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The Economic Implications of NBA Player Achievements on Athletic Apparel Companies

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Abstract

This paper aims to measure the economic impact of different NBA player achievements on the athletic apparel companies, Nike, Adidas, and Under Armour. It looks at players affiliated with the brands who participated in three different events in the NBA from from 2007 to 2017: the All-Star game, the All-NBA awards, and starting lineups in the Finals. Monthly stock returns for each company were calculated for the months the events took place: January, February, May, and June. The return of each company was then regressed on total number of players each company had in the events. Four total regressions were run for the months of January, February, May, and June. Understanding the economic implications of endorsed players participating in these events can help athletic apparel companies draft more cost efficient endorsement contracts.

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I. Introduction

For years, the top brands in the sporting goods industry have inked endorsement deals with some of the best athletes in the world to drive sales. These endorsements, which are intended to build brand awareness to boost sales and ultimately equity, can be worth hundreds of millions of dollars to both the athletes and the companies. Just last year, superstar LeBron James signed a lifetime deal with Nike worth over $1 billion, the largest deal currently on record. With companies paying top dollar for elite athletes to wear and promote their products, it raises the issue: are the companies getting equal value in these kinds of deals? Stated differently, what is the return on investment of these endorsements? This is the question this thesis explores.

In order to better predict what companies should pay for future endorsements, it is important to pinpoint how endorsements drive sales and thus add value to these companies. In addition to spreading brand awareness, this thesis hypothesizes that the athletes' performances, viewed by the consuming public, is one of the biggest drivers of sales for endorsed products. The idea is that as athletes perform well week after week, year after year, in their respective playing fields, their popularity spikes. One way to attempt to measure whether this concept is accurate is to look at the correlation between signature athlete statistics in a given time frame and company stock returns. In addition to statistics, we can look at what happens to stock returns when a signature athlete wins accolades such as becoming an all-star, MVP, or wins a championship in their respective sport. This thesis hypothesizes that the more all-stars and all-NBA players an athletic apparel company has signed, the higher their stock returns should be. It does not attempt to determine such concepts as market saturation. Thus, the hypothesis is a broad

assumption. Countless factors influence stock price and consumer behavior and it may be difficult to pinpoint what exactly adds value to these brands.

II. History

Viewership In Professional Sports

It is safe to say that the better a player performs, the more marketable he becomes. As of this writing, the three highest paid endorsed players in the NBA are LeBron James ($55 million), Kevin Durant ($36 million), and Stephen Curry ($35 million). All have at least one MVP award to their name. Do their contracts translate into revenue for their associated brands? Presumably the companies paying these enormous sums believe the answer is “yes”, by raising brand awareness and driving sales. Anytime an athlete is viewed by the public eye wearing a sponsored shoe or apparel, it is an advertisement. Professional sports are some of the highest viewed programs on television, with *Sunday Night Football holding* the top spot averaging 18.2 million views.

The NFL has long held the title of most popular sport in American households. Its viewership still dwarfs all other major American sports. NFL games averages 15.3 million viewers per game compared to the NBA’s meager 1.4 million views per Nielsen Ratings. On the surface this may seem like a large discrepancy, however the NBA season is drastically longer than the NFL’s, amounting to a total of 1230 regular season games compared to the NFL’s 256. Not to mention the nearly three month long postseason following the NBA’s 82 game regular season. Moreover, it is far easier to play pickup basketball than pickup football. Figure 1 illustrates the projected number of viewers for the 2017-18 NFL and NBA seasons according to Nielson Ratings

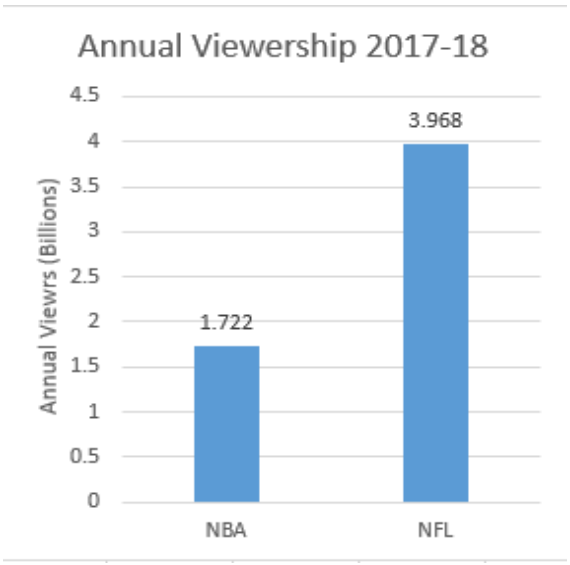

Figure 1: Projected Total Viewership in NBA and NFL 2017-18 Season

Furthermore, recent trends in viewership reflect the average American household attitude towards the respective sports. The NFL has seen another decline in yearly ratings, dropping from 16.7 million average views in 2016 to 15.3 million in 2017, an 8.5% decrease. Additionally, the percentage of U.S. adults who self-identify as professional football fans has fallen from 67% in December 2012 to 57% in December 2017 per Gallup. Meanwhile, the NBA is averaging 1.4 million views as of November 30th, 2017, an impressive 32% increase from 2016. This marks the league's highest ratings since the 2010-11 campaign, and LeBron's inaugural season with the Miami Heat. Figure 2 illustrates the change in viewership in the NFL and NBA from 2016 to 2017.

