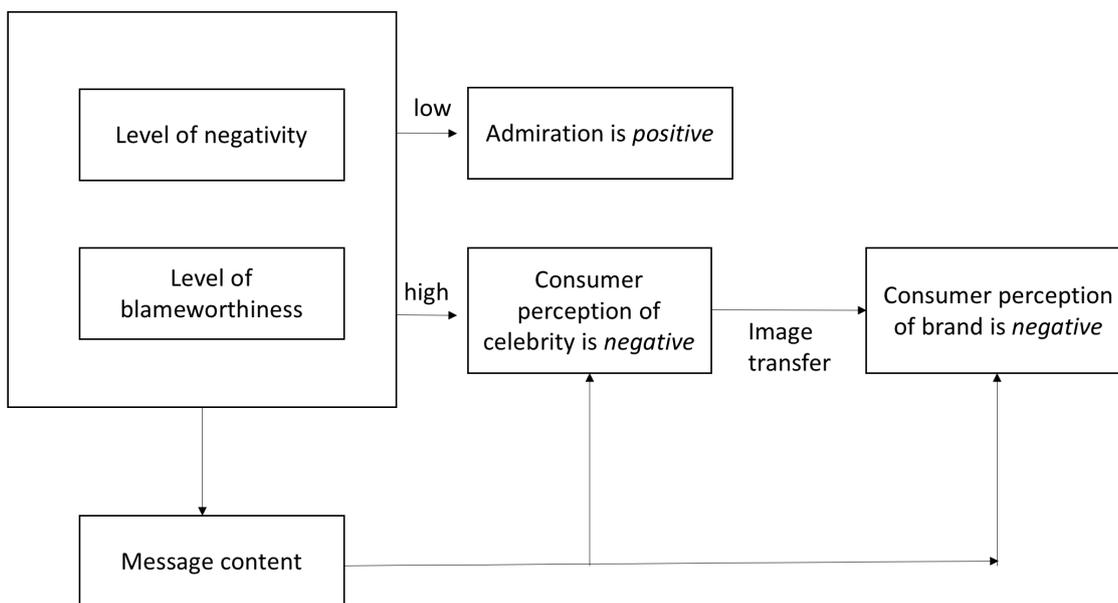


Figure 6 Negative associations (modified from Akturan 2011)

The sum of the level of blameworthiness, level of negativity and the addicted admiration shape the consumer perception of the celebrity (Akturan 2011).

Based on this model Akturan (2011) came up with the following proposals:

- When the negativity of the instance is perceived as low (high), the celebrity image is perceived as positive (negative).

- When the blameworthiness of the celebrity is perceived as low (high), the celebrity image is perceived as positive (negative).
- When the negativity of the instance is perceived as low (high), the admiration is perceived as positive (negative).

With these findings it is easier for a company to analyze and estimate the amount of negative connotations the undesirable actions of a sponsored athlete might bring.

2.4.2 *Poor performance on the court*

To be able to obtain a large sponsorship deal an athlete has to be able to perform at the highest level in his or her sport. The athlete may also possess other attributes that make him or her an attractive partner.

Sponsors take risks in tying endorsement deals with athletes that own great potential but have not necessarily shown the full latitude of it. Even once a high level is reached, in the world of competitive sports where there are literally thousands of contestants trying to reach the top spot, continuing to perform at a high level is incredibly hard to maintain. Dropping down from the highest level is not always in the hands of the athletes themselves; it may be a sum of bad luck, injuries and a more competitive field. This was the case in the 2007 cricket world cup, where the poor performance by India caused sponsors of the top cricketers to take advertisements off the air, in an attempt to save their brands from negative publicity (Upadhyay & Singh 2010). Sponsors look for security, liability and consistency in athletes to ensure a constant value creation process throughout the entire sponsorship relationship.

With this in mind, when forming sponsorship relationships, it is important to address the question how long is an athlete usually able to perform at the highest level in his or her sport?

2.4.3 *Poor performance off the court*

The most common reason for the sudden discontinuation and failure of sponsorships has to do with unforeseeable events that occur in the personal lives of athletes. One of the most famous cases where an athlete, and the brands around him suffered negative publicity is the case of Tiger Woods. His extra-marital indiscretions resulted in marketers and his sponsors disassociating themselves from the world-famous golfer (Ruihley et al. 2010). The consulting firm Accenture decided to drop Woods completely, and other major endorsers including Gillette and Tag Heuer made the decision of limiting the use of Woods in future advertisements (Ruihley et al. 2010). These actions took place in

order to prevent negative connotations to be associated with the brand of these companies. In efforts to prevent this kind of risk, many sponsorship contracts include a clause, which permits the sponsor to end a contract should the athlete take part in morally questionable or unlawful activities (Lear et al. 2009).

Negative effects on the brand of the sponsor company do not always result of illegal actions of an athlete. Top athletes of the world can be seen as role models, thus their personal beliefs and ideologies have a major impact on how they are portrayed amongst fans. It has been studied that being openly gay affects an athlete's marketability and financial viability. As stated by Dean Bonham, a sports marketing executive, "The question isn't whether coming out would have a negative impact on an athlete as an endorser. The question is, how much of a negative impact" (Parker & Fink 2012). Even though there is legitimately and ethically nothing wrong about being gay, empirical data supports the notion that gay athletes may be perceived as less credible (Parker & Fink 2012).

2.4.4 Previous collaborations and perceptions of an athlete

Other actions that affect building the co-brand and its effect usually have to do with the credibility of the athlete. In some cases the athlete celebrity can be seen to endorse a product simply for financial gains, rather than truly believing in the product (Dix et al. 2010).

Also when trying to create a co-brand it may be difficult to dislodge meanings that have been already created and have existed for quite some time (Motion et al. 2003). This can be the case when a top-athlete changes his or her main athletic equipment supplier.

As negative events occur sponsors have to face the problem and make decisions in the best interest of the company. Discharging the athlete from the sponsorship agreement may in some cases be extremely costly, but continuing the sponsorship may also contain potential risks to the image of their brand (White et al. 2009).

2.4.5 Mitigating the consequences

In the case of athletes taking part in undesirable events, companies can end the relationships in order to alleviate the damage to brand equity and to showcase their position on the matter (Akturan 2011). Terminating a contract is an effective and straightforward way out of a sponsorship relationship, however, it is not always necessary. Youthful fan groups like to see their role models challenging the establishment. In some instances,

the bad behavior of an athlete will be tolerated to an extent, and it may even add to the cache of the brand. Advertising potential sometimes lies within negative media attention. This can be seen to be the case with examples such as professional soccer player Eric Cantona and NBA superstar Allen Iverson. Even after attacking a fan, Nike decided to continue Cantona's agreement. Iverson on the other hand is an ex-convict and known for his controversial rap recordings, even with his turmoil past, he signed a 10-year contract worth \$50 million with Reebok (Burton et al. 2000).

Discontinuation of a sponsor relationship shouldn't be done too hasty. According to the psychological involvement and attachment theory, "consumers often develop strong relational ties with admired celebrities" (Atkin & Block 1983). Even when negative events occur, fans tend to look elsewhere for the blame, since they have grown fond of the athlete endorsers.

3 MANAGING A SPONSORSHIP PROGRAM

The goal of this chapter is to answer and discuss the third sub question of this thesis: How to manage a successful sponsorship program?

Sponsorship is a marketing investment, an attempt to convey strong corporate messages with the intention to strengthen the overall brand or product of a company. As with any marketing investment, the more planned and thought out the strategy is, the better the execution will be. Kourovskaja and Meenaghan (2013) identify the following 4 steps for managing an effective sponsorship program:

- Specifying sponsorship objectives
- Selecting the strategically most efficient sponsorship program
- Implementing a comprehensive sponsorship activation program
- Measuring sponsorship effectiveness

3.1 Sponsorship objectives

Sponsorship can have a great number of desired outcomes. The choice of utilizing sponsorship may be done because it is seen as the best viable option for reaching objectives in which the company is currently underachieving in. The purposes can be bound to external or internal goals and they can be of tangible or intangible nature. Kourovskaja and Meenaghan (2013) identify the following objectives a company may have in a sponsorship program:

- Building Brand and Corporate awareness
- Enhancing Brand and Corporate image
- Building Customer Relations
- Improving Employee Relations
- Strengthening Community Relations

To this list can also be added the views of Greenhalgh and Greenwell (2013) :

- Increase target market awareness
- Increase sales and market share

Usually the goal of sponsorship is a certain mix of the objectives proposed above, hardly ever do these traits come one without another. However, it is essential to have a distinct strategy for the objectives of the sponsorship investment and that the objectives identified are measureable in order to evaluate the success of the sponsorship program.

3.1.1 Building brand and corporate awareness

Building brand and corporate awareness is an objective which falls into almost any sponsorship scheme, whether it is an elaborate strategic investment with a lot of time and effort put into activation, or a more minor advertisement venture with relatively less weight in the sponsors overall marketing plan. Building brand and corporate awareness is also one of the most studied and frequently cited themes in the context of sponsorship (Greenhalgh & Greenwell 2013).

The amount of awareness the sponsor-sponsored relationship creates is found to be central in establishing and building an effective sponsorship program. This is because the awareness of this relationship provides a mandatory building block for higher level processing of the sponsorship. When a sponsorship is processed at a higher level, it brings along image transfer and a more favorable attitude towards the sponsor and a higher intent to purchase its products (Walraven 2014). The importance of this objective in a sponsorship relationship cannot be overstated. If the message is lost or is unclear in the beginning of a relationship, it may be very difficult to capitalize on any other objectives.

Research has also proven that the creation of brand and corporate awareness in a sponsorship relationship cannot be taken for granted. The communication of this to the public must be as clear as possible, since the consumer has been found to confuse sponsors with official sponsors (Walraven 2014).

3.1.2 Enhancing brand and corporate image

Moving up the ladder in the sense of sponsorships strategic advancement is enhancing the brand and corporate image of the sponsor. After being able to inform a larger crowd of the company's brand and products, the next goal is to be able to associate the brand or company with the chosen sport entity. This is done with the desire to transfer the positive connotation of the athlete brand to the corporate brand. The success of enhancing brand and corporate image through sponsorship is largely based on the match –up of the two entities. The better the two partners are seen to fit and complement each other's brand, the more effective the transfer of meanings to the consumer.

Enhancing brand and corporate image are important goals in any sponsorship agreement, Walraven (2014) summarizes three main factors influencing the matter:

- The effect of sponsorship duration
- The effect of individual involvement
- The effect of sporting success

3.1.3 *Building customer relations*

The benefits of sponsorship can also be used to a significant advantage in building and strengthening customer relations. Sponsorships of causes and events that are portrayed as noble or possess significant sociological effect can have the ability to transfer the goodwill of the event or entity to the sponsor (Kourovskaja & Meenaghan 2013). Therefore, boosting the perceived image of the sponsoring company in the eyes of a prosperous customer and making it seem more reliable and trustworthy.

Sponsorships can also bring the advantage of admission to desired occasions. Hosting important clients at major sporting events is a good opportunity to strengthen relationships in a less hostile non-business environment.

3.1.4 *Improving relations*

Sponsorship can be used in improving both external and internal relations. Within a company, sponsorships may play a significant role in attracting highly qualified personnel and motivating existing employees. They can be used within the company in many of the ways they are used in external relationships with existing and potential customers, including different rewards and entertainment for the sponsor's employees. Improving employee relations has been discovered an essential objective of sponsorship (Zinger & Reilly 2010).

