

# JABM

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## AIMS AND SCOPE

Journal of Accounting, Business and Management (JABM) provides a scientific discourse about accounting, business, and management both practically and conceptually. The published articles at this journal cover various topics from the result of particular conceptual analysis and critical evaluation to empirical research. The journal is also interested in contributions from social, organization, and philosophical aspects of accounting, business and management studies. JABM goal is to advance and promote innovative thinking in accounting, business and management related discipline. The journal spreads recent research works and activities from academician and practitioners so that networks and new link can be established among thinkers as well as creative thinking and application-oriented issues can be enhanced. A copy of JABM style guidelines can be found inside the rear cover of the journal. The Journal of Accounting, Business and Management (JABM) is published twice a year that is in April and October of every year and sponsored by Malangkuçewara School of Economics (MCE) in Indonesia. It is listed in ULRICH'S Periodicals Directory of Accounting and Management Studies with ISSN No. 0216-423X (print) and listed in Australian Business Deans Council Journal Rankings List. It is also full indexed in EBSCO "Business Source Premier" databases. More information about JABM can be obtained by visiting the web site of the journal at (<http://jabm.stie-mce.ac.id>).

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# For the Money or the Thrill of the Game: The Financial Performance of National Basketball Association Arena Sponsors

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## Abstract

Companies that sponsor NBA arenas spend millions of dollars each year for the naming rights. To our knowledge, no studies have examined the financial performance of the sponsoring companies over the course of the sponsorship. Managers appear to believe that such expenditures generate net financial benefits for their companies; however, measuring such returns can be elusive. We examine the impact of sponsorship on sales growth and stock price returns before, during, and (if applicable) after the sponsorship of the sponsoring companies. We then explore if the following factors moderate or enhance the sponsorship results. We include the NBA team's on-court performance during the regular season, the performance during the playoffs, and whether the sponsor's corporate headquarters are co-located with the arena. We find evidence of negative sales growth associated with sponsorships, but if the NBA team makes the playoffs, that performance positively correlates with the sponsoring company's stock price return.

**Keywords:** financial performance, sports, national basketball association, sponsorship, stock price returns, sales growth.

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## I. INTRODUCTION

Professional sports teams have increasingly sought additional revenue by selling the naming rights of their arenas. With regard to the NBA, 29 out of the 30 NBA teams now have their home arenas named after a sponsoring company (the New York Knicks' Madison Square Garden is the one exception). This has not always been the case and, in fact, prior to 1988 no arenas bore the name of a sponsor, and even by the turn of the century only a handful of teams chose to sell their arena naming rights. (Leeds et al., 2007).

While these exclusive sponsorship agreements vary between the different teams and sponsors, they range in price from \$1M and \$10M annually and the lengths of the contracts are generally ten to thirty years (FromThisSeat.com, 2019). Even for larger companies that have more substantial marketing budgets, this is a serious financial commitment and one that requires scrutiny from management if they are to be accountable to shareholders. The sponsors presumably believe that the costs of the sponsorship are more than justified based on the increase in value that accrues to the company.

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But how exactly does this increase in value manifest itself? One can suppose different narratives that firm managers ascribe to in believing in the financial merit of their sponsorship agreements. At face value, it is difficult to imagine that customers will consciously decide that they want to patronize the sponsor's business simply because they see the name advertised on the arena.

There must be something else going on if the company's managers believe they indeed are driving sales through their sponsorship. Berger and Fitzsimmons (2008) address this issue by examining how priming clues – such as seeing and hearing a company's name repeatedly and connected to a specific sports team – can influence consumer purchase behavior indirectly. They analyze the situation where after the 1997 NASA pathfinder landed on the planet Mars, the candy company Mars experienced a significant increase in the sales of their candy, despite the fact that the name of the company had nothing to do with the planet. They performed further experiments and reported that priming clues could influence consumer purchases of unrelated items (e.g., the increased presence of the color orange around Halloween can positively affect the buying of sunkist and orange crush).

Another narrative managers may believe is that increased value is achieved not through indirect priming clues that lead to sales, but instead through increased brand awareness whereby prospective customers and shareholders are more comfortable with the company which in time leads to increased sales and/or share price. The idea is that brand name reduces uncertainty and accompanying risk and thus serves as a lubricant to convert purchase intentions of the product or stock into actual sales (Cobb-Walgren et al., 1995).