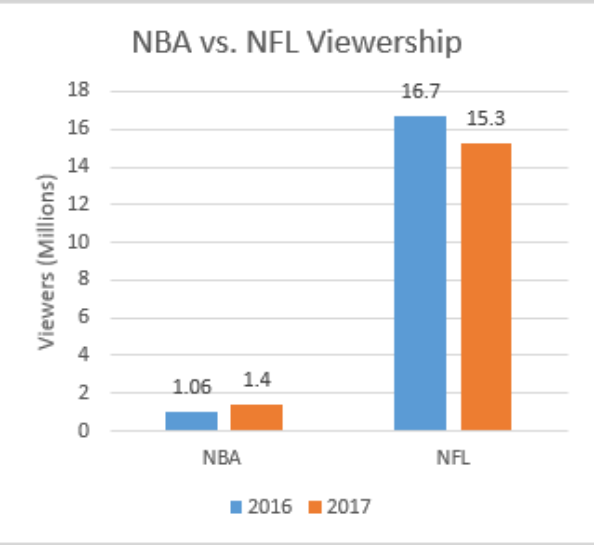

Figure 2: Viewership per Game 2016 vs. 2017

While the NBA may never fully eclipse the NFL in viewership, it can make up significant ground if recent trends continue. There is compelling evidence it may just do so. One major reason NFL popularity has decreased over the last five years is the dangerous nature of the sport. Along with numerous players sidelined by knee injuries and turf toe, serious neck injuries occur too. Further, there has been a recent surge in research linking football with concussions and chronic traumatic encephalopathy (CTE), a progressive degenerative disease of the brain found in people with a history of repetitive brain trauma. A 2017 study published in the Journal of the American Medical Association discovered CTE in 110 out of 111 brains of former NFL players (99%), and even more disturbingly in the brains of three of 14 high school players (21%) and 48 of 53 college players (91%). With mental health becoming a larger topic in the media, people are more aware than ever about the dangers of playing football. This has translated to fewer kids participating in the sport across the country. According to the National Federation of State High School Associations, 25,900 fewer students

participated in high school football during the 2016-17 school year. This marks a 2.3% decrease in participation from last season nationwide. This is just the latest statistic in a growing trend. The California Interscholastic Federation reported a 3.12% decrease in participation in the 2016-17 season, topping off a 10% decline in the last decade. Parents are taking notice of the long term repercussions of football. As the future fan base of the sport, youth participation will certainly affect viewership moving forward.

Endorsement Deals

Despite evidence showing that football is becoming less popular among American households, NFL viewership is still significantly higher than the NBA. Indeed, it is more than double. Yet Nike pays Lebron James, the NBA's highest paid endorser, almost five times as much as it pays Peyton Manning, the NFL's top endorser (Forbes, 2017). This means there are other factors besides viewership that affect how marketable an athlete is. One reason is the NBA players' importance in sneaker culture and fashion. The other is what the NBA lacks in television viewership, it makes up for in social media presence. The NBA dominates the NFL in terms of marketability. Figure 3 compares the NBA's top endorsements to the NFL's. Stated differently, companies can make more money selling basketball shoes than they can footballs, cleats or shoulder pads.

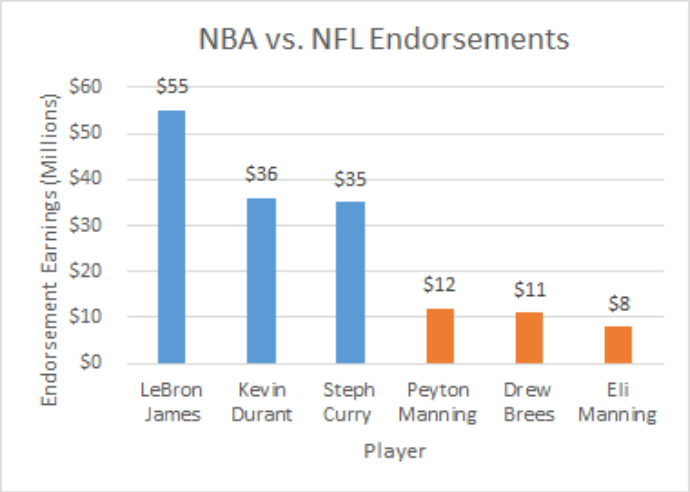

Figure 3: Top NBA and NFL Endorsements

SB Nation (2017) reports the NBA currently has 18 players with their own signature shoe. Not to mention retired players, such as Michael Jordan and Kobe Bryant, who continue to sell their own line of signature shoes. These shoes have proven to be extremely profitable. In 2014 Nike sold $340 million worth of James' signature shoes, up 13% from 2013 according to Forbes (2015). That figure is more than six times what Nike pays James annually, strongly suggesting that Nike is getting its money's worth in its James' contract. An even more shocking statistic is that Michael Jordan branded U.S. shoe sales accounted for more than $2.6 billion in revenue in 2014, a 17% increase from the previous year, via Market Mogul (2015). The numbers speak for themselves. Nike is turning an enormous profit by endorsing the NBA's top players, both current and retired.