Companies have been found to have a keen interest in developing external relations, such as with the communities they are physically present in. Sponsorship has been found to be the most effective means of advertising in doing this (Greenhalgh & Greenwell 2013). Independent of the size of the company, showing commitment to local athletes, teams and events can make the company appear more credible and likeable.

3.1.5 *Increase target market awareness and sales*

One of sponsorships main purposes is to build brand and corporate awareness of the company in a specific target market. In this sense, sponsorship can be seen more as an alternative to traditional advertising. However, with companies constantly looking for ways to target more specific groups with tailored messages, sponsorship offers that possibility for instance within niche sports.

The objective of increasing sales and the market share of a sponsor can be seen to be one the most straightforward goals a company sets when using sponsorship in their

marketing mix. As in any form of marketing if the result doesn't have an impact on sales, it can quickly be abandoned.

Sponsorship can be seen to fulfil these objectives in several ways. Consumers have been seen to choose products or brands over competitors, that actively sponsor sports or events that they think highly of (Greenhalgh & Greenwell 2013, 103). Also, since many purchasing decisions for consumer products are made in-store, sponsors have utilized displays and other means to advertise sponsoring relationships at the point-of-purchase in order to persuade potential buyers (Greenhalgh & Greenwell 2013, 103). Event sponsorship can also bring the possibility for exclusive distribution in certain occasions where fans and consumers are present.

Also, sponsorship can be viewed as a unique way of differentiation in order to grow market share. The attainment of top athletes to a company's sponsorship program can be seen as an effective way to fight off competitors and achieve a larger share of the market.

3.2 Selecting a strategically effective sponsorship program

One of the most important steps in the sponsorship lifecycle is finding the right sponsorship program. The selected strategy should allow the achievement of predetermined objectives within a given financial budget. The more efficiently objectives can be hit, the greater the expected ROI of the sponsorship program there will be. Marketers have developed different models and theories for the selection of an appropriate sponsorship program, however, each situation is unique and the selection will always include some amount of judgment (Kourovskaja & Meenaghan 2013, 419).

The better the two brands, the sponsor and sponsored, and the objectives set fit, the more likely success is. The suitability of the two entities can be evaluated based on an image-based fit or a function-based fit (Kourovskaja & Meenaghan 2013, 419). An image-based fit insists the two brands possess similar traits such as being passionate, fun and elegant. A function-based fit presumes the products or brands of a sponsor are actively used in a sponsorship. This is the case when top athletes utilize and trust the equipment provided by a well-known top supplier of accessories or equipment. In general, an image-based fit is easier to achieve in the sporting world since the variety is much broader than in physical products.

The Millward Brown Optimor model displayed below in figure 7 shows a strong correlation between better impressions of a brand and the appropriateness of the sponsorship.

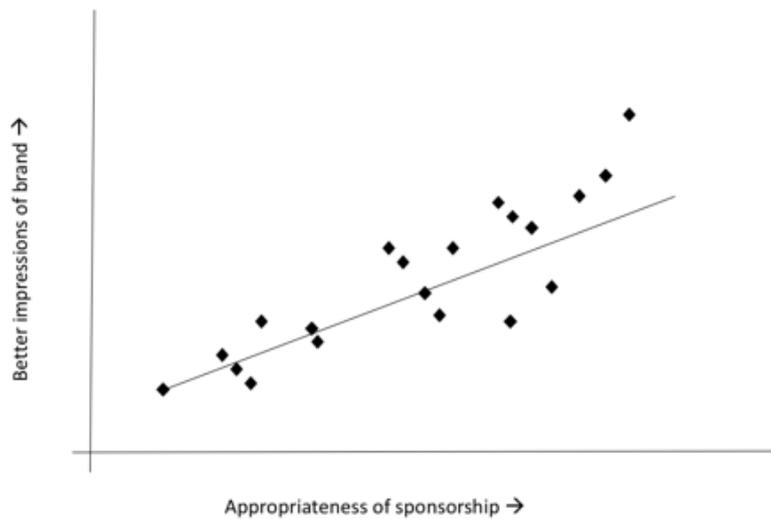


Figure 7 Impact of appropriateness of sponsorship on brand image (Kourovskaja & Meenaghan 2013)

Being a product or brand of interest, as well as being able to target a pre recognized market can be seen as a prerequisite for a successful sponsorship program (Kourovskaja & Meenaghan 2013, 419).

3.3 Sponsorship activation

Once a partner for sponsorship is chosen, the next step is to find the right tools for promoting the attired relationship. Activation in sponsorship is the act of further investments and time put into leveraging the sponsorship to its maximum potential (O'Keefe et al. 2009). This includes utilizing promotions, competitions, television advertising, events and other means to impose on the investment. Attaining the rights to a prosperous athlete brand simply is not enough, it must also be leveraged in the right way and proportion. To achieve maximum ROI, the most important part is not finding the right object or match, it is being able to exploit that pairing to its full potential (Keefe et al. 2009, 43).

In 2011 an average of \$1,60 was used on leveraging the sponsorship against every \$1 used for the acquirement of the rights (Kourovskaja & Meenaghan 2013). However, marketers do not seem to find consensus on what is the optimum level of further investment. IEG (2014) insists the ideal range being in between \$0 and \$4 per every dollar spent in sponsorship. When planning and budgeting for the use of sponsorship, it is important to consider how much money and other assets will go into the activation of it.

The cost of the activation of a sponsorship usually falls on the sponsor. When sponsorship agreements are drafted, all additional costs must be extremely well documented in order to avoid any misunderstandings as the relationship builds. In some cases, the costs can however be divided. This depends on the how the activation is brought into practice. Mike Kerrigan of the Columbus Blue Jackets states the following (O’Keefe et al. 2009):

“It depends on if it benefits the team to have the added exposure in the market. It is worth helping to pay if we can have player posters and standees up in a store over a 2–3-month period during the season. It generates excitement for the player and the team.”

3.4 Measuring sponsorship effectiveness

The measurement of sponsorship effectiveness is a highly researched yet controversial area in sports marketing. Nowadays, marketers have a vast toolbox available to justify their spending’s in other forms of marketing. Sponsorship however, suffers from a shortage in this area, since it does not have a universal set of methods for calculating ROI. Based on the IEG Performance Research Study (2012), 34% of marketers admit to not measuring returns in sponsorship. However, 86% believed the need for justified results has increased in the past few years due to companies being more cost-conscious about their marketing spending.

Even with a scarcity in metrics, there is a wide range of accepted methods used to measure the effectiveness of sponsorship. However, when choosing the appropriate tools, they must be efficiently linked to the desired objectives. The tools chosen usually focus on coming up with a numeric value for the return on investment (ROI) or the return on objectives (ROO) (O’Keefe et al. 2009, 46).

Kourovskaja and Meenaghan (2013) point out relevant ways of measurement:

- Determining media equivalent value
- Econometric modeling
- Brand impact measurement

3.4.1 Determining media equivalent value

Determining media equivalent value is the attempt to convert the amount of earned media coverage into a dollar figure. Assessing the value of media coverage is a widely used, yet controversial topic and method in the world of marketing. Some experts say it

is the best way to get a comprehensive view on the coverage earned in broadcasting, print media or event marketing. However, due to the intangible nature of media impressions, researchers have not been able to arrive on an agreement for a single formula that would take into account the different factors affected. This being said, the main goal of this thesis is to try present a framework, which would give a more unambiguous view on the subject.

The basics for determining media equivalence revolve around calculating the value of the exposure of a certain brand to consumers or a target group. It is done primarily from television, press and social media. In the digital era we live in, it is quite easy and inexpensive to calculate the amount of exposure a brand receives in any of the channels mentioned above. A variety of companies exist that specialize in these kinds of metrics.

Measuring brand exposure on television is done by calculating how much airtime a single brand receives. This figure is then multiplied by the amount of viewers watching the event and by a monetary value that reflects the value of the airtime to that specific segment. Deriving a specific figure for the monetary value of a sporting events airtime is where the biggest debates and fluctuations occur. This type of media exposure cannot be seen to be even close to the value of a television commercial, since the brands portrayed are usually not at the center stage of the sporting event. Some experts say that the value of exposure can be as low as 10% of a broadcasted commercial. In whichever way you should calculate the value of exposure, the going rate for television advertisement for that specific event is a good starting point.

Addressing the value of press coverage and social media coverage is done in a similar manner than for television. The amount of articles where the subject is mentioned is multiplied by the readership of that particular media outlet. In order to achieve a dollar value, this figure is multiplied by the cost of reaching a specific amount of people via advertising.

$$\text{Advertising value equivalent (AVE)} = (\text{Quantity of articles} * \text{potential reach}) * (\text{cost of advertising})$$

This equation produces a monetary value for how much the earned media coverage is worth. However, there are a few problems with the produce of this equation. First of all, it assumes that media coverage is at least as valuable as advertisement for the same target group. In many cases media coverage is less valuable than advertising as discussed earlier. Since the variance can be very broad, it is near impossible to come up with a coefficient that would indicate the value of earned media coverage in any context.

Second, even though the potential reach or average readership of a specific media is known, it is very difficult to find out the how many people have actually read the article. There can be a vast difference in actual readership numbers if an article is published

in the last pages of a newspaper compared to the front page. Also, the variance will alternate between different medias, as smaller medias tend to have a more distinct group of readers.

3.4.2 *Econometric modeling*

Econometric modeling is a popular method used to measure the effectiveness of sponsorship. The foundation of econometric modeling is based on comparing previous sponsorship, marketing and advertising programs with current actions.

Companies usually have a substantial database of the effects and results of former campaigns. This helps them recognize the benefits and success of ongoing sponsorship projects. Because of the existing baseline, econometric modeling is considered to be more precise in measuring the short-term effects such as revenue, sales volumes or growth in website traffic. (Kourovskaja & Meenaghan 2013).

3.4.3 *Brand impact measurement*

Brand impact measurement is based on how much the brand image, emotional engagement and purchasing intent of a brand has changed (Kourovskaja & Meenaghan 2013). For instance, due to Coca-Cola's sponsorship in the 2008 Beijing Olympics, Coca-Cola's brand awareness in China grew by 25 % (Kourovskaja & Meenaghan 2013).

The advantage of brand impact measurement is that when it is used over an extensive time period, it can give a very concrete value for the change in the popularity of a brand. Because of this, brand impact measurement is usually only used in measuring sponsorship effectiveness in the long-run.

4 SPONSORSHIP VALUATION MODELS

In the context of sponsorship, valuation has to do with predicting the value a specific sponsored athlete or team may bring to a sponsor over a certain amount of time. Valuation can be done on many different levels and in different ways. Brewer & Pedersen (185, 2009) define valuation in the following way: "*Valuation is a traditional theoretical and practical means to estimate market prices of risky assets, controlling for time*". In other words, valuation is the attempt to give a financial value to a tangible or intangible object or asset at a given point in time for a given time period.

Time plays a significant role in valuation since the essence of valuation is estimating how much value an asset will bring to its owner over a certain period of time. Valuation can also be written into an equation:

$$\text{Value} = \text{potential profit} * \text{risk}$$

A sponsor must estimate how much value a certain athlete can produce for the company or brand. What is the likely hood of this, or in other words, what is the numeric value of risk? These calculations must also take into consideration the specific time frame intended for the investment.