Yet another narrative may be that managers believe that value is achieved not through priming clues or increased brand awareness, but instead just have a gut feeling or instinct that it will increase shareholder value. However, relying on managerial wisdom or gut feeling of executives to assess the impact on shareholder value is problematic. Ben-David et al. (2013) show that executives severely miscalculate the range of their future stock price and may do so because of cognitive biases from which they suffer. We suspect that some companies that purchase the naming rights to professional arenas are not immune from such decision-making biases.

While all three of these narratives are plausible as an explanation for why firm management believes it should pursue arena sponsorships, the problem remains as to whether or not these sponsorships are in fact producing value to firms in the form of increased sales or increased returns to shareholders. This is an important question because hundreds of millions of dollars are spent on NBA arena sponsorship agreements alone and companies considering an NBA sponsorship or other arena sponsorships should understand how their predecessors have fared. Moreover, if a better understanding is had as to the types of firms more likely to benefit from the sponsorships, prospective sponsors can make better and more data-driven decisions.

## **II. LITERATURE REVIEW**

This study is important to the literature on sports sponsorships for a few reasons. First, while there are many studies that look at non-financial metrics related to sponsorship, few tackle sales and share price which are crucial metrics for companies. For example, one innovative study that evaluates major league baseball (MLB) stadium sponsors finds that when the sponsor adapts its color scheme to match that of the team they are sponsoring, there are enhanced effects on the intended audience in terms of brand attitude and intentions (Henderson et al., 2019). Jensen and Cornwell (2017)

examine 69 cases of corporate sponsorship of professional facilities. Their study spans multiple sports and countries in a longitudinal effort to detect what makes some of these relationships mutually beneficial for the sponsor and team, whereas others are not. They find that firm-sponsor congruence and pre-existing sponsor brand equity are strong predictors of a successful relationship, along with a healthy overall economic environment.

Second, many prior studies on stadium sponsorship that use financial metrics do so in a very short-term way, using an event-study method. For example, Reiser et al. (2012) find evidence that announcements about sports' sponsorships positively affect stock performance, but the effect is dramatically different across various sports and regions of the world. Clark et al. (2002) studied 49 different stadiums and arenas across various sports that experienced a new corporate sponsorship and found that the increased valuation attributable to the announcement to be 1.65% on average. By contrast, a later study by the same authors in 2009 examined 114 title sponsorships for sports ranging from golf to tennis to NASCAR and found that the prices paid for these sponsorships were market-clearing prices in which the sponsoring companies realized neither economic loss nor gain. Such approaches seem to capture investor perceptions of the value of the agreement versus the true long-term value proposition of the agreement as demonstrated through increased sales and returns to shareholders over the longer run.

One reason why few studies take the longitudinal approach is the difficulty in controlling for confounds which may be influencing sales and share price. While over shorter terms it can be easier to isolate the impacts of the sponsorship decision, over the long-run many variables impact the financial success (or lack thereof) for companies and a researcher must be careful in her methodological approach. Otherwise, she risks inferring that that the decision to sponsor is responsible when in fact confounding factors are at play. Naidenova et al. (2016) used an innovative approach to solve for this as they investigated the financial performance of European soccer stadium sponsors. They utilize an instrumental variables regression framework combined with a lagged effects model as they collect information on the number of tweets that contain both team and sponsor names. They find a negative association between stadium sponsorship and financial results, and, by implication, they encourage managers and investors to be wary of believing such deals will increase company value. Jensen and Hsu (2011) examine the business performance of companies that consistently invested in sponsoring American sports compared against companies that did not invest. They not only find higher business performance for the group that consistently marketed through sports, but they also find that performance increases are positively associated with the level of investment made by the sponsoring firm. Blake et al. (2018) examine South African companies that have consistently advertised through sports and compare stock performance to companies that have not consistently done so and find that neither group significantly outperformed the other.

Lastly, there is very little in the literature on the sport of basketball and the financial performance of companies that purchase naming rights to NBA arenas, despite the fact that basketball is the world's second most popular sport (Krasnoff, 2018), and even though the NBA is the sport's unquestioned epicenter. Leeds et al. (2007) studied the stock performance of companies who, between 1990 and 2004, acquired the naming rights of stadiums across the four major professional sports in the United States: football, basketball, baseball, and hockey. They utilize a one-step version of event analysis and found no significant long-term impact on the profitability of the firms that purchase the

naming rights. Miyazaki and Morgan (2001) examined 27 announcements of corporate sponsorships of the 1996 Olympic games held in Atlanta, which included basketball. They did not find a statistically significant abnormal rate of return for the sponsoring companies.