NBA players are able to drive shoe sales unlike any other athlete. This is because NBA blurs the lines between performance and casual shoe unlike any other sport. In addition to acting as a performance basketball shoe, people can wear these sneakers casually at social events or to work. According to HYPEBEAST, the most fashionable sneaker of 2017 was the Virgil Abloh X Air Jordan 1 "THE TEN," a classic basketball

sneaker that first debuted in 1985 and was redesigned by one of today's top artistic directors Virgil Abloh. The shoe has been worn by many of the league's top players as a fashion statement. Often, players are filmed walking into the arena before game time and broadcasters will take note of their outfit and their shoes. In addition to television exposure, fans emulate players' fashion styles even closer through social media.

Social Media

The NBA has a massive social media following through such outlets as Instagram, Twitter, and Snapchat, more so than any other sport. This gives fans a more intimate following of their favorite players' lives than ever before. Undoubtedly the endorsement contract requires a minimum amount of exposure through social media. Whatever players post, fans see. Players commonly share outfits, sneakers, social events, and other parts of their lives through Instagram posts and stories. Often times, this acts as an advertisement for brands who endorse the players. Nike and LeBron James recently launched a series of exclusive signature shoe releases entitled "LeBron Watch." Each colorway released was promoted by James via Instagram. Leading up to the release, he would alert his 36.6 million followers that the shoe was coming soon. As soon as James wore the shoe on court, Nike opened a draw and selected winners.

For these reasons, this author suggests that the NBA is the most marketable sports league in the United States. Social media following and enormous endorsement contracts confirm this. Figures 4 and 5 illustrate the magnitude of the NBA's social media presence. While sales data supports the impact of these contracts, another metric which could validate the value of these contracts is the change in stock price in response to player achievements.

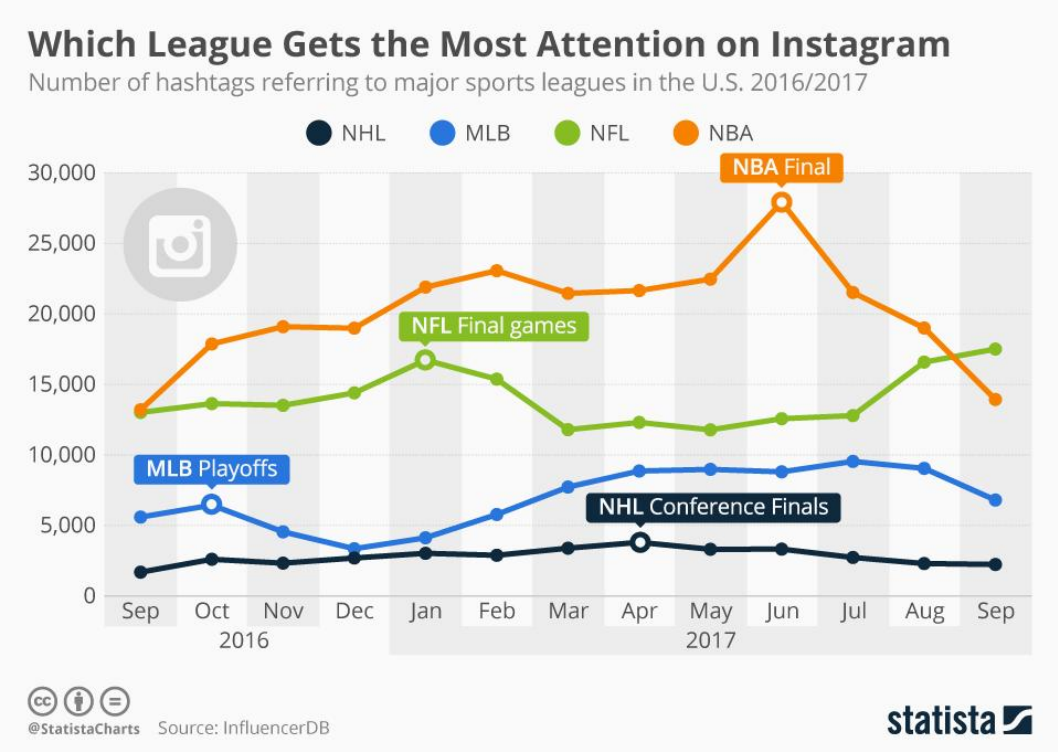

Figure 4 Sports Leagues Social Media Interactions (Statista)