As discussed in the beginning of this thesis, in order to make profitable investments in the long run one must have accurate valuations. Next, the different approaches for athlete valuation are examined.

4.1 Business equity valuation

Business equity valuation theory proposes that value can be derived from one or more of the three different valuation approaches:

- Asset approach
- Income approach
- Market Approach

4.1.1 *Asset approach*

In an asset approach, the different assets of a company are valued separately. Liabilities are then subtracted from the sum of the valuated assets in order to come up with a financial value for the total.

In the eyes of sponsorship, this could mean valuating the brand equity of an individual athlete and estimating how much of this equity could be used in favor of the sponsor if a sponsorship relationship is to be established (Brewer & Pedersen 2009, 185).

4.1.2 *Income approach*

In an income approach, the valuation is based on predictions of future incomes. Future incomes are calculated with the help of historic data taking into consideration time value of money concepts, holding period risk, industry risk, business risk, and idiosyncratic risk. The time considered for the investment plays a big role, since cash flow predictions are calculated in present value terms (Brewer & Pedersen 2009, 185).

Sponsors can use an income approach to estimate how much cash flow and profit could be attained by having an individual athlete endorse a certain product or brand.

4.1.3 *Market approach*

When valuation is performed with a market approach, similar deals that have been realized in the same market are compared to conclude on a value for the existing entity. The comparable aspects of different companies are called value drivers. In order to come up with a specific valuation, value drivers are used, compared and analyzed very precisely to derive a final value (Brewer & Pedersen 2009). In the context of sponsorship, a market approach can be used when the attributes of athletes are easily comparable.

In this study a market approach valuation will be used in order to investigate current valuations of the top 10 golfers in the world. The value drivers used will be further discussed in the methodology of this study.

4.2 Sponsorship valuation of sporting events

Since the literature for the valuation of individual athletes competing in individual disciplines is fairly scarce, the metrics used for the valuation of sporting events are examined and applied in this study.

Event sponsorship is a type of sponsorship where a company supports a particular event, or series of events, financially, or by offering the use of its products or assets to the organizers (Gwinner & Eaton 1999). The valuation of event sponsorship depends on a number of value drivers. Brewer and Pedersen (2009) highlight the following six factors as key value drivers for the valuation of sponsorship for sporting events:

- Attendance
- Total reach
- Sports type
- Facility and event signage
- Attendees' positioning and sightlines
- General level of orderliness

Brewer and Pedersen (2009, 189) also provide a table consisting of weight of the value drivers for their calculations which is illustrated in table 1.

Table 1 The weight of value drivers (Brewer & Pedersen 2009)

Weight of value drivers in event sponsorship		
	Comparative value	Percentage (%)
Attendance	4	22 %
Total Reach	7	39 %
Sports type	3	17 %
Facility	2	11 %
Positioning	1	6 %
Orderliness	1	6 %
total	18	100 %

Based on their model, the weight of value drivers that account for reaching people, attendance (22 %) and total reach (39 %), account for approximately 61 % of event sponsorship valuation. This validates the significance reaching spectators has in order to bring value to sponsors. The more people you are able to reach with the help of an athlete or event, the higher the value of the sponsorship will be to companies.

5 METHODOLOGY

The goal of this chapter is to provide the reader with evidence and understanding for the chosen methodology used in this study. Also, the sample group will be introduced to give a more in depth view of the characteristics of the data. Finally, data gathering methods will be described in addition to methods used in data analysis.

5.1 Choice of methodology

The purpose of this study is to formulate a framework for the valuation of professional golfers. With this in mind, the metrics chosen for the empirical part of this study must accurately represent the phenomenon being studied and at the same time be available at any given instant. Due to this, the methodology chosen for this study was **big data mining**. Big data mining is a process where different quantitative data from various sources are combined with a goal to discover distinguishable patterns about the studied subject (ACM SIGKDD 2006).

Based on the literature review of this study, the main objectives in sponsorship are to increase brand awareness and to enhance brand and corporate image. These objectives are most effectively accomplished by reaching as broad an audience as possible, by the use of an athlete who is perceived credible to the target audience. The media reach a player is able to achieve is highly dependable on two dominant factors: the performance of an athlete and how easily media coverage is produced about the athlete, or in other words, how interesting the athlete is perceived to be from the media's perspective.

In this study earned media coverage is defined as online news articles that have been written about an athlete due to athletic performance or other events that interest the greater public. The software used to gather this information holds and updates a database of 208 languages, hence a giving the data a truly global scope. Since earned online media coverage can be seen to give an accurate view on the success of the two most important objectives in sponsorship, it will be chosen as the key metric in the formulation of this framework. Other data points that will be used in the analysis are:

- the potential reach of an athlete's media coverage
- how much money an athlete has won in tournament play
- how much money an athlete has earned through sponsorship deals

The potential reach of online media coverage has to do with how many individual people have potentially read a given news article. The figure is based on data on how many unique visitors a specific media outlet receives in a certain time period. It is important to point out that potential reach does not take into account the actual amount of people who have read a certain article, it is only the total amount of unique visitors the

web page receives. For instance, if a web page for a newspaper has 1 million unique visitors per day, and the media produces hundreds of articles a day, it is highly unlikely that each visitor would read every article. Hence the term *potential reach*. However, this value is extremely useful when calculating the overall effectiveness of numerous articles since the variance in reach for individual articles can be significant.

In professional golf, as well as in other professional sports, there is a strong correlation with the amount of prize money awarded to participants and the level of accomplishment. The more important the competition, the more prize money is to be won. Because of this the metric "money won in tournament play" is used for the measurement of success in this study. This is also a good metric since it is completely unbiased.

The amount of money the athletes are currently earning through sponsorship will act as a reference point for valuation. Since it is an actual figure, it gives a good representation of an athlete's current market value. When combined and analyzed together in the right manner, these metrics are expected to produce an accurate figure for the valuation of the sample group.

5.2 Data collection

The primary data of this study, online media coverage, was collected with the use of Meltwater's media monitoring software. The nature of data is longitudinal. Meltwater and the data collection process is briefly introduced below.

Secondary data, such as official golf world rankings, tournament earnings and sponsorship earnings were collected from various sources. All of the data collected about the sample group, are used in the analysis and intend to describe the the performance and valuation of the sample group for the time period of the 2015 calendar year. All of the data used in this study was collected in March of 2016. Table 2 illustrates from which sources the different data in this study are collected from.

Table 2 Data collection methods and sources

Data name	Online media coverage	Official golf world rankings	Tournament earnings	Sponsorship earnings
Collection method	The use of Meltwater's software.	Manual collection from official golf world rankings website.	Manual collection from golf digest website.	Manual collection from golf digest website.
Source	Data mining from over 300 000 online media sources.	http://www.owgr.com/	http://www.golfdigest.com/gallery/golfs-top-earners#1	http://www.golfdigest.com/gallery/golfs-top-earners#1
Description	Online news articles about the athletes in the sample group.	The official ranking system of professional golfers.	The amount each individual athlete won in tournament prize money during the 2015 calendar year.	The amount each individual athlete earned in endorsements, bonuses, appearance fees, corporate outings, speaking engagements, licensing fees etc.

The operationalization of variables in this study is displayed in table 3 on the next page.

Table 3 Operationalization of variables

Purpose of this study:	To develop an initial framework for the valuation of professional golfers					
Research questions:	What is sports sponsorship? (Chapter 2.1)	What are the risks and benefits of sports sponsorship? (Chapter 2.2 & 2.3)	How to manage a successful sponsorship program? (Chapter 3)	What are the methods currently used for the valuation of athlete endorsers? (Chapter 4)	How does the performance of an athlete affect his or her media coverage? (Chapter 6.1 & 6.2)	
Themes:	<ul style="list-style-type: none"> • Sports sponsorship components • Different levels of sponsorship • The sponsorship paradigm 	<ul style="list-style-type: none"> • Develop brand image • Build brand awareness • Increase financial value • Consumer perceptions • Performance on and off the court • Athlete perception 	<ul style="list-style-type: none"> • Sponsorship as a strategic decision • Sponsorship objectives • Selecting the correct sponsorship program • Implementing sponsorship • Measuring sponsorship effectiveness 	<ul style="list-style-type: none"> • Business equity valuation approach • Sponsorship valuation of sporting events 	<ul style="list-style-type: none"> • Previous performance and future expectations • Face-value of an athlete 	
Theoretical framework:	<ul style="list-style-type: none"> • Henseler et al. 2011 • Halonen-Knight & Hurmerinta 2010, 454 • Vuokko 2002, 319 	<ul style="list-style-type: none"> • Dix et al. 2010, 40 • Motion et al. 2003 • Mathur et al. 1997 • Akturan 2011 • Ruhley et al. 2010 • Dix et al. 2010 	<ul style="list-style-type: none"> • Kourovskaja & Meenaghan 2013 • Greenhalgh & Greenwell 2013 • Walraven 2014 • Zinger & Reilly 2010 • O’Keefe et al. 2009 	<ul style="list-style-type: none"> • Brewer & Pedersen 2009 • Gwinner & Eaton 1999 	<ul style="list-style-type: none"> • Analysis and concepts developed in this study 	
Operationalization in developing the framework	<ul style="list-style-type: none"> • Selecting the top 10 golfer’s in the world as the research sample – verified world class athletes 	<ul style="list-style-type: none"> • The effect performance has on generating media coverage 	<ul style="list-style-type: none"> • Reaching sponsorship objectives through media coverage • Measuring sponsorship effectiveness 	<ul style="list-style-type: none"> • Transforming market based valuations into a more elaborate framework • The importance of reach and impressions in valuation 	<ul style="list-style-type: none"> • Developing a coefficient for how interesting an athlete is at any given time 	

5.2.1 *Meltwater*

Meltwater is a global leader in online media monitoring. The company was founded in 2001 by Jörn Lyseggen who is also currently the company's CEO. Meltwater originates from Oslo, Norway, with its headquarters currently located in San Francisco, California. Meltwater operates offices in 27 countries, on six continents and has over 1000 employees worldwide.

Meltwater offers company's Software as a Service (SaaS) for tracking digital media. The company's customer base varies from non-profit and governmental organizations to large multinational companies. It has been a forerunner in tracking relevant news online, and in the future it wishes to position itself more directly in the growing field of business intelligence and data analytics.

The cloud-based software tracks more than 300,000 digital media sources online from more than 190 countries. In practice, Meltwater's software tracks each significant media outlet internationally as well as domestically. In other words, if an article is written and published by a credible media, Meltwater's software will be able to retrieve it.

Users are able to find relevant information using text-based search algorithms. The searches can be specified using Boolean search logic. Boolean enables the use of search operators such as AND, OR, NOT, NEAR, NEAR/x, TITLE or INGRESS set between search terms. This enables the possibility to search for a number of different key words within an article for the use of narrowing a search to a specific context. It also offers the capability to search specific parts of an article, e.g. the title.

The software also enables users to track information written in various social media channels such as Facebook, Twitter, blogs and forums. However, for this study the focus will be solely in analyzing established media outlets.

5.2.2 *Data gathering of media coverage*

Media coverage data was collected for each athlete separately. Since the objective of this study is to formulate a universal model for the valuation of professional golfers based on their media coverage, the cropping of the searches was done in a specific manner in order to find only articles of relevance to the athlete at hand. This was done by using two different search criteria in each search: title search and full search.