One advantage of studying NBA arena sponsorships is that, compared to the NFL, where each stadium houses just eight regular-season games, NBA arenas generally host 41 regular-season games each year. This marked difference results in significantly higher fan traffic and media mentions throughout the season. As a result, this study offers the possibility of comparing naming right's sponsorships in the NBA versus the NFL to see if the structures of the two sports might influence the effects on the sponsoring companies.

### **III. RESEARCH METHODOLOGY**

#### **3.1. Theory and Hypotheses**

Economics has long studied the classic principal-agent problem where an agent is hired by the principal to look after the principle's interest, yet the agent may find opportunity to indulge in actions that benefit himself at a cost to the principle and face no repercussions. Much research exists that identifies situations in which corporate managers may be diverting corporate resources away from the most productive uses for shareholders to obtain some pecuniary, material, or reputational advantage for themselves.

Barnea and Rubin (2010) study the 3000 largest corporations and examine the relationship between each firm's corporate social responsibility (CSR) rating and their institutional ownership and capital structure. They find a significant negative relationship between CSR score and institutional and insider ownership, meaning that when corporate managers have less financially invested in the company they are willing to engage in more CSR which can place not only the company, but also themselves in more positive light publicly.

Huang and Lin (2016) study the timely release of bad news to shareholders by Airlines companies as a function of the disclosed aircraft perquisites that the CEO receives and find a significant negative relationship, meaning that increased amounts of CEO aircraft perquisites corresponds with increased misleading of shareholders. Clearly if the CEO was solely concerned with maximizing shareholder value and was not factoring in his own personal benefits then we would unlikely see these results.

Cespa and Cestone (2007) find that incumbent CEOs strategically engage in CSR activities to generate positive external support from activist groups that may reduce the probability of CEO turnover in future periods. This again suggests that while CEOs may do a decent job at focusing on the corporation for the majority of their day to day decisions, certain large decisions that generate exposure to news media may unearth other motivations where the CEO may not be objectively looking out for the best interest of her shareholders.

Best corporate governance practices suggest that companies should mitigate this potential principal-agent problem that exists between shareholders and the CEOs who manage their companies by making a large portion of the CEO's compensation stock grants. By doing this, the CEO becomes part-owner of the company and theoretically should make decisions more closely aligned with the company's interest than would otherwise be. However, Quigley et al. (2020) found that even this effort can be met with problems. They found that in the weeks prior to when CEOs are scheduled to receive a large grant, they systematically adjust the tenor of the public releases they make to strike

a more negative tone so that they receive the stock at a lower price. They also find that underpaid CEOs and CEOs who have the most discretion are the largest abusers of this manipulation.

Devos et al. (2015) similarly study the timing of stock grants and stock sales of CEOs in relation to announced stock splits by the company. Noting that decades of research on stock splits reveals they usually coincide with abnormal positive returns on the stock, they find that 80% of CEO stock grants are timed just before the stock split. Furthermore, two-thirds CEO stock sales were timed to be just after the stock split, which resulted in an average gain of over \$300,000. If CEOs were truly looking out only for the company and disregarding pecuniary advantages for themselves, then we would be unlikely to see such dramatic findings.

Trusting that CEO and other corporate managers actions are driven solely by concerns of increasing sales or share price return seems dubious. And if sponsoring an NBA arena is not an efficient way to spend marketing dollars and if the company could otherwise be spending those dollars in more efficient channels to promote sales growth, then we should expect to see a negative relationship between sponsorship and stock price (or sales growth rate).

We therefore hypothesize that companies that choose to spend their marketing dollars on NBA arena naming rights deals will see a significant adverse effect in both their stock price and sales growth. We previously mentioned the large cost of these sponsorship arrangements (Table 1) and the corresponding changes to consumer purchasing behavior that must follow in order to justify them from a financial standpoint. Further we know that managers are susceptible to cognitive and behavioral biases, and can imagine scenarios where the relative financial merit of a sponsorship decision is clouded by thoughts of pride in seeing the company name on an arena, joy in getting to bring clients and others to the luxury box during games, and other thrills of the game. In fact, this is an intuition shared by Nobel Laureate Behavioral Economist Richard Thaler as he tweeted, “Conjecture: companies that buy the naming rights to stadiums and golf tournaments underperform the market. True?” (Thaler, 2019).