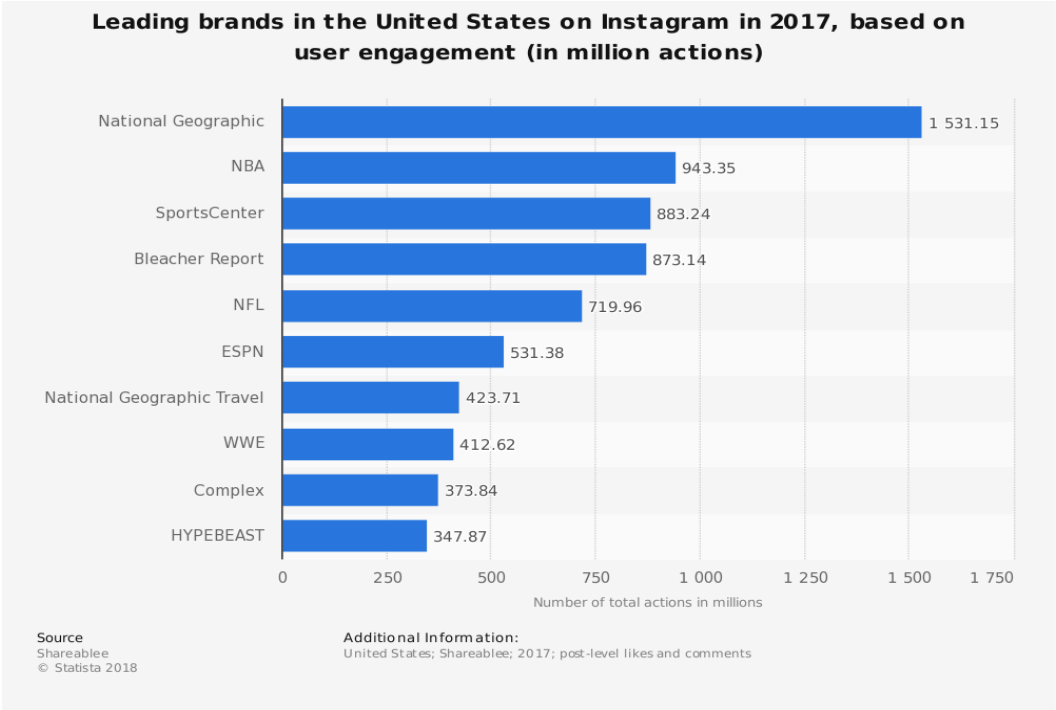

Figure 5 Leading US Brands Social Media Interactions (Statista)

III. Literature

Several existing studies have aimed to find the economic impact of athlete endorsement deals. Various methods have previously been used to measure this. The first metric used to measure economic impact of endorsements on brand value is stock price. Several studies have looked at changes in stock price on the day (or as soon as markets open the next day) of endorsement announcements. Additionally, other studies have viewed fluctuations in price following changes in an endorser's status, performance, or image. Lastly, one study traced changes in sales following an endorsement and again when an endorser won a championship in his or her sport.

Current Literature

Agrawal and Kamakura (1995) follow 110 endorsements from 1980 to 1992. The authors find evidence which shows that endorsements have a positive impact on stock returns. On the date endorsements are announced, they report a (statistically significant) 0.44% abnormal return, and a 0.54% abnormal return over a two day event period. Fizel et al. (2008) assessed 148 athlete endorsements between 1994 and 2000, but exclude "megastar" observations, in fear they may cause upward bias. This means they excluded top athletes in fear they may be outliers and skew results and not reflect the true effect of companies endorsing players. They report no significant changes in stock returns on the day of announcement or within an extended period of time. Their results are difficult to interpret due to the fact that they do not denote the magnitude of the "Megastar" upward bias. Obviously, the companies want Megastar deals for this very reason. Lastly, Elberse and Verleun (2012) report that across 341 endorsements, stock returns show an abnormal return of (statistically significant) 0.23% on announcement day. Although the

endorsement initially increases the firm's valuation, abnormal returns in the subsequent days following announcement are statistically indistinguishable from zero, suggesting that the event is quickly incorporated into the stock price.

Multiple studies also document the effect of endorsers' specific events on stock returns. Mathur et al. (1997) focus on Michael Jordan, and the economic impact of his highly anticipated return to the NBA in 1995 on the five firms he endorsed at the time, as well as 9 competing firms. They report a near 2% increase in stock returns for brands he endorsed at the time. This corresponds to more than $1 billion in market value, significantly greater than non-endorsed brands. The author notes that Michael Jordan is an exceptional athlete and that returns were viewed for a small number of firms. It is unclear if the findings would translate to a larger sample size. Farrell et al (2000), which only observes one athlete, Tiger Woods, and three brands he endorses, examine stocks returns as a function of Woods' performance at 46 tournaments from 1996 to 1998. While Farrell et al. did not indicate the magnitude of the abnormal returns, they did indicate that Woods' performance only significantly impacted Nike, not other sponsors. The small sample size again calls into question the validity of their findings. Louie et al. (2001) viewed the impact of negative events involving a celebrity endorser on a firm's stock returns. Their data covered 48 negative events across 128 endorsed brands. They reported a statistically significant negative impact of negative events on stock returns, especially when the athlete is believed to be at fault. Lastly, Elberse and Verleun (2012) observed the impact of athlete achievements on endorsers' stock returns. They find that 596 sporting events are associated with abnormal returns of (statistically significant) 0.08% on the event day and a (statistically significant) 0.14% cumulative abnormal return

on the event and subsequent day. Furthermore, major events produce a (statistically significant) 0.16% CAR.