Title search enables the search engine user to specifically find articles where the subject of the search is mentioned in the title of the article. Both first and last names were used separately in the title search to ensure the possibility of a positive hit.

(Title:Rory* OR Title:McIlroy*)

For instance using the search terms presented above resulted in finding the following article: “McIlroy pulls away with 66 to take four-shot lead at Dubai Desert Classic” (LLC 2015).

In addition, full search was used to crop and ensure the article returned as a hit was in fact about the athlete desired. If only the first criteria had been used, an article of any “Rory” OR any “McIlroy” would have been returned as a hit. The full search searched for the whole name of the athlete from the entire article, e.g. “Rory McIlroy”. Thus, the final search algorithm used for each player looked as follows:

(Title:”firstname*” OR Title:”lastname*”) AND ”firstname lastname*”

The asterisk at the end of each search term enables the conjugation of each search term in the article. Therefore, if the name of the athlete had been conjugated, it would also return a positive hit.

5.2.3 Potential reach

Potential reach of an article is part of the meta data of each individual article. Meltwater uses a partner in cooperation who tracks information on the amount of traffic each media outlet has. This information is then paired with each article in order to give an approximate view of the reach the article or media outlet in question has. The figure produced is the amount of unique visitor’s the media outlet in question has on average, on a weekly basis. It is to be noted that this figure is not an accurate measure of how many individuals have read the article, but more of an approximation of the potential spread. Also, the software is only able to obtain this information from roughly 60% of all the sources it tracks. However, mainstream medias are well represented and therefore account for most the sources with this data available. A sample of 915 articles of the data acquired was evaluated to find out the reliability of the metric. The results conclude that 67% of the articles where Jordan Spieth is mentioned contained meta data of the potential reach of the source. The sample articles were dated between the 18th of December 2015 and the 31st of December 2015.

5.2.4 Official world golf ranking

The Official World Golf Ranking was used in this study in order to formulate the sample group. As the goal of this study is to produce a model that is as a truthful as possi-

ble, the decision was made to choose the top 10 players at the end of the 2015 season as the sample group. This was done with the assumption that there would most likely be the most data available about the top 10 players than a randomly selected group, and therefore this would provide the study with the most accuracy.

The Official World Golf Ranking was introduced in 1986 from a need to rank players according to performance, independent of which tour or competitions they primarily played. A uniform ranking system was established in compliance with the Royal & Ancient Golf Club, which is the ruling authority of golf throughout the world.

The method of points calculation for the ranking has gone through numerous changes over the years. Currently it gives the average points obtained by a player during the last two seasons, calculating the total number of points a player has earned by the amount of events he or she has played. Each event is valued separately based on the participants. The more top players competing in the tournament, the more points an individual is able to achieve.

The official world golf ranking list is updated every week giving an up-to-date view of player performance. The data gathered for this research was gathered from the official world golf rankings archive.

5.2.5 *Money earned from tournament play*

In golf, the organizers of a competitive tournament try to attract players to compete in the particular event by offering as high a prize pool as possible, collecting this money from tournament sponsors and ticket income. The bigger the prize pool, the greater the amount of established players are likely to participate. The better the players the more media attention the tournament is likely to receive. Because of this paradigm, the money a player earns from a tournament is an accurate and unbiased measure of success. Since performance is a significant factor in the valuation of athletes a money won from tournament play was chosen as the metric to represent success in this study.

More accurately, money earned from tournament play includes all the money a player has earned on the 6 international main tours. These tours include: PGA Tour, Japan PGA, PGA European, Australasian, Southern Africa and Asian tour. It also includes unofficial money won from non-tour events. The data used in this study was originally gathered and formulated by Golf Digest USA for their annual ranking of the top 50 earners in golf. Golf Digest's data origins from the official money lists of the professional tours.

Golf Digest is a monthly magazine covering recreational and competitive golf. It was founded in 1950 and it is known for producing lists and rankings based on extensive

research of the most intriguing aspects in golf, e.g. the world's 100 greatest golf courses.

The ownership of Golf Digest has been under Condé Nast Publications since 2001. The magazine has a circulation of approximately 1,66 million copies (PSA Research 2012).

5.2.6 Sponsorship income

Off-course income, or sponsorship income figures used in this study include estimates of all the money a player has made from endorsements, bonuses, appearance fees, corporate outings, speaking engagements, licensing fees (video games, trading cards, etc.), course architecture, books, instructional videos and businesses that capitalize on a person's status as a player, such as product lines including clothing, wine and turf grass (Golf Digest 2016).

The data used in this study was originally gathered and formulated by Golf Digest USA for their annual ranking of the top 50 earners in golf (Golf Digest 2016). The figures for Golf Digests list were acquired through interviews with agents, players, executives of companies involved with endorsements and industry analysts. These interviews were conducted by Golf Digest.

Since Golf Digest is one of the leading publications in the field, with subsidiaries all over the world, their data can be seen to be highly reliable. Also, information about sponsorship deals are highly secretive. All figures announced in mass media are based on estimates, since it is usually in the best interest of the brands and companies that commence these deals to conceal this information.

5.2.7 Research sample

The population of this study includes all professional golfers competing either on a national or international level involved in some form of endorsement or sponsorship operations. The actual size of this population is hard to come by, the Official World Golf Rankings hold the official ratings of approximately 2000 players worldwide. Based on this, the population size will be determined to be 2000. Since the population itself is highly diverse in terms of the nature of endorsement contracts and in the competitiveness of play, a research sample was selected.

The research sample includes the top 10 players in the world as of the 3rd of January 2016. This was the final world ranking listing of 2015 and also the starting point for the 2016 calendar year. Since the data gathered in this study is highly quantitative, we shall

present each player briefly in order to give a more elaborate view about the subjects of research, as well as hopefully be able to explain some of the findings later on in this research.

The research sample was chosen in order to evaluate the most successful golfers of the 2015 season. One of the advantages of the chosen sample, is the vast amount of quantitative data and information available of the subjects of research. Since the purpose of this research is to develop a framework for the valuation of professional golfers, the best alternative found was, to start from the top of the rankings so that in the future the model could be scaled down to a wider spectrum.

Of the 10 players, only two, Dustin Johnson and Patrick Reed, started the season outside of the top 10 rankings. With Dustin Johnson in 18th place and Patrick Reed in 23rd place in the beginning of the 2015 season. The most remarkable features of each player are now discussed briefly, starting from the top ranked player and proceeding in the order of rankings.

Table 2 Research sample

Athlete	Position in world rankings end of 2015	Position in world rankings beginning of 2015	Nationality	Prize money won \$ during 2015 calendar year	Wins	Top 5 finishes
Jordan Spieth	1	9	USA	\$ 13 030 465	9	5
Jason Day	2	8	Australia	\$ 11 938 330	5	4
Rory McIlroy	3	1	Northern Ireland	\$ 9 468 190	4	3
Bubba Watson	4	4	USA	\$ 8 289 297	2	7
Henrik Stenson	5	2	Sweden	\$ 8 513 827	0	9
Rickie Fowler	6	10	USA	\$ 8 254 416	3	3
Justin Rose	7	6	England	\$ 7 119 762	2	6
Dustin Johnson	8	18	USA	\$ 6 209 467	1	5
Jim Furyk	9	7	USA	\$ 4 112 664	1	5
Patrick Reed	10	23	USA	\$ 4 321 960	1	5
AVERAGE	37 894	160 164	4,12	\$ 8 125 838	1	5

Jordan Spieth

Jordan Spieth, aged 22, is the youngest player of the sample group. Jordan is an American citizen. At the end of the calendar year of 2015 he was ranked the number one golfer in the world holding the top spot for 15 consecutive weeks at the time. In the beginning of the 2015 season he was ranked 9th showing a consistent climb through the world rankings. During the 2015 season, Spieth won a total of 5 professional tournaments in

addition to 9 top-5 finishes. Spieth managed to win a total of \$ 13 030 465 in prize money during the calendar year.

Jason Day

Jason Day, aged 28, is an Australian professional golfer and was ranked the number two player in the world as of the end of the 2015 calendar year. In the beginning of 2015, he was ranked 8th in the world and experienced a steady rise in the world rankings thanks to a total of five wins on the PGA Tour in addition to 4 top-5 finishes. Day accumulated a total of \$ 11 938 330 in tournament earnings.

Rory McIlroy

Rory McIlroy is a 26-year-old professional golfer from Northern Ireland. At the end of the 2015 season, Rory was ranked 3rd in the official world golf rankings. Rory started the year ranked the best golfer in the world, but 4 wins and 3 top-5 finishes dropped him to 3rd place. McIlroy's total earnings for 2015 were \$ 9 468 190.

Bubba Watson

Bubba Watson is an American professional golfer, aged 37. Watson was ranked 4th in the world both at the beginning and end of the 2015 season. Watson won one event and had a total of 7 top-5 finishes earning him a total of \$ 8 289 297 during the calendar year.

Henrik Stenson

Henrik Stenson is a 39-year-old Swedish native ranked 5th in the world at the end of the 2015 season. Stenson started the season ranked 2nd in the world. He is the only player who did not manage to win a professional golf tournament during the 2015 calendar year. He did however have a total of 9 top-5 finishes contributing to a total of \$ 8 513 827 won from tournament golf.

Rickie Fowler

Rickie Fowler is a 27-year-old American professional golfer ranked 6th in the world at the end of the 2015 season. In the beginning of the 2015 season he was ranked 10th. Fowler was able to gather \$ 8 254 416 in tournament winnings with the help of 3 wins and 3 top-5 finishes.

Justin Rose

Justin Rose is an English professional golfer aged 35. At the end of 2015 Rose was ranked 7th in the world, starting the season in 6th. His total earnings for 2015 were \$ 7 119 762. He managed 2 wins along with 6 top-5 finishes.

Dustin Johnson

Dustin Johnson is a 31-year-old American professional golfer. He started the 2015 season in 18th position and experienced a steady climb into 8th in the world by the end of the season. Johnson won 1 tournament and had 5 top-5 finishes amongst earning \$ 6 209 467 from tournament play.

Jim Furyk

Jim Furyk is an American professional golfer and the oldest player in the top-ten at 45 years old. He started the year ranked 7th in the world and ended it in 9th place. Furyk had 1 win along with 5 top-5 finishes. He earned a total of \$ 4 112 664 from the 2015 season.

Patrick Reed

Patrick Reed is a 25-year-old American professional golfer. He started the season ranked 23rd in the world rising to the 10th position by the end of the 2015 season. Reed earned \$ 4 321 960 from tournament play. He had 1 win along with 5 top-5 finishes for the year.

5.3 Data analysis

Data analysis involves the comparison of data collected within means of relevant theory. For this study Microsoft Excel was used for the primary tool of analysis in order to form causality from the data gathered.

All raw data from both primary and secondary sources were first gathered into one spreadsheet. After this, different equations were introduced for the analysis of the raw data. The equations used are discussed in detail along with the findings of the research.

6 FINDINGS

The findings chapter of this thesis consists of two parts. Part one focuses on measuring how the athletic performance of an athlete affects earned media coverage. From these results a coefficient named “athletes face-value” was derived. Thus, part one of the analysis will be called derivation of face-value. After arriving on a face-value for each athlete, this coefficient was then used in part two of the analysis.

In part two, the focus was on combining the data gathered and analyzed in part one with additional data. This was done in order to formulate two metrics that describe the effectiveness of the sponsorship: COST and REACH.