**H<sub>1A</sub>:** sponsorship agreements negatively influence the stock price of companies who sponsor NBA arenas.

**H<sub>1B</sub>:** sponsorship agreements negatively influence the sales growth of companies who sponsor NBA arenas.

When a team does well (as measured by winning many games, making the playoffs, and being a contender for a championship), it is reasonable to believe that the arena the team plays in will get more exposure to consumers. Eisdorfer and Kohl (2017) studied NFL Monday night games in which a publicly-traded company sponsored the home team arena. They found in their event study that when the home team won, the sponsor experienced abnormal returns of 50 basis points. In addition, Sun et al. (2016) found that between 2001 and 2013 Korean baseball sponsors experienced a positive spillover effect on their financial returns when the team they sponsored won and that the effect was stronger for sponsors whose name was actually on the jerseys of the team. Edmans et al. (2007) examined the link between the on-field performance of a national soccer team in World Cup and other major Continental Cup matches and the stock market index for the underlying country. They found that losses by the national team corresponded to next day abnormal stock losses in the stock market of the underlying country. By contrast, Boyle and Walter (2003) found no relationship between the success of the New Zealand national rugby team against international competitors and the financial performance of the New Zealand stock market between 1950 and 1999.

We therefore hypothesize that the team's success (or lack thereof) will serve as a moderator in the relationship between arena sponsorship and company performance. If the team performs well, then we predict that even if overall relationship between sponsorship and performance is negative, the success of the team will make the relationship less negative. And if the team performs poorly, then the relationship between sponsorship and performance will be even more negative.

**H<sub>2</sub>:** companies that sponsor arenas of NBA teams that are successful perform better than companies that sponsor arenas of teams that are not successful.

When a company decides to sponsor a team that shares geographical proximity, there would seem to be synergies that can exist in terms of fans (customers) who may share inherent loyalties to both team and sponsor. Chang et al. (2012) found that for NASDAQ firms headquartered in the same city as an NFL team, a loss by the NFL team also resulted in an average loss the next day for the company's stock price based on games played between 1972 and 2004. While this study captures ephemeral investor sentiment since it looks at the stock returns just one day after the event, a longitudinal approach should similarly capture the same customer sentiment.

Similarly, and while not related to collocated headquarters specifically, Dees et al. (2010) examined data from NASCAR to determine if personality fit between the NASCAR drivers and their major sponsors affected the sponsorship outcomes of consumer attitudes toward the sponsor, brand, and purchase intentions. The researchers sampled 347 attendees of the NASCAR Samsung 500 and used factor analysis, bivariate correlations, and hierarchical moderated factor analysis to determine that a stronger fit between the sponsors and NASCAR resulted in more positive consumer attitudes toward the sponsor and brand, as well as higher purchase intentions.

We would expect that companies headquartered near their sponsored arena would make the relationship between basketball arena sponsorship and company financial performance more positive (or less negative). The idea is that in such a situation the company might have numerous employees in the area and may partake in local philanthropic ventures, which, combined with naming rights, could create synergistic value.

**H<sub>3</sub>:** companies that sponsor arenas that are co-located in the same geographic area as their headquarters do better than companies who are not co-located.

Larger companies (those defined as having more assets) who are already established and well-known by a large percentage of the national population would seem to benefit less from incremental exposure than would comparatively smaller companies. Jaisinghani and Kanjilal (2019) studied firm performance in China's manufacturing sector and found that smaller firms saw larger incremental financial gains to proportionate advertising expenditures than did their larger counterparts. In the area of sports sponsorships, Jobber (2007) found that the company Canon, which had relatively little brand awareness among men was able to drastically increase that brand awareness from 40% to 85% by sponsoring soccer stadiums in the United Kingdom. We would expect that smaller companies may see outsized gains (or relatively smaller losses) associated with their decision to sponsor an NBA arena.

**H<sub>4</sub>:** smaller companies benefit more (or see less detrimental effects) from NBA sponsorship than larger companies.

### **3.2. Data and Variables**

As shown in Table 1, the twenty-four NBA arena sponsors in our study represent a diverse set of industries (e.g., airlines, financial, energy, telecommunications, consumer



discretionary, etc.). This diverse sample should minimize concerns that sponsoring companies might represent industries that are uniquely experiencing booms or busts. Most NBA teams have long-term relationships with the arena sponsors, but there are a few teams whose arena sponsor has changed during the 1991-2019 study period. We excluded any sponsoring companies that underwent a merger or acquisition during this period and any sponsors that are private corporations, since their financial data is unavailable. We pulled financial data from Compustat for each of these public companies for four years before the arena sponsorship began, all sponsorship years, and up to four years after the sponsorship ended. Our study includes 438 firm years of data from 1987-2019.