Literature On Sales

Elberse and Verleun 2012 measured sales for endorsed brands using dollar sales data obtained from Nielsen's HomeScan panel, which covers 120,000 households scanning all their in-home and out-of-home purchases. The data comprised weekly sales in the U.S. from January 2004 to October 2009. Sales data specified the brand and product, allowing for the observation of sales for the endorsed brands as well as competing brands. The data covered sales of 51 endorsements over 14,280 weeks. Elberse and Verleun (2012) reported a firm's decision to sign an endorsement deal typically had a positive effect on the firm's focal brand sales, averaging out to $200,000 (4% of total weekly sales) per week throughout the duration of the endorsement. This represents over $10 million in added sales annually. Furthermore, they looked at the impact of athlete achievement on sales. The authors found that when an athlete captures a championship during the endorsement, weekly sales increase $70,000 per week. If an athlete won a subsequent championship, another $30,000 in weekly sales was generated. The authors did not find a pattern of decreasing-returns, winning an additional championship does not have diminishing marginal return on sales.

Literature On Contracts

Adidas recently released sections of their endorsement contracts with Derrick Rose and John Wall. Among the details released was an incentives clause, specifying the bonuses each player was paid for achieving certain personal accolades. This information is

important because it gives insight into how Adidas values certain player achievements.

The incentives are valued as follows in table 1.

Derrick Rose	John Wall
NBA MVP - $1,000,000 1st Team All NBA - $500,000 2nd Team All NBA - $250,000 3rd Team All NBA - $100,000 Finals MVP - $500,000 All Star MVP - $100,000	All-Star MVP - $500,000 All-Star Reserve - $150,000 All-Star Starter - $300,000 First Team All-NBA - $750,000 Second Team All-NBA - $500,000 Third Team All-NBA - $250,000 Defensive Player of the Year - $300,000 First Team All Defense - $100,000 Second Team All Defense - $50,000 First round of the Playoffs - $25,000 Conference Semifinals - $50,000 Conference Finals - $150,000 NBA Finals Runner-up - $250,000 NBA Champion - $500,00 NBA Finals MVP - $500,000 Leads NBA in scoring - $150,000 World or Olympic gold medal - $500,000 (must play 15 minutes in gold medal game to earn bonus) League Leader in Assists - $250,000 League Leader in Rebounding - $50,000 League Leader in Blocks - $50,000 League Leader in Steals - $50,000 Dunk Contest Champion - $1,000,000 Three-point contest champion - $100,000 NBA Skills Champion - $50,000 Dunk Contest Participant - $250,000 20/10 Bonus (20 points, 10 assists average) - $150,000

Table 1: Derrick Rose and John Wall Contract Incentives

It should be noted that Derrick Rose's base contract is much higher than John Wall's new contract with Adidas. Rose's contract is worth $185 million over 18 years and began in February of 2012, and includes a new signature shoe model annually. Wall's contract is worth only a base of $4.825 million in 2017-2018; which then increases marginally and returns to $4.825 million in 2021-22. Additionally, Wall will not have a signature shoe but the deal does permit him to collaborate on footwear with fellow Adidas endorsers like Kanye West and Pharrell. Adidas appears to be hedging its bets following the Rose contract, forcing Wall to meet incentives to earn a (relatively) hefty paycheck.

IV. Data

The purpose of this analysis is to determine how player achievements in the NBA add economic value to the brands the athletes are signed with. This study looks at the NBA All Star game and All NBA awards on a year by year basis from 2002 to 2017. Each year approximately 24 all-stars are selected to play in the NBA's all-star game, twelve from the Eastern conference and twelve from the Western conference. The starters from each team are decided based on popular fan vote, while reserves are selected by NBA coaches. If a player is injured or unable to participate, coaches vote on a replacement. Injured players who were selected as all-stars were not included in the study.

Each year the number of all-stars signed with Nike, Adidas, Under Armour, and Reebok were recorded. Athletes who wear Jordan branded gear were recorded as Nike athletes, as the Jordan brand is a subsidiary of Nike. Similarly after 2006, Reebok athletes were counted as Adidas, as Reebok since falls under the Adidas umbrella. Smaller international brands such as Anta, Peak, and Li Ning were not included in this study due to the limited data available on them. All player data was gathered using Basketball Reference, an online database of Statistics, scores, and history for the NBA, ABA, WNBA, and top European competition.