After analysis was done, the final step was to formulate an initial framework for the valuation of professional golfers from the analysis earlier carried out in part one and two. This was also the purpose of this thesis.

The data used for both parts was collected with the help of Meltwater’s software and from external sources. After data collection, it was transferred to Microsoft Excel for further analysis and mining.

The data used for analysis consists of two different data types, quantitative data representing the amount of articles published about a player and monetary data. Monetary data consists of two different sets of values, the amount a player has won through official tournaments and the amount a player makes through the means of sponsorship.

6.1 Part one of analysis: face-value of an athlete

Part one of the data analysis consisted of gathering data of each athlete’s media coverage for the 2015 calendar year and comparing it to the chosen performance metrics. The data of the athlete’s media coverage contains both the amount of articles where the athlete is mentioned in the title and the potential reach of those articles. The performance metric includes the amount of prize money an athlete has earned.

After gathering data on each athlete’s media coverage, the results were compared to the amount of prize money each athlete had won in competition during the same period. This produced a measure that was created in this particular study, “face-value”. The face-value figure was produced by the following equation:

$$\text{Face-value} = \frac{\text{Amount of money (\$) won in competition}}{\text{Amount of articles mentioning the athlete}}$$

The purpose of this metric is to calculate how much media attention an athlete receives in comparison to the success of the athlete in question. In other words, the goal of this metric is to describe how interesting an athlete is to the general public. The

smaller the value acquired, the better it is for the sponsor, since the athlete has to achieve less in order to acquire the same amount of media attention. Table 5 illustrates the data gathered in part one:

Table 3 Data gathered in part one

#A. Athlete	#B. Articles	#C. Potential reach (million)	#D. Average reach of article (million)	#E. Prize money won \$	#F. Face-value \$ won / article	#G. Potential reach / \$ won
Jordan Spieth	124 136	491 526	3,96	\$ 13 030 465	105	37 721
Jason Day	54 752	321 218	5,87	\$ 11 938 330	218	26 906
Rory McIlroy	108 338	422 428	3,90	\$ 9 468 190	87	44 616
Bubba Watson	12 841	49 147	3,83	\$ 8 289 297	646	5 929
Henrik Stenson	15 698	65 954	4,20	\$ 8 513 827	542	7 747
Rickie Fowler	11 502	49 317	4,29	\$ 8 254 416	718	5 975
Justin Rose	16 380	63 996	3,91	\$ 7 119 762	435	8 989
Dustin Johnson	23 777	96 569	4,01	\$ 6 209 467	261	15 552
Jim Furyk	6 668	24 340	3,65	\$ 4 112 664	617	5 918
Patrick Reed	4 849	17 151	3,54	\$ 4 321 960	891	3 968
AVERAGE	37 894	160 164	4,12	\$ 8 125 838	452	16 332

From the data gathered it can be seen, that the amount of articles where the athlete is mentioned (column #B) ranges from 124 136 (Jordan Spieth) to 4 849 (Patrick Reed). On average each athlete had 37 894 article where they were mentioned in the title of the article during the 2015 calendar year. The top three players in the rankings account for

75,8% of the total media coverage of the sample group, with the number one player, Jordan Spieth, receiving 32,8% of the total amount of coverage. This is not surprising since the top 2 players, Jordan Spieth and Jason Day won a total of three out the four possible Major championships of the 2015 season. Major championships are the most prestigious events in the golfing world and also receive the most media coverage. Rory McIlroy was injured for part of the season, and therefore unable to compete in one of the Major championships, the British Open. However, Rory won a total of 4 tournaments during the season and showed solid form in the three other Majors, placing 4th, tied for 9th and 17th. His strong performance throughout the season resulted in the second highest amount of total media coverage. The seven other athletes received coverage ranging from 23 777 articles (Dustin Johnson) to 4849 articles (Patrick Reed).

Being in contention as well as winning tournaments plays a crucial role in receiving media coverage. Figure 8 shows how different athletes of the sample group have acquired top spots in tournaments during the 2015 season.

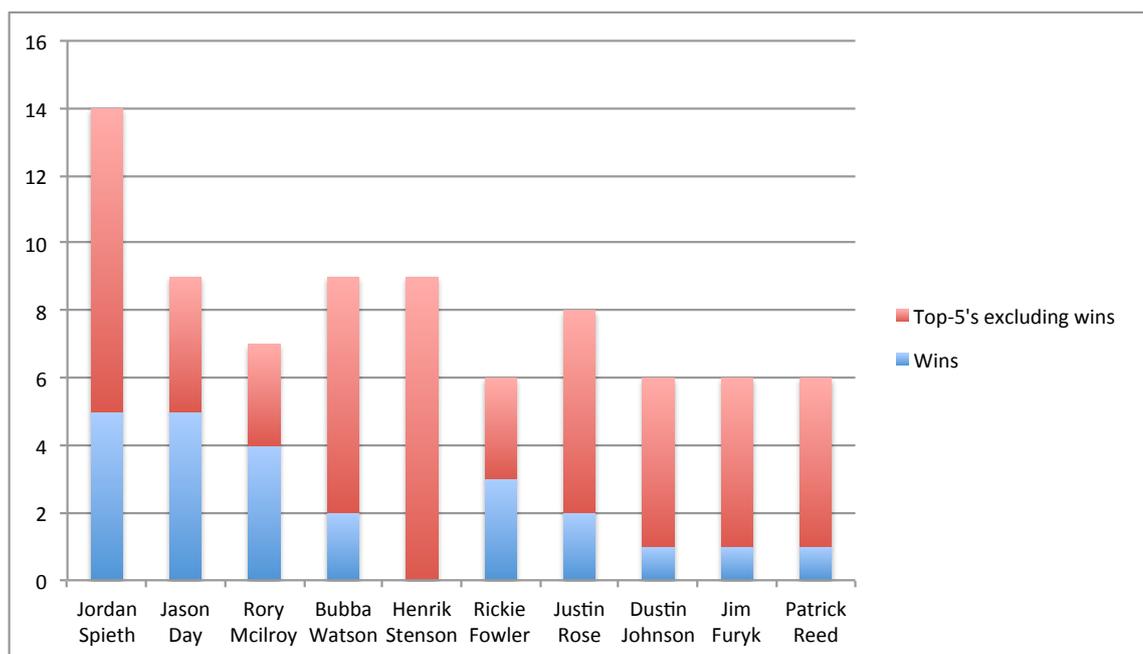


Figure 8 Athlete performance in international competitions during the 2015 season

As can be seen from the figure, only one athlete clearly stands out in performance, Jordan Spieth. The other 9 athletes can be seen to perform relatively well to each other with the exception of Jason Day who achieved 5 wins and Rory McIlroy who achieved 4 wins.

The total potential reach (column #C) of the athlete's media coverage follows the same pattern as the amount of articles written about them. The top 3 players averaged a total reach of 7,86 times more than the average player of the other 7 athletes in the top

10. This correlates fairly well with the quantity of media coverage the top 3 received compared to the other 7 of the sample group, where the top 3 had 7,31 more articles on average written about them compared to the other athletes in the top 10.

The face-value metric compares the quantity of media coverage athletes receive to their performance in terms of prize money won in tournaments. The variance in this metric is quite substantial. The leading player, Rory McIlroy, had one article written about him per every \$87 he earned in tournament play. When the last player in this ranking, Patrick Reed, had to win \$891 in tournament play to have an article written about him. The sample group averaged \$452 dollars won per article written, with the top three players bringing down the average substantially. The only player to achieve a below average face-value in addition to the top three was Dustin Johnson (\$261).

6.2 Discussion of findings in deriving face-value

The findings presented in part one of the results and analysis clearly show how strong performance on the course correlates with a large quantity in media coverage. The top 3 athletes of the season accumulate the majority of the total media coverage earned by the top 10 athletes, 75,8%. The top 3 athletes in media coverage were also the top performers in terms of dollars earned and individual wins. However, dollars earned do not directly correlate with earned media coverage. The top 3 athletes earned a total of \$34,4 million dollars when the player's ranked 4 to 10 earned a total of \$46,8 million. In percentages the top 3 won 42,4% of all money the top 10 earned through competing in tournaments. This shows that other factors affect the amount of media coverage athletes receive or, that superb performance results in substantial media coverage of an athlete.

Expectations of an athlete's performance could also explain why the top 3 received significantly more coverage compare to their performance. Figure 9 shows the change in the top 5 athlete's world ranking during the course of the season.

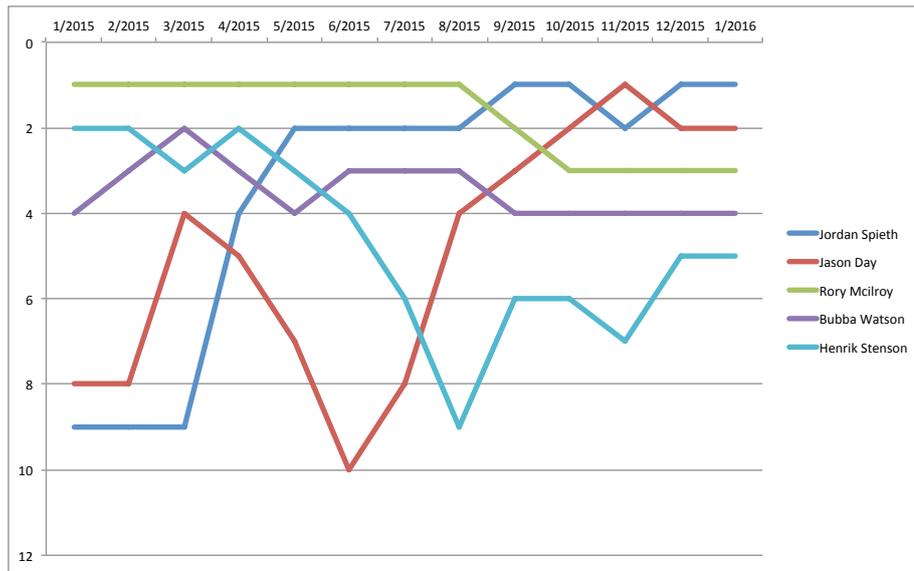


Figure 9 Change in top 5 athlete's world ranking during the season

This figure shows the fluctuations in the rankings during the season. Out of the athletes that ended the season in the top 5, they started the season ranked as follows: 9th Jordan Spieth (1st at the end of the season), 8th Jason Day (2nd), 1st Rory McIlroy (3rd), 4th Bubba Watson (4th) and 2nd Henrik Stenson (5th).

Figure 10 shows the media coverage the top 5 athletes earned in chronological order.