Two dependent variables were calculated for each firm year. Stock return is measured by the percentage change in the fiscal year closing stock price, and sales growth is calculated as the percentage change in total revenue. The main independent variable is the Sponsor dummy variable, equal to one in the years in which the companies sponsor an NBA arena, and zero in the years before and after the sponsorship.

To maximize the robustness of our results by removing possible confounds, we include three financial control independent variables for each firm. Having a diverse set of companies that span a broad set of industries is a good starting point towards removing the confounds of industry-specific dynamics; however, many other factors influence a company's stock price return or sales growth rate beyond its decision to sponsor an NBA arena or not.

**Table 1****NBA Teams and Sponsors**

NBA Team	Sponsor	Sponsorship Years	Average Sponsorship Cost per Year (M)
Atlanta Hawks	Phillips	1999-2019	9.25
Boston Celtics	TD Bank	2005-2019	5.95
Brooklyn Nets	PVH Corp	2007-2010	1.4
Brooklyn Nets	Prudential	2010-2012	5.26
Brooklyn Nets	Barclays PLC	2012-2019	10
Chicago Bulls	United Airlines	1994-2019	5
Denver Nuggets	Pepsico	1999-2019	3.4
Golden State Warriors	Oracle	2006-2019	1.8
Houston Rockets	Toyota	2003-2019	4.75
Indiana Pacers	CNO Financial	1999-2019	2
Los Angeles Lakers	Staples	1999-2019	5.8
Memphis Grizzlies	FedEx	2002-2019	4.09
Miami Heat	American Airlines	1999-2019	2.1
Milwaukee Bucks	BMO Harris	2012-2018	1
Minnesota Timberwolves	Target	1990-2019	1
Oklahoma City Thunder	Ford	2008-2011	
Oklahoma City Thunder	Chesapeake Energy	2011-2019	3
Orlando Magic	TD Bank	1999-2006	1.6
Philadelphia 76ers	Wells Fargo	2010-2019	2
San Antonio Spurs	AT&T	2002-2019	2.05
Utah Jazz	Delta Airlines	1991-2006	1
Utah Jazz	Eversource Energy	2006-2015	
Vancouver Grizzlies	General Motors	1995-2001	6
Washington Wizards	Capital One	2017-2019	10

Size is measured by the natural log of total assets. Company size has been shown to be negatively related to stock price return; smaller companies often out-perform large companies. Leverage is calculated as the debt-to-equity (D/E) ratio; it is the book value of total liabilities divided by the book value of total stockholders' equity. Leverage tends to increase risk and magnify gains and losses. The profitability of the company, as measured by return on total assets (ROA), is our third control variable. Some companies may operate in industries that are more competitive or less competitive, and it is possible that specific time periods impact that as well (we especially think here of differences in returns for secular versus cyclical industries). As such, we use ROA as measured by net profits after taxes divided by total assets in the given year to control for this.

We utilize a research model similar to the lagged effects model of Naidenova et al. (2016) in order to address endogeneity issues. We propose that the lagged model is appropriate as it recognizes that sponsorship arrangements are long-term propositions (often 20-30 years in length) and that it would take time for the impact of the sponsorship to show up in the financial performance of the company, as opposed to seeing the benefits or detriments of sponsoring an arena in the current year. Therefore, all three financial control variables are lagged one year prior to the dependent variables.

Table 2 gives summary statistics of the two dependent variables and three control variables. As can be expected, stock price returns show a large deviation during the thirty-two-year study period, as does the debt-to-equity ratio.

**Table 2**

**Summary Descriptive Statistics**

Variable	Mean	Median	Std. Dev.	N
StockReturn <sub>t</sub>	152.137%	4.566%	26.785	438
SalesGrowth <sub>t</sub>	6.367%	4.868%	0.159	438
LogAssets <sub>t-1</sub>	4.767	4.574	0.717	438
Debt/Equity <sub>t-1</sub>	5.744	2.307	39.749	438
Return on Assets <sub>t-1</sub>	0.027	0.028	0.102	438

Table 3 divides the firms into non-sponsor and sponsorship years. Sales growth shows a statistically significant decline in sponsorship years, going from an average of 9.99% to 5.047%. The median debt-to-equity ratio also shows a significant decrease during sponsorship years, while the average ROA increases after the firms begin to sponsor an NBA arena.