The NBA All Star Game ("ASG") was selected as a metric of player success because in addition to highlighting the league's best players, the event serves a major marketing platform for athletic apparel companies and offers an interactive fan voting experience. Starters voted on by fans offer athletic apparel companies valuable insight into the league's most marketable players. The hypothesis behind this study is that in

years that athletic apparel companies have more sponsored players participating in the ASG, the stronger the companies will perform financially. Lineups for the NBA ASG are announced in January and the game is played in February.

In addition to the ASG, All NBA awards is another metric used to measure player success. The All NBA First, Second, and Third teams are comprised of the fifteen most talented players in the league, voted on by sports journalists as well as broadcasters throughout the US and Canada. While they are not selected by NBA fans, they are still representative of the NBA's most popular players. All NBA Awards are announced in May during the NBA playoffs.

Additionally, All-Star appearances, All-NBA Selections, and NBA Finals starting lineups were used as covariates because of their perceived importance by athletic apparel companies. John Wall's most current contract with Adidas offers incentives that reward him with a hefty bonus for each of these achievements. Since "money talks", presumably these achievements are highly valued by Adidas, as demonstrated by Adidas' willingness to pay a huge premium if Mr. Wall meets them. Table 2 identifies these variables and their respective definitions.

S&P Returns January	Return of the market over January
S&P Returns February	Return of the market over February
S&P Returns May	Return of the market over May
S&P Returns June 2017	Return of the market over June
All-Stars	Nike, Adidas, Under Armour athletes named to the All Star Game
All-NBA	Nike, Adidas, Under Armour athletes named to the All NBA Team
NBA Finals Participants	Nike, Adidas, Under Armour athletes starting in NBA Finals

Table 2: Variable Definitions

Stock returns were calculated over the month that each of these events took place. Returns were calculated in January for ASG lineup announcement, February for the ASG, May for the All NBA Award announcements, and June for the NBA Finals from the years 2007 to 2017. Additionally S&P 500 returns were also calculated over the time period to act as a market beta. The end goal of this study is to determine if stock returns in the identified time-frame justify the exuberant contracts from athletic apparel companies. All dates were pulled from the NBA historical online database, while stock prices from 2002 through 2017 were obtained from Yahoo Finance.

V. Methods

Ordinary Least Squares Regression

I hypothesize that companies with more athletes participating in the All-Star game and NBA Finals, or named to the All-NBA Team, will have higher returns. To test this hypothesis, I implemented a linear model which regresses company stock returns on corresponding S&P 500 returns and player achievement variables.

$$y_i = \alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \varepsilon_i$$

The covariates that enter the vector y include

x_{i1} = Monthly S&P 500 Stock returns

x_{i2} = Number of All-Stars, All NBA, Finals starters

Four total regressions are run. The first regresses Nike, Adidas, and Under Armours' January stock returns from 2007 to 2017 on January's S&P 500 returns and the number of All-Stars for each company in those years. This regression measures the impact of the All-Star Game starting lineup and reserve announcements for companies. The same regression was run using February returns to examine the significance of the All-Star Game being played. The third regresses Nike, Adidas, and Under Armours' May stock returns on May's S&P 500 returns and the number of All-NBA players each company has. Lastly, I regress each company's June stock returns on June's S&P 500 returns and the number of Finals starting players each company has.

VI. Results

Table 3 outlines the four regressions. The first of the four regressions was run with the data, January All-Star. Using the model specification detailed above, the first regression was best at representing the data with an R-squared value of .7090. Additionally, coefficients for S&P Return January and All Star coefficients were significant at the .01 and the .1 significance level respectively. The regression also yielded a high R-squared value of 0.7. S&P Return January yielded a coefficient of 1.355, while All Stars yielded a coefficient of 0.00187. This can be interpreted as a 1% change in the S&P 500 returns in the month of January resulted in a 1.35% change in Nike, Adidas, and Under Armours' stock returns for the month. Additionally, the marginal effect of a brand having an additional player added to the NBA All-Star Game results in a 0.187% positive change in stock returns. While this may seem like a small change, there are 24 total All-Stars named each year, creating potential for a 4.32% positive change in stock returns. While it is unlikely that any one brand will sign all 24 league All-Stars, Nike has come close in previous years. 22 Nike athletes participated in the 2012 All-Star Game. It is important to note again, these results are only significant at the .10 level and cannot be considered certain. Moreover, this study did not attempt to exclude other potential variables, such as increased sales of non-basketball related products. While these results can help influence future endorsement contracts, it cannot be assumed that a player automatically generates a 0.18% increase in return for his brand when he makes the all-star team.