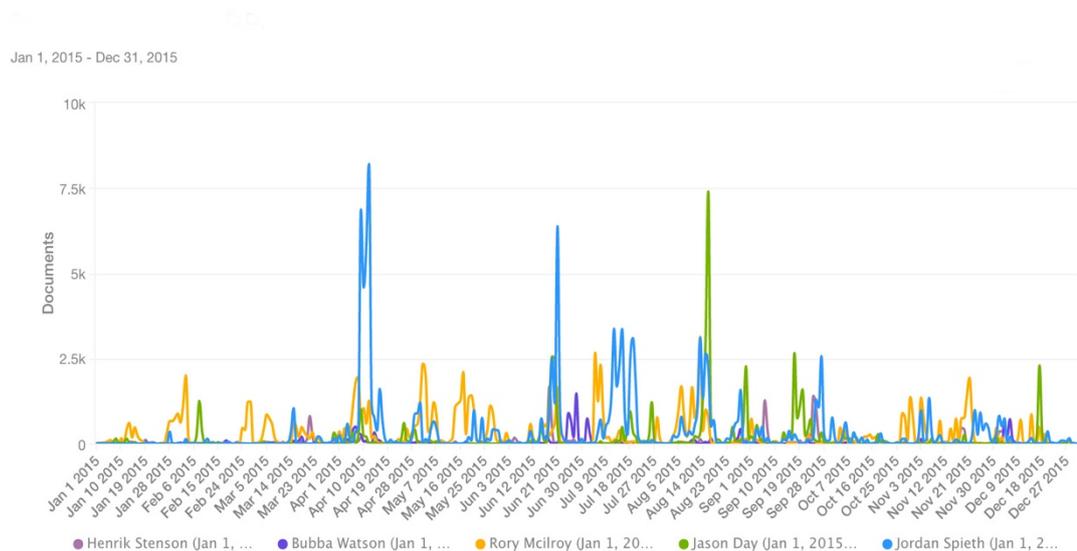


Figure 10 Media coverage of top 5 athlete's during the 2015 season

As can be seen from the figure, Rory McIlroy who started the season ranked number one in the world, received all of his coverage (yellow) in small doses throughout the

season. He was also ranked no worse than 3rd in the Official World Golf Rankings throughout the season, which strengthens the concept that high expectations result in a high quantity of media coverage. Jordan Spieth however, received very little media coverage (blue) before his first Major championship win, the US Masters in April. This win propelled Spieth into 2nd place in the world rankings. He would not descend in the rankings to any further than 2nd place for the rest of the season. During and after winning the US Masters, Spieth's media coverage is presented in the graph as the highest amount of coverage received by an athlete throughout the season. The second highest point for Spieth, approximately halfway through the season, is the result of him winning the second Major championship of the season, the US Open. However, the amount of media coverage he earned for his second major title was 1 827 articles. This shows that even though Major championships are usually valued at an equal level within the sport, in terms of media coverage there can be differences. Also, Spieth's excellent performance in the two latter Major championships of 2015, tied for 4th in the British Open and 2nd place in the PGA Championship, earned him roughly half the amount of coverage that his win from the US Open did. A strong performance early in the season, and climbing up the world ranking, resulted in a greater amount of media coverage for the second half of the season.

Henrik Stenson failed to win a single tournament during the 2015 calendar year resulted in a total media coverage of only 15 698 articles with a peak of 1 399 articles. Thus, substantial coverage is hard to accumulate without prevailing in tournament golf.

All-in-all, the media coverage of the top 5 athlete's compared to their on course performance shows how small the margins in making a name for yourself can be. Winning tournaments and performing steadily on the highest level is key in acquiring media coverage. Winning Major championships will give you an exponential boost and differentiate you from the competition.

As for the changes in rankings of the players who finished the season in positions 6 to 10 of the Official World Golf Rankings, figure 11 provides further evidence.

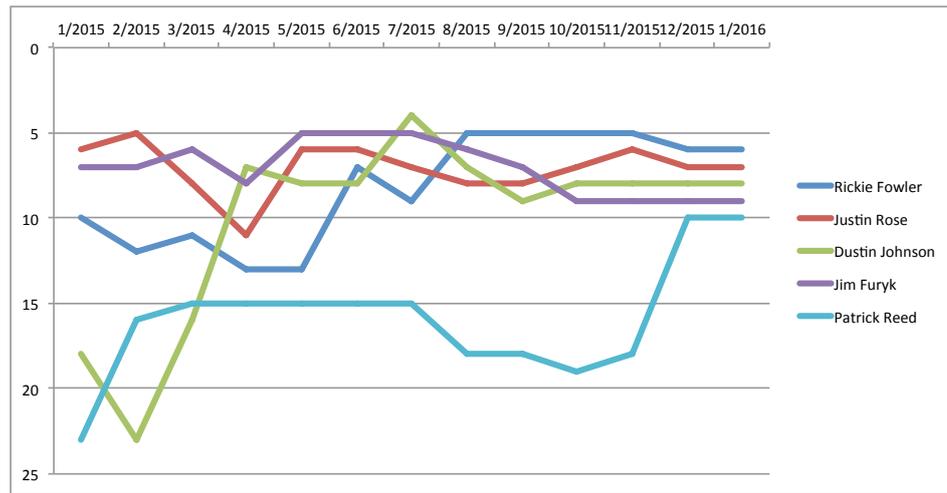


Figure 11 Change in top 6-10 athlete's world ranking during the 2015 season

In the second half of the sample group there is more fluctuation of personal rankings throughout the season. Patrick Reed and Dustin Johnson started the season well outside the top 10, 23rd and 18th respectively. The other three athletes, Rickie Fowler, Justin Rose and Jim Furyk, had a steadier run, with their rankings ranging from 4th to 13th position throughout the season.

Figure 12 shows media coverage of the bottom five athlete's in the top 10 in chronological order.

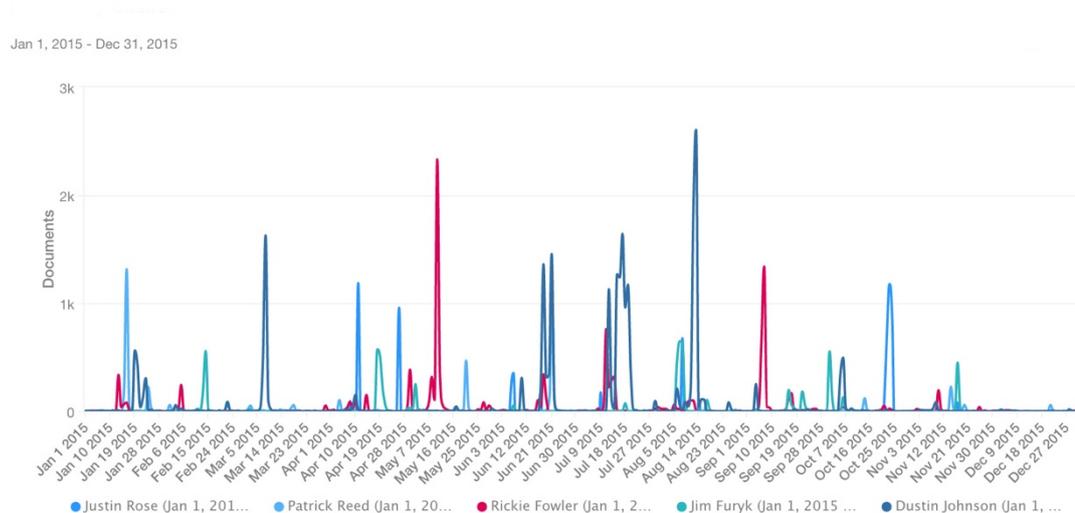


Figure 12 Media coverage of top 6-10 athlete's during the 2015 season

The bottom five athletes acquired only 16,7% of all the coverage the top 10 athletes achieved. Also, their peaks are lower than of those in the top 5. The highest point achieved by Dustin Johnson, 2 604 articles, was achieved by Johnson being in conten-

tion in the early stages of the final Major championship of the season, the PGA Championship. Other high points for the bottom five include Rickie Fowler's victory at the Player's Championship, 2 331 articles May 13th, and Dustin Johnson's strong start in the third Major championship of the season, the British Open, mid-July. Johnson lead the field after both the first and second rounds only to result in a breakdown in the final two rounds finishing the tournament in tied for 49th place. These results further address the concept that being in contention in Major championships and winning tournaments result in considerable media coverage of an athlete.

The bottom five athletes achieved only 8 wins in total during the entire season, this resulted in substantially lower amounts of article written about them as well as lower individual high-points. Also, with lower rankings to start with, the expectations of the athletes in the eyes of the media resulted in a smaller quantity of overall media coverage. This again affects the metrics introduced, face-value and potential reach per dollar won, significantly. The top three athletes, Jordan Spieth, Jason Day and Rory McIlroy were able to achieve a much lower face-value than the rest of the group. Also, they were able to reach a much larger crowd on average than the rest of the sample group per every dollar won in tournament play. Their effectiveness as message carriers is further amplified by the fact that they were also the top performers in terms of money won, hence they reached a larger crowd more often.

6.3 Part two of the analysis: deriving the COST and REACH metric

The second part of analysis in this study consists of comparing the results acquired in part one, the face-value of an athlete, to the sponsorship earnings of the sample group in the 2015 season. Table 6 illustrates the data analyzed in part two of the analysis.

Table 4 Analysis part two, face-value and media coverage compared to sponsorship earnings

Athlete	Performance, FACE-VALUE: \$ won / article	Sponsorship income \$	Media coverage of athlete	Sponsorship effectiveness COST: Sponsorship income \$ / article	Sponsorship effectiveness REACH: Potential reach / invested sponsorship \$
Jordan Spieth	105	\$ 30 000 000	124 136	\$ 242	16 384
Jason Day	218	\$ 7 500 000	54 752	\$ 137	42 829
Rory McIlroy	87	\$ 37 500 000	108 338	\$ 346	11 265
Bubba Watson	646	\$ 6 000 000	12 841	\$ 467	8 191
Henrik Stenson	542	\$ 5 000 000	15 698	\$ 319	13 191
Rickie Fowler	718	\$ 9 000 000	11 502	\$ 782	5 480
Justin Rose	435	\$ 8 000 000	16 380	\$ 488	8 000
Dustin Johnson	261	\$ 6 000 000	23 777	\$ 252	16 095
Jim Furyk	617	\$ 5 750 000	6 668	\$ 862	4 233
Patrick Reed	891	\$ 1 750 000	4 849	\$ 361	9 801
AVERAGE	452	\$ 11 650 000	37 894	\$ 426	13 547

The data in table six consists of the face-value of an athlete, a figure calculated in part one, the total sponsorship income of an athlete for the 2015 season, the total media

coverage an athlete received during the 2015 season and two separate values calculated for the effectiveness of an athlete's sponsorship.

The sponsorship income of the sample group for the 2015 season ranges from \$37,5 million (Rory McIlroy) to \$1,75 million (Patrick Reed). In total, the top 10 players in the world earned \$116,5 million in sponsorship income, averaging \$11,65 million per athlete. Sponsorship income is unevenly spread within the top ten, with Jordan Spieth (1st) and Rory McIlroy (3rd) accounting for approximately 58% of the total sponsorship income earned by players.

In order to analyze the effectiveness of the athlete as an investment, two different metrics for sponsorship effectiveness were calculated. The two metrics introduced are cost of coverage and potential reach per invested dollar. The equations are formulated as follows:

$$\mathbf{COST\ OF\ COVERAGE} = \frac{\text{Sponsorship income \$}}{\text{Media coverage}}$$

AND

$$\mathbf{REACH\ PER\ DOLLAR} = \frac{\text{Potential reach}}{\text{Sponsorship income \$}}$$

The purpose of the COST equation is to determine a value for the cost of one written article about the athlete. In this equation the smaller the value acquired, the more effective an athlete is from a sponsor's perspective since he is able to generate an article for a smaller cost.

The values for the cost equation range from \$137 (Jason Day) to \$862 (Jim Furyk). This difference converts into a multiplier of 6,3, meaning that the sponsors of Jim Furyk are paying approximately 6,3 times more for every article written about him than the sponsors of Jason Day. The sample group averaged at \$426 per article, with 7 of the athlete's acquiring a value lower than the average value and 3 athletes having a higher than average value.