**Table 3**

**Summary Descriptive Statistics by Sponsorship Years**

Variable	Non-Sponsorship Years			Sponsorship Years			Difference	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
StockReturn <sub>t</sub>	16.651%	7.754%	1.012	201.520%	3.498%	31.280	-184.86%	4.255%
SalesGrowth <sub>t</sub>	9.990%	6.844%	0.192	5.047%	3.919%	0.144	<b>4.943%*</b>	<b>2.924%*</b>
LogAssets <sub>t-1</sub>	4.789	4.505	0.729	4.759	4.605	0.714	0.030	-0.100
Debt/Equity <sub>t-1</sub>	8.903	6.065	69.485	4.592	1.939	20.061	4.311	<b>4.126*</b>
Return on Assets <sub>t-1</sub>	-0.013	0.007	0.105	0.042	0.040	0.096	<b>-0.055*</b>	<b>-0.032*</b>
N	117			321				

Notes: \* significant at the 10% level, \*\* significant at the 5% level, and \*\*\* significant at the 1% level.

We also wanted to determine if the on-court success of the NBA teams impacts the financial performance of the corresponding arena sponsors. We examined team performance on a season-by-season basis using four different variables. We calculated the regular season winning percentage by taking the total number of games won and dividing that number by the total number of games played. Thus, for each season, we assign each team a numerical variable between 0 and 1. Next, we employ three dummy variables that assess the following: (1) whether or not the team made the playoffs; (2) whether the team made the NBA Championship; (3) whether the team won the NBA championship.

These three dummy variables and our numerical winning percentage variable together represent team performance. When teams do well by these measures, it follows that they are more likely to receive greater media coverage in the form of nationally-televised games, mentions in the news, and more fans visiting the arena throughout the season. In turn, the sponsoring company should realize gains in stock price and sales growth in part as a function of how well the sponsored team is performing. These four team performance variables are also lagged one year prior to the dependent variables.

Finally, we created a dummy variable that takes on the value of “1” if the sponsoring company is headquartered in the same geographic area as the sponsored arena or a “0” if not. We define the same geographic area as a company that is headquartered within 200 miles of the arena they sponsor.

### 3.3. Models

We utilize two different models and two regression methods in our study. The first model is our “base model,” which includes the main sponsorship variable and the financial control variables but does not include the moderator variables of on-court success and co-located headquarters. We do this to see if the sponsorship itself influences the sponsoring firm’s stock price return and sales growth. Accordingly, the performance (stock price return or sales growth) of firm  $i$  at time  $t$  is represented as:

$$\text{Performance}_{it} = \alpha + \beta_1 \text{Sponsor}_{it} + \beta_2 \text{LogAssets}_{it-1} + \beta_3 \text{Debt/Equity}_{it-1} + \beta_4 \text{Return on Assets}_{it-1} + \epsilon \quad (1)$$

The second model is our “robust model,” which includes all the variables in the first model as well as the four team performance variables and the headquarters variable. In this model, the performance (stock price return or sales growth) of firm  $i$  at time  $t$  is represented as:

$$\text{Performance}_{it} = \alpha + \beta_1 \text{Sponsor}_{it} + \beta_2 \text{WinPercentage}_{t-1} + \beta_3 \text{Playoffs}_{it-1} + \beta_4 \text{Finals}_{it-1} + \beta_5 \text{Champion}_{it-1} + \beta_6 \text{Headquarters}_{it-1} + \beta_7 \text{LogAssets}_{it-1} + \beta_8 \text{Debt/Equity}_{it-1} + \beta_9 \text{Return on Assets}_{it-1} + \epsilon \quad (2)$$

We use both a regular ordinary least squares (OLS) regression method and a one-way fixed effects regression by company for each model. We have a potential omitted variable bias since only three financial control variables are used; there may be other factors that affect the companies’ stock price return and sales growth. The use of a fixed-effects method helps to capture any other unobserved variables that influence the two dependent variables.

Using these two models and regression methods, we perform eight regressions in total – we regress each dependent variable (stock price return and sales growth rate) on the corresponding independent variables of the respective models for each regression method.

## IV. RESULTS AND DISCUSSIONS

### 4.1. Results

As can be seen in Table 4, in both the base and robust model regressions, sponsorship does not appear to impact the companies' stock price return either positively or negatively ( $H_{1A}$ ). However, concerning sales growth, in Table 5 the base OLS regression model shows a strong and significant negative relationship ( $p$ -value= 0.005) with arena sponsorships. This supports the hypothesis ( $H_{1B}$ ) that sponsoring an NBA Arena is an inefficient use of marketing dollars. These results imply that companies would be wise to use their marketing dollars in more efficient ways in support of sales growth. In the robust OLS model in Table 5, the strength of the relationship decreases somewhat ( $p$ -value= 0.072), but there is still evidence of a negative relationship between sponsorship and sales growth. However, this significance dissipates in the fixed-effects models.