This can also allow companies to look at the cost benefit analysis of offering players incentives in contracts. Referring back to the Adidas John Wall contract, Adidas pays Wall a bonus of $300,000 if he is named an All-Star starting player. Under this

finding, Adidas had five All-Stars in the 2018 All-Star game. Each player appearance generates a 0.187% positive change in Adidas' stock price. At the time of the 2018 All-Star announcements, Adidas stock price was $113.63. A near 1% increase in returns would result in a price of $114.69. Given Adidas' market cap of 52.79 billion, this adds significant value to the company and their payment of $300,000 to each starter and $150,000 to reserves may be justified. While stocks are extremely volatile, it is a valuable finding that All-Star participation positively and significantly affects company stock returns. This can help brands make more informed decisions on how much they can afford and

how much they should offer athletes moving forward.

Table 3: OLS Regressions

	January Regression		February Regression		May Regression		June Regression	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
S&P Return Jan.	1.355***	0.1628						
All Stars	0.00187*	.00010						
S&P Return Feb.			0.9588***	0.3481				
All Stars			-0.0018	0.0015				
S&P Return May					1.2477**	0.4973		
All-NBA					-0.0039	0.0034		
S&P Return June							0.7888	0.5017
Finals Participants							-0.0083	0.0057

The larger repercussions of this finding are the importance of public opinion on athletic brands endorsed athletes. As stated earlier, All-Star starting lineups are determined via fan vote. The starting lineups consist of the league's 10 most popular players. Benches are determined by coaches' votes. The positive change in stock returns

indicates that when endorsed athletes perform better, fans are receptive and companies reap the benefits of their investments. This positive change in stock return likely reflects an uptick in sales of signature shoes, player merchandise, and general basketball apparel.

The February, May, and June regressions yielded different results. Player variables All-Stars, All-NBA, and Finals participants all yielded negative coefficients of 0.00183, 0.00394, and 0.00834. Coefficients were insignificant at all levels (P-value = 0.222, 0.253, 0.156 respectively). This paper suggests several reasons why these variables did not have the same impact seen with the January All-Star announcement. The first being that these awards are determined strictly within the NBA and do not reflect the fans' (relevant buying market) opinions. While All-Star votes take player popularity into account, All-NBA and Finals Appearances are determined strictly by skill. Furthermore, there is much less variation year to year in the All-NBA selections and Finals Appearances than the All-Star game. This is due to the fact that each year only 15 players are named All-NBA, while only 10 players start in the NBA Finals. Many years, the same numbers appear for each of these categories. For example, of the eleven seasons observed, Nike had six athletes in the Final 4 times, seven athletes three times, and eight athletes four times. This makes it difficult to statistically assess the true impact of these players' appearances if there is not much variation in the data. Additionally, the same teams tend to appear in the finals year after year. Of the eleven seasons observed, a LeBron James team appears in the finals in eight seasons. The last three finals have been a matchup between the Golden State Warriors and the Cleveland Cavaliers. The Cavaliers, Spurs, Warriors, Celtics, Heat, and Lakers have all made at least back to back

finals appearances in this eleven year span. Again, it is hard to measure the impact of the Finals if we observe the same players on a year to year basis while stock returns consistently fluctuate. Lastly, there are countless other variables which can affect stock returns. Like anything else, the value of returns are determined by supply and demand. If more people seek to acquire the stock than wish to sell, the price increases. Nike, Adidas, and Under Armour are complex companies with many different moving parts. They make apparel and shoes for a wide variety of different sports as well as casual wear. While the NBA certainly has a wide following, the events simply may not be significant enough to drive the value demand for stock shares. Moreover, buyers of stock may not be sports fans. It may take time for the increased sales data to reach the stock buyers.

As an example of negative events impacting price, in the late 1990's and early 2000's Nike received a lot of negative publicity around the manufacturing of their products, as CEO Phil Knight stated in a 1998 speech "The Nike product has become synonymous with slave wages, forced overtime, and arbitrary abuse… I truly believe the American consumer doesn't want to buy products made under abusive conditions" (Business Insider, 2013). Even though Michael Jordan, Nike's biggest athlete at the time, won a championship in 1998, stock returns may still be negatively affected because of the labor protests. Without a more comprehensive analysis of the company, it is difficult to understand what drives stock performance.

S&P Returns for February and May were significant yielding positive, significant, coefficients of 0.9588 and 1.2477. This tracks how the companies returns measure against the market as a whole. S&P Returns for June were insignificant, meaning athletic

apparel companies performed differently than other companies on average in the month of June. This may be due to the seasonal nature of the retail industry.

VII. Conclusions

This paper offers insight into justifying athletes' large endorsement contracts. The All-Star Game should be the focus of bonuses in a star's contract. Companies pay athletes millions of dollars every year to endorse their products. To some degree, this paper confirms that when companies have more of their players performing at a high level, it draws consumer attention and adds economic value to brands. This is seen in the positive return (0.18%) added when a company has a player named to the All-Star game.

The study could be enhanced if more stock data and signature shoe sales data was available. It would be interesting to analyze if signature footwear sales are correlated to player statistics and achievements on a year to year basis. This could give insight into exactly how performance affects sales and companies could run a true cost-benefit analysis of the contracts they offer their athletes.