The purpose of the REACH equation is to give a value for how many people are potentially reached through a news article for every sponsorship dollar invested in the athlete. In this equation the total potential reach of the athlete's earned media coverage for the 2015 season was divided by the total sponsorship income of an athlete. In this metric, the more people an athlete potentially reaches per sponsorship dollar paid, the better it is from the sponsor's perspective.

The values acquired for the reach equation range from 42 829 (Jason Day) to 4 233 (Jim Furyk). The sample group averaged a value of 13 547, with only three athlete's receiving a higher than average value, Jason Day (42 829), Jordan Spieth (16 384) and

Dustin Johnson (16 095). The top performer in this metric (Jason Day) accounted for approximately 32% of potential reach per sponsorship dollar. Day's reach was approximately 3,2 times more than the average of the sample group and approximately 4,1 times more than the median of the sample group.

6.4 Discussion of findings in part two of the analysis

The values acquired in part two of the analysis clearly indicate that there is a wide range in the effectiveness within the sample group. The top performer in the cost metric, Jason Day, was able to obtain over three times more coverage in terms of article quantity for every sponsorship dollar invested in him than the average athlete of the sample group. Jim Furyk's coverage cost more than two times the average of the sample group. When comparing the top performer Day, and the least effective athlete Furyk, the value for the ratio of effectiveness is greater than 6:1 in favor of Day. And, when further comparing these two players in terms of potential reach per every sponsorship dollar invested, Day prevails with a ratio of approximately 10:1 in effectiveness.

These results show that in terms of the value of media coverage there are quite remarkable differences between athletes even in a small sample group. Therefore, sponsors should carefully analyze these metrics before calculating a final figure for the valuation of an athlete.

6.5 Equations for the valuation coefficient of a professional golfer

The final analysis of the results was to compare the face-value of an athlete, acquired in part one, to the two separate sponsorship performance metrics, acquired in part two. This was done in order to accumulate a figure for the overall valuation of the individual athletes and to accumulate an answer for the purpose of this thesis. Two models were derived from the data and the analysis of results:

- An article quantity based valuation model
- A potential reach based valuation model.

6.5.1 Article quantity based valuation model

Article quantity based valuation takes into account three different metrics. In order to simplify the equation produced they shall be abbreviated as follows:

- Article quantity = Q

- Money won in tournament play = W
- Sponsorship income = I

Two values, or multipliers, are produced from these values. The first value is an inverse for the face-value calculated in part one. This figure represents the amount of articles written about an athlete (Q) for every tournament dollar won (W).

$$\text{Inverse of face-value} = \frac{Q}{W}$$

The second value produced is the inverse of the cost of coverage equation. This value indicates sponsorship effectiveness and illustrates how many articles have been written about the athlete per every sponsorship dollar invested (I).

$$\text{Inverse of cost of coverage} = \frac{Q}{I}$$

These two values are then multiplied by each other in order to get a coefficient for the athlete's media coverage with on course performance and sponsorship accounted for:

$$\text{Valuation} = \frac{Q}{W} \times \frac{Q}{I} = \frac{Q^2}{W \times I}$$

At this point, the value achieved is a weighted value based on the performance of an athlete. Since the model does not take into consideration the previous performance and skill the athletes possess, the value achieved in this stage must be adjusted based on performance. The performance-based reference point is calculated by comparing the performance-based metric used in this study, dollars won by an athlete, to the average performance of the sample group, dollars won by an athlete on average. By using this calculation, expected media coverage and therefore expected performance is taken into consideration:

$$\text{Performance – based adjusted valuation (PBAV)} = \frac{\text{Valuation}}{W / W_{\text{Average}}}$$

A metric that indicates the valuation of an athlete, that takes into consideration the expected performance of an athlete, has now been derived. However, the value produced from this equation does not work as a stand-alone value since there is no reference point to the sample group. The final step is to make it convert the value into a comparable value between athletes. The figure achieved, PBAV (performance-based

adjusted valuation), is compared to the average PBAV of the sample group to result in an equation, which is also the final model, article quantity based valuation, or AQBV.

$$\text{Article quantity based valuation (AQBV)} = \frac{PBAV}{PBAV_{average}}$$

The selection of using the average PBAV of the sample group for the point of reference is validated by the fact that in sponsorship your investment decision is done by evaluating opportunity cost. As an investor you want to know which athlete out of a pool of athletes brings the most potential for your company or brand. In this model the effort is to discover the athlete that will give you the most media coverage per every dollar invested. When looking for an investment target, you may want to compare a large number of athletes to find out who is the most underappreciated and invest in him or her. Or, you may want to preselect a few athletes who you have previously determined that would be a good fit for your brand and then assess which athlete of that group will be the most efficient choice.

When the equation introduced above is converted into the original three metrics used in this study, the final equation for article quantity based valuation (AQBV) is as follows:

$$\text{Article quantity based valuation (AQBV)} = \frac{\left(\frac{Q^2}{W \times I} \div \frac{W}{W_{average}}\right)}{\text{Sample group average of } \left(\frac{Q^2}{W \times I} \div \frac{W}{W_{average}}\right)}$$

Q = Article quantity
 W = Money won in tournament play
 I = Sponsorship income

This model produces a coefficient that demonstrates the appreciation of an athlete compared to the sample group. A value of 1 signifies that the athlete is accurately valued compared to the sample group. Values over 1 tell by how many times an athlete is underappreciated, or in other words currently receiving a lower compensation for his sponsorship activities than the data suggests to be appropriate. Values under 1 tell that the athlete is over appreciated.

To get a coefficient for the over appreciation of an athlete, simply take the inverse of the value produced by the AQBV equation. The results of the article quantity based valuation of the sample group are presented in table 7.

Table 5 Article quantity based valuation (AQBV) model results

Athlete	Q (article quantity)	W (money won \$)	I (sponsorship income)	Under-appreciation coefficient: AQBV	Over-appreciation coefficient: 1 / AQBV
Jordan Spieth	124 136	\$ 13 030 465	\$ 30 000 000	2,03	0,49
Jason Day	54 752	\$ 11 938 330	\$ 7 500 000	1,88	0,53
Rory McIlroy	108 338	\$ 9 468 190	\$ 37 500 000	2,34	0,43
Bubba Watson	12 841	\$ 8 289 297	\$ 6 000 000	0,27	3,73
Henrik Stenson	15 698	\$ 8 513 827	\$ 5 000 000	0,46	2,19
Rickie Fowler	11 502	\$ 8 254 416	\$ 9 000 000	0,14	6,91
Justin Rose	16 380	\$ 7 119 762	\$ 8 000 000	0,44	2,25
Dustin Johnson	23 777	\$ 6 209 467	\$ 6 000 000	1,64	0,61
Jim Furyk	6 668	\$ 4 112 664	\$ 5 750 000	0,31	3,26
Patrick Reed	4 849	\$ 4 321 960	\$ 1 750 000	0,48	2,07
AVERAGE	37 894	\$ 8 125 838	\$ 11 650 000	1	

In this table it can be seen that the results calculated by article quantity based valuation model. Based on the model, 4 out of the 10 athletes in the sample group are underappreciated compared to the average of the sample group. These athletes are Jordan Spieth (2,03 times underappreciated) Jason Day (1,88), Rory McIlroy (2,34) and Dustin Johnson (1,64). These results are in line with the findings discussed in part one of the analysis of results. Rory McIlroy had the best face-value of the sample group, one article written per every \$87 won in tournament play, and the 6th most efficient value based on the cost of coverage equation.

The most over appreciated player of the sample group is Rickie Fowler. He is over appreciated by a coefficient of 6,91 compared to the average of the sample group. This

is not a surprise since Fowler was paid the 3rd most sponsorship income, had the second highest face-value and the second highest cost of coverage. Other significantly over appreciated athletes are Bubba Watson (3,73) and Jim Furyk (3,26).

6.5.2 *Potential reach based valuation model*

The potential reach based valuation model (PRBV) uses the same metrics utilized in AQBV model, with the exception of using the potential reach of each individual article instead of the quantity of articles. The strength of this model is that a more concrete value is given for having an article written about the athlete. It also gives the possibility to calculate how many people are potentially reached for every dollar invested in the sponsorship of the athlete, as done in part two of the analysis. However, the weakness of this model is that the data for the potential reach for every article is not available, based on an analysis done of the articles, approximately 67 % of the articles possess metadata of the potential reach. Nonetheless it does give a more profound value to the concept of an article. The equation for the PRBV model use the following metrics:

- Potential reach = R
- Money won in tournament play = W
- Sponsorship income = I

Since an equation for the AQBV model was derived previously, it is possible to simply substitute the values of quantity (Q) for the values of potential reach (R) used in the AQBV model. The final equation for the PRBV model is as follows:

Potential reach based valuation (PRBV)

$$= \frac{\left(\frac{R^2}{W \times I} \div \frac{W}{W_{average}}\right)}{\text{Sample group average of } \left(\frac{R^2}{W \times I} \div \frac{W}{W_{average}}\right)}$$

The results for the potential reach based valuation model of the sample group are presented in table 8.

Table 6 Potential reach based valuation (PRBV) model results

Athlete	R (Potential reach, billion)	W (money won \$)	I (sponsorship income \$)	Under-appreciation coefficient: PRBV	Over-appreciation coefficient: 1 / PRBV
Jordan Spieth	491,5	\$ 13 030 465	\$ 30 000 000	1,67	0,60
Jason Day	321,2	\$ 11 938 330	\$ 7 500 000	3,39	0,29
Rory McIlroy	422,4	\$ 9 468 190	\$ 37 500 000	1,87	0,54
Bubba Watson	49,1	\$ 8 289 297	\$ 6 000 000	0,21	4,85
Henrik Stenson	66,0	\$ 8 513 827	\$ 5 000 000	0,42	2,37
Rickie Fowler	49,3	\$ 8 254 416	\$ 9 000 000	0,14	7,17
Justin Rose	64,0	\$ 7 119 762	\$ 8 000 000	0,36	2,82
Dustin Johnson	96,6	\$ 6 209 467	\$ 6 000 000	1,42	0,71
Jim Furyk	24,3	\$ 4 112 664	\$ 5 750 000	0,21	4,67
Patrick Reed	17,2	\$ 4 321 960	\$ 1 750 000	0,32	3,16
AVERAGE	160,2	\$ 8 125 838	\$ 11 650 000	1,00	

Based on the PRBV model, 4 of the 10 athletes of the sample group were underappreciated. The overall results acquired from the PRBV model were similar to the results of the AQBV model. The underappreciated athletes recorded the following coefficients: Jordan Spieth 1,67 under appreciation (compared to 2,03 in the AQBV model), Jason Day 3,39 (1,88), Rory McIlroy 1,87 (2,34) and Dustin Johnson 1,42 (1,64).

The athlete whose valuation was affected by the most in the PRBV model was Jason Day. This is well backed by the fact that Day's average potential reach per article was almost 1,5 times more than the average potential reach of the sample group. For the

other athletes in the sample group, the introduction of the PRBV model affected the valuation of the athlete by only a small percentage.

The most over appreciated athlete of the group was again Rickie Fowler. Based on the model, Fowler achieved a reach that was over seven times less than what his current sponsorship value would anticipate. Other substantially over appreciated athletes based on the model were Bubba Watson 4,85, and Jim Furyk 4,67.