**Table 4**

**Stock Return Regressions**

Independent Variable	OLS Regression		1-Way Fixed Effects (Company)	
	Base Model	Robust Model	Base Model	Robust Model
Intercept	449.228 (0.609)	162.700 (0.862)	-1590.901 (0.649)	-1832.697 (0.582)
Sponsor <sub>it</sub>	191.740 (0.506)	859.031 (0.202)	21.560 (0.950)	792.282 (0.285)
Win Percentage <sub>t-1</sub>		-2492.191 (0.132)		-2684.751 (0.135)
Playoffs <sub>t-1</sub>		<b>997.235*</b> <b>(0.059)</b>		<b>971.942*</b> <b>(0.076)</b>
Finals <sub>t-1</sub>		-4.792 (0.996)		-41.139 (0.962)
Champion <sub>t-1</sub>		182.602 (0.857)		378.394 (0.717)
Headquarters <sub>t-1</sub>		270.748 (0.303)		-24.311 (0.981)
Log Assets <sub>t-1</sub>	-66.976 (0.708)	-36.018 (0.844)	289.735 (0.627)	334.393 (0.581)
Debt/Equity <sub>t-1</sub>	-2.610 (0.419)	-2.087 (0.521)	-2.822 (0.393)	-2.380 (0.475)
Return on Assets <sub>t-1</sub>	<b>-38.066***</b> <b>(0.003)</b>	<b>-39.551***</b> <b>(0.002)</b>	<b>-40.061***</b> <b>(0.004)</b>	<b>-42.422***</b> <b>(0.003)</b>
N	438	438	438	438

Notes: \* significant at the 10% level, \*\* significant at the 5% level, and \*\*\* significant at the 1% level.

While we did not find evidence of a relationship between a team's on-court performance and sales growth for a sponsoring company, we did find evidence that a team's on-court performance impacted the stock price return of the sponsoring company ( $H_2$ ). In Table 4, out of our four independent variables aimed at assessing on-court performance, the lagged dummy variable "playoffs" (representing whether or not the team of the sponsored arena made the playoffs) was significant in both models at the 10% level in the expected direction for both regression methods. The other three variables that assessed on-court performance showed no significance. It seems reasonable to us that "playoffs" might be the only significant factor of the four. If a team

makes the playoffs, the team will be featured in nationally televised games when viewership is generally at its highest. Teams that win in the regular season may not necessarily be featured in nationally-televised games on account of their winning percentage, especially in cases where those teams have considerably smaller national fan bases; moreover, fans tend to watch more in the playoffs than during the regular season such that national attention during the regular season may yield considerably smaller results. That said, we certainly would expect a positive influence of the sponsored team playing in or winning a championship since the championship is the most viewed event of the year.

Table 5

## Sales Growth regressions

Independent Variable	OLS Regression		1-Way Fixed Effects (Company)	
	Base Model	Robust Model	Base Model	Robust Model
Intercept	22.267*** (0.000)	19.877*** (0.000)	59.689*** (0.003)	57.852*** (0.003)
Sponsor <sub>it</sub>	-4.800*** (0.005)	-6.223 (0.118)	-3.612** (0.072)	-3.601 (0.403)
WinPercentage <sub>t-1</sub>		4.468 (0.647)		2.257 (0.829)
Playoffs <sub>t-1</sub>		-1.999 (0.522)		-2.404 (0.448)
Finals <sub>t-1</sub>		2.043 (0.686)		1.198 (0.813)
Champion <sub>t-1</sub>		0.676 (0.910)		-0.288 (0.962)
Headquarters <sub>t-1</sub>		1.641 (0.291)		-04.93 (0.933)
LogAssets <sub>t-1</sub>	-2.629** (0.013)	-2.300** (0.034)	-8.430** (0.015)	-8.050** (0.023)
Debt/Equity <sub>t-1</sub>	-0.003 (0.876)	-0.003 (0.878)	-0.005 (0.783)	-0.007 (0.700)
Return on Assets <sub>t-1</sub>	0.061 (0.410)	0.060 (0.424)	0.051 (0.528)	0.059 (0.465)
N	438	438	438	438

Notes: \* significant at the 10% level, \*\* significant at the 5% level, and \*\*\* significant at the 1% level.

Taken together, although this finding does not help a manager understand whether he or she should invest in acquiring the naming rights to an arena, if sponsorship is a foregone decision, these results suggest that the marketing manager ought to pursue arena naming rights with a franchise that possesses a relatively high probability of making the playoffs.