VIII. References

Agrawal, J., and W. A. Kamakura (1995). *The Economic Worth of Celebrity Endorsers: An Event Study Analysis*. Journal of Marketing 59, 3: 56–62.

Badenhausen, K. (2015). *LeBron James Is NBA's Top Shoe Salesman With $340 Million For Nike*. [online] Forbes.com. Available at: https://www.forbes.com/sites/kurtbadenhausen/2015/03/18/lebron-james-is-nbas-top-shoe-salesman-with-340-million-for-nike-in-2014/#31b45f3b4e56 [Accessed 21 Apr. 2018].

Badenhausen, K. (2015). *The NFL Players Who Make the Most From Endorsements*. [online] Forbes.com. Available at: https://www.forbes.com/sites/kurtbadenhausen/2015/10/11/the-nfl-players-who-make-the-most-from-endorsements/#461bec8e6277 [Accessed 21 Apr. 2018].

Badenhausen, K. (2017). *The 2017 NBA All-Stars: Players Who Earn The Most Money From Endorsements*. [online] Forbes.com. Available at: https://www.forbes.com/sites/kurtbadenhausen/2017/02/19/the-nba-all-stars-2017-players-that-earn-the-most-money-from-endorsements/#205a062578f6 [Accessed 21 Apr. 2018].

Elberse, A., & Verleun, J (2012). *The Economic Value of Celebrity Endorsements*. Journal of Advertising Research: 149-162.

Farrell, K. A., G. V. Karels, K. W. Montfort, and C. A. McClatchey (2000). *Celebrity Performance and Endorsement Value: The Case of Tiger Woods*. Managerial Finance 26, 7: 1–15.

Fizel, J., C. R. McNeil, and T. Smaby. *Athlete Endorsement Contracts: The Impact of Conventional Stars.* International Advances in Economics Research 14, 2 (2008): 247–256.

Gbadamosi, T. (2015). *The Economics of Nike's Air Jordan Brand*. [online] The Market Mogul. Available at: https://themarketmogul.com/the-economics-of-nikes-air-jordan-brand/ [Accessed 21 Apr. 2018].

Glenza, J. (2017). *Study links longer football careers to more severe cases of CTE*. [online] the Guardian. Available at: https://www.theguardian.com/sport/2017/jul/25/concussion-study-nfl-cte-college-players [Accessed 21 Apr. 2018].

Jones, J. (2018). *Pro Football Losing Fans; Other Sports Holding Steady*. [online] Gallup.com. Available at: http://news.gallup.com/poll/220562/pro-football-losing-fans-sports-holding-steady.aspx [Accessed 21 Apr. 2018].

Louie, T. A., R. L. Kulik, and R. Jacobson. *When Bad Things Happen to the Endorsers of Good Products.* Marketing Letters 12, 1 (2001): 13–23.

Martino, A. (2017). *Football's Concussion Crisis Is Killing Former High School Players, Too*. [online] HuffPost. Available at: https://www.huffingtonpost.com/entry/football-brain-injury-cte_us_598dc2dee4b0909642967529 [Accessed 21 Apr. 2018].

Morgan, R. (2017). [online] Nypost.com. Available at: https://nypost.com/2017/12/13/sunday-night-football-takes-huge-hit-as-nfl-ratings-continue-to-sink/ [Accessed 21 Apr. 2018].

Nisen, M. (2013). *How Nike Solved Its Sweatshop Problem*. [online] Business Insider. Available at: http://www.businessinsider.com/how-nike-solved-its-sweatshop-problem-2013-5 [Accessed 21 Apr. 2018].
Wertheim, J. (2018). *Exclusive: Inside look at John Wall's Adidas deal*. [online] SI.com. Available at: https://www.si.com/nba/2018/02/07/john-wall-adidas-contract-bonuses-incentives-wizards [Accessed 14 Feb. 2018].

Rapp, T. (2018). *Report Shows Continuing Drop in High School Football Players*. [online] Bleacher Report. Available at: http://bleacherreport.com/articles/2726124-report-shows-continuing-drop-in-high-school-football-players [Accessed 21 Apr. 2018].

Singer, M. (2017). *NBA's TV viewership up 32%, highest since 2010-2011 season*. [online] USA TODAY. Available at: https://www.usatoday.com/story/sports/nba/2017/11/30/nba-tv-viewership-up-32-espn-tnt-nbatv/910427001/ [Accessed 21 Apr. 2018].

Sykes II, M. (2017). *Here's every signature shoe in the NBA right now in one place*. [online] SBNation.com. Available at: https://www.sbnation.com/2017/9/6/16255002/nba-signature-shoe-lebron-james-steph-curry-kyrie-irving-kevin-durant-paul-george-james-harden [Accessed 21 Apr. 2018].

Wertheim, J. (2018). *Why is Adidas still paying D-Rose superstar money?*. [online] SI.com. Available at: https://www.si.com/nba/2018/02/06/derrick-rose-adidas-sneaker-contract-details-cavaliers-knicks-bulls [Accessed 14 Feb. 2018].