It is interesting to notice that based on the model, from outside the top 3 players, only one player was underappreciated, Dustin Johnson. Out of the other six players, each athlete was significantly over appreciated, with no athlete being able to achieve an over appreciation coefficient of less than two.

6.6 Further integration of the models presented

The two models presented above give different yet similar results for the valuation of professional golfers. The models introduced assume data about the sample groups tournament winnings (W), sponsorship income (I) and article quantity (Q) or potential reach (R) are available.

Tournament winnings and data about media coverage are available to anyone using the right set of tools. However, sponsorship income is information that cannot be attained by the greater public. Regarding this data, only educated guesses can be made in order to utilize the models presented.

6.7 Validity and reliability of research

An important part of any research is to ensure the validity and reliability of the research and the methodology.

Validity of a study adverts to how competent the chosen theories, measurement tools and conclusions are in researching the problem initially addressed (Moisander & Valtonen 2006). The strength in terms of validity in this research is, that the research conducted focuses on providing an answer to a problem with sufficient data. However, the small size of the research sample can be seen to reduce the value and scalability of the results. Also, the validity of the study suffers since it aims to answer a complex dilemma with a few simple metrics. In other words, oversimplification of a problem may result in distorted results and conclusions. On the contrary, valuation of athletes is a field where very little research has been previously conducted.

Reliability of a study has to do with accuracy and consistency of the measurement tools chosen, as well as the methodology applied in the study (Moisander & Valtonen

2006). Since the measurement tools chosen for this study are provided by a large multinational company whose thousands of clients rely on the same platform for exercising daily business activities, reliability of the measurement tools can be seen to be at a strong level. Also, even though the data gathered only focuses on a small sample group, the quantity of data averts measurement errors. The secondary data used in this study originates from an established source, which also strengthens consistency of this study.

7 CONCLUSIONS

This study contributes to previous research on the valuation of athletes as well as measuring the effectiveness of sports sponsorship. This chapter aims to address the theoretical and managerial implications of the results.

7.1 Theoretical implications

The results of the research imply that there is quite a large variance in the current valuations of professional golfers. There are two factors that could explain the findings.

First of all, current valuations of professional athletes may be heavily based on other valuation methods than the market approach valuation method applied in this study. A market based valuation compares the known valuation of other entities of similar size and magnitude. In order to calculate a value for the entity in question, the different value drivers of the entities with the known valuation are compared to the value drivers of the entity in question (Brewer & Pedersen 2009, 185). Other valuation methods, such as an asset based approach and an income based approach rely on slightly different practices for addressing value. An asset based approach calculates the sum of the value of the different assets the entity possesses (Brewer & Pedersen 2009, 185). An income based approach estimates the amount of income possible to achieve with the entity in question (Brewer & Pedersen 2009, 185). Since the differences of the calculated valuations within the sample group were found to vary significantly, it is proposed that the importance of media coverage in sponsorship should be given a more significant role. As a result, it can be seen that the valuation method developed in this study is a hybrid of a market based valuation and an asset based valuation method. The market based valuation was considered a starting point for the calculations and face-value as an asset of the athlete. Using a hybrid method for the valuation of athletes is well backed by the fact that the effects of sponsorships are often multidimensional (Kourovskaja & Meenaghan 2013).

The second factor that could explain the wide variance in the accuracy of the valuations presented in this study is that the data collected and used in this study is non-linear by nature. It is proposed that when the media coverage of an athlete exceeds a certain point, the effectiveness of that coverage diminishes. If this is the case, it would explain how the top 3 athletes of the sample group were underappreciated and the six out of seven of the bottom athletes in the sample group were over appreciated.

Also, the methods and software used to gather data in this study, e.g. tracking global online media coverage, have only arrived to commercial use in the past few years. Be-

cause of this, researchers have not had data of this quality at their use, and have not been able to conduct a study of this nature.

In the literature review, it was pointed out that the one factor in measuring the effectiveness of sponsorship was the amount of online media coverage an athlete receives (Brewer & Pedersen 2009). However as was discussed in the findings of this thesis, the amount of online media coverage an athlete receives for the same amount of success varies between athletes. The face-value of one athlete can be substantially different than that of another athlete. Current research does not take this into consideration.

7.2 Managerial implications

The managerial implications of this study insist on addressing the marketing objectives a company wishes to achieve through sponsorship with great care. Sponsorship should never be utilized in the marketing mix of a company just because it is assumed to be an effective means. The use of sponsorship should be chosen because it is the result of an analysis that finds it the most effective means in communicating a certain message or reaching a specific crowd.

When utilizing sponsorship, selection of an athlete should be done only after thorough analysis of the options at hand. Even within the top 10 golfers in the world, substantial differences were found in the effectiveness of the athletes as mediums for gaining increased awareness. Based on the analysis and calculations done in the findings part of this study, the gap between the most effective athlete endorser and least effective athlete endorser surpasses a coefficient of 20. With this in mind, through meticulous calculations it is possible to find athletes that might currently be dramatically undervalued, thus great investments for sponsorship. However, the valuation of athletes always involves the performance of the athlete. Since performance is something that is difficult to estimate, the valuation of athletes as well as investing in sponsorship will always involve some risk and gamble.

Even though the metrics used for data collection and data analysis of this study are not absolute, the results of this thesis give a solid foreground for further investigation of the phenomenon at hand, as well a set of tools for managers to use when analyzing potential athletes for sponsorship.

8 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This thesis investigated the valuation of athletes on the basis of media coverage and other metrics. The study provided two different valuation models for the valuation of an athlete at any given time.

Visibility of an athlete and the entailed increase in awareness of a sponsoring brand is what sponsors pay for in a sponsoring relationship. The more people the sponsor is able to reach, allegedly the more effective the campaign is. Tracking media coverage therefore enables the analysis of awareness or increase in awareness in terms of quantity. However, it does not take into consideration quality aspects of awareness or how effectively a message is passed on to the recipient. Marketing theory imposes that the perceived fit between an athlete brand and the sponsoring brand correlates strongly with the effectiveness of a sponsoring relationship. The better the values and image of the two entities fit together, the more effective it will be in conveying messages. Therefore, finding a right fit between the athlete brand and the sponsoring brand is key in producing a powerful co-brand. Thus, the results portrayed in this study may not be directly implied for any one company, 10 individual athletes cannot be seen to be an equally perfect fit for any one company. One, or some athletes will always be a “better” fit for a company independent of the valuation. The models created also enable the possibility of comparing athletes with a similar perceived image among a certain target group. However, athletes with nearly identical traits may be hard to come by. Because of this further research is suggested for analyzing the difference in sponsorship effectiveness of athletes that possess different traits.

The models in this study were created with the sample group consisting of the 10 best athletes of a specific season. Even though large amounts of data were processed in the research phase, a sample group of 10 will infrequently give an accurate enough representation of the total population to convert it into a sound theory. When formulating theory, the importance of scope and relativity comes into play. If the population of this study was seen to consist of the 20 best golfers in the world, the models presented could in fact be seen to give an accurate overall valuation of an athlete. If the population is widened to all professional golfers competing internationally, one individual measurement of a convenience sample will unlikely hold true in a greater population. This being said, more research is proposed in terms of both a broader time period and a larger sample size in comparison to the population used in this study.

In this study the focus concentrated on analyzing only one metric of visibility, media coverage. In a digital society, online media is only one outlet which consumers and fans use to consume and gather information. Other substantial outlets are different social media outlets, television, print media, advertising and word-of-mouth. The consumption

of these channels differ greatly depending on age, socioeconomic status and geographical location. Further research is suggested in how much variance and correlation there is in the quantity of coverage of an athlete depending on the media outlet.

9 SUMMARY

The purpose of this thesis was to formulate a theoretical framework for the valuation of professional golfers based on quantitative big data. The motivation for this thesis arose from the current research gap on the valuation of professional athletes. In the analysis of this study, the framework was also tested by comparing the original valuations of the athletes to the valuations arrived on based on the analysis. The results showed, that based on the framework introduced, there were significant differences in the original valuations of the athletes.

Five research questions were formulated in order to carry out this study:

- What is sports sponsorship?
- What are the risks and benefits of sports sponsorship?
- What are the steps in building a successful sponsorship program?
- What are the methods currently used for the valuation of athlete endorsers?
- How does the performance of an athlete affect his or her media coverage?

These research questions were analyzed, discussed and answered in the literature review, as well as in the analysis and findings chapters of this thesis.

In the literature review it was found that building corporate and brand awareness was one of the key objectives in sponsorship. This is most effectively done when the sponsorship relationship is well established and has exposure to large crowds. On this basis, it was logical to choose an athletes media coverage as the primary data that was gathered and analyzed. Also, it was logical to choose the top 10 professional golfers in the world as the sample group, since the most data would be available about them. In addition to media coverage, the following data was gathered about the athletes in the sample group: tournament earnings, sponsorship earnings and potential reach of the media coverage of the athletes.

The analysis of the data was divided into two parts, the first part consisted of analyzing how the success of a player affected the amount of media generated about an athlete. There were substantial differences within the sample group in this analysis and it was found that athletes with previous success, so called “front runners”, were likely to generate more media coverage about them, than their peers, the “underdogs”, for the same amount of competitive success. The results indicated that the most efficient athlete in this metric, Rory McIlroy, generated approximately 10 times more media coverage for the same amount of success as the worst athlete, Patrick Reed.

In the second part, the value of the athletes’ current sponsorship agreements were taken into account in order to arrive on how well the athletes had met their sponsors expectations on value. This was done in order to find out if a player over or under appreciated according to the data. In this metric the surprising finding was, that even the best paid players of the sample group were the under appreciated. The lower ranked

players then again were found to be the most over appreciated. This analysis was done twice, altering two different types of data for media coverage, article quantity and potential reach. The analysis of potential reach gave a larger variance on the success of sponsorship than the article quantity based analysis. This is well backed by the fact that since the more media coverage a player generates, the more likely it is to make mainstream news and therefore earn a substantial reach.

After the analysis was done, the mathematical equations used for analyzing were derived, in order to develop a final equation for the valuation of any athlete endorser of a certain sample group, given that the following metrics were available: tournament winnings, sponsorship income and media coverage.

With these findings it was suggested that more research would be conducted in the field of athlete valuation, since the results implied certain athletes were significantly under or over appreciated compared to the sample group. It was also suggested that more research was to be conducted on accuracy of media coverage as a metric for analyzing sponsorship success.

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OTHER

<http://www.golfdigest.com/gallery/golfs-top-earners#1>

“On-course income for 2015 includes all money earned on the PGA Tour and the five international tours (Japan PGA, PGA European, Australasian, Southern Africa, Asian) and the Champions Tour, LPGA Tour, Ladies European Tour and the Japan LPGA through Nov. 22. It includes unofficial money won in non-tour events.

Off-course income includes estimates of all money earned from endorsements, bonuses, appearance fees, corporate outings, speaking engagements, licensing fees (video games, trading cards, etc.), course architecture, books, instructional videos and businesses that capitalize on a person's status as a player, such as product lines including clothing, wine and turf grass. Investment income is not included.

NR: Not ranked among the Golf Digest 50 in March 2015.

Sources: Figures for the list were compiled through Golf Digest interviews with agents, players, executives of companies involved with endorsements, industry analysts and through the official money lists of the professional tours.”