We find no evidence to support H<sub>3</sub>, either in the base model or in the robust model. While prior studies found some synergies associated with sponsoring a professional sports arena (or stadium) near where a company is headquartered, we see no evidence of that in our study.

While there was no evidence that the size of the sponsoring company (as measured by the log of total assets) impacted the marginal increase in stock price in Table 4, there was a strong, significant, and negative relationship in both the base (p-value= 0.013) and robust (p-value= 0.034) models between the size of the sponsoring company and sales

growth in Table 5. This relationship holds at the 5% significance level in both the OLS and fixed effects regressions. This confirms our intuition that smaller companies who have less exposure are more likely to see benefits from sponsorship because they would seem to have more untapped potential to reach new prospective customers.

## **V. CONCLUSION, LIMITATIONS AND FUTHER RESEARCH**

### **5.1. Conclusion**

Buying the naming rights to a basketball arena (or any professional sports facility) is no modest undertaking. Both the cost per year and length of commitment make this a big decision for companies, and one they should only pursue if they believe it would add value to their company. In our study, we find that companies who have chosen to sponsor NBA arenas seem to experience smaller sales growth, and we suggest one explanation might be a reduction in the relative efficiency of sales budgets (i.e., other opportunities provide better ways to spend those same dollars). Further, we find that when a team makes the playoffs, it positively impacts the relationship between sponsorship and company stock price. Lastly, we find that sponsorship has a less negative correlation with sales growth for smaller companies than for larger companies. To concisely sum up our results as advice to a prospective arena sponsor, we might say, “You probably should not sponsor an NBA arena if you want to maximize shareholder value, especially if you are a larger company. But, if you decide to invest despite our advice, pick a team that is likely to make the playoffs.”

### **5.2. Limitations and Further Research**

The major inherent weakness in this study is the extreme difficulty of isolating our variable of interest, namely, the decision by a company to invest in the naming rights of an arena. On a year-to-year basis, managers of companies make many different decisions that influence share price and sales growth. Removing all possible confounds is impossible. That said, we suggest that our data and methodology alleviate some of the primary concerns generated by such a study. First, by including 24 different companies across various industries over 30+ years, our sample is large and broad enough to ease concerns of unique peculiarities that our results might show or imply. Second, our use of financial control variables identifies key financial factors for possible confounds of these companies. Third, we utilize financial metrics before, during, and (if applicable) after sponsorship for every company, and thus including financial data before and after sponsorship serves as an important control.

We propose that further research could use alternative financial metrics (e.g., ROIC instead of ROA) or a different proxy for sales growth to better assess the impact of arena or stadium sponsorship. Although shareholder wealth maximization and sales growth (as relates to long-term shareholder wealth maximization) are generally understood to be the primary goals for management, it may be too direct a course of study to analyze these variables given how challenging it is to identify and control for all variables that impact these higher-level company performance results.

Another potential weakness of our study is that some of the sponsors have only become sponsors somewhat recently, such that the cumulative effects of these new sponsorships may not yet be detectable. Also, exclusive naming rights are a relatively new phenomenon. Therefore, once the sponsorship data is a bit more seasoned, we suggest that our particular line of inquiry ought to be renewed with more seasoned data, as this would, in turn, yield higher reliability of reported results.

We suggest that further research could also explore other potential moderators of the relationship between sponsorship and the outcome variables. In particular, one might explore the degree of relatedness (or perceived relatedness) of the sponsor's product to sports in general. It is possible that companies whose product is closely associated with sports might enjoy greater financial success through sponsorship than a comparable company whose product is not associated with sports. A company like Nike is an obvious example, but even a company like Pepsi, one that is often associated with sports, would represent a situation of perceived relatedness even if the product is not "sports product" per se. By contrast, perhaps FedEx or TD Bank, neither of which have a strong association with sports or sporting events outside of their sponsorships, might yield less significant results.

Finally, now that nearly all arenas and stadiums for the three most-viewed sports in the United States feature named sponsors with exclusive naming rights, comparisons between the means achieved by companies who sponsor a stadium in one sport versus another sport could be very interesting. If a significant difference in means exists between sports, perhaps due to differences in the underlying structure, this could be interesting to would-be sponsors and researchers alike. In the past, data within a particular sport was too sparse to analyze in a way that yielded reliable results. As such, past studies often grouped sponsorships from multiple sports rather than using sport as a predictor variable. Now the path is paved to compare the relative merits of purchasing naming rights across different sports.

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