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The Effect of Investment in European Football on the Market Value of Chinese Corporations

Yangyang Chen[1], Helmut M. Dietl[2], Johannes Orlowski[2], and Fang Zheng[1]

[1]*Zhejiang University*
[2]*University of Zurich*

Yangyang Chen is a PhD candidate at Zhejiang University. Her main research interests include sports management and economics of professional sports.
Helmut M. Dietl is professor of services & operations management and chairman of the board of directors of the Center for Research in Sports Administration at the University of Zurich. His research interests include sports management, sport economics, and service and operations management.
Johannes Orlowski is a postdoctoral researcher at the University of Zurich. His main research interests include consequences of managerial change, economics of physical activity, and labor market research.
Fang Zheng is a professor in the Department of Physical Education at Zhejiang University. Her main research interests include sports management and economics of professional sports.

ABSTRACT
This paper analyzes how investments in professional European football clubs affect the market value of Chinese corporations. Twelve acquisition cases with complete stock return data are identified between 2009 and 2017. Applying traditional financial event study methodology, it appears that Chinese corporations, on average, do not earn abnormal returns as a result of their investments in professional European football clubs. However, as exceptions to this finding, a few corporations show significant positive or negative abnormal returns. This study also hints at an association between the change in market value of acquiring corporations, the relative transaction size, and their industry relatedness. These findings have important implications for corporate and football managers, current stock holders, and future investors.

Keywords: event study, European football, Chinese acquisition, market value

JEL classifications: Z23, G14, G34

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Introduction

During the last decade, a substantial number of Chinese corporations have invested in professional European football. Birmingham City was the first European football club acquired by a Chinese corporation in 2009. Further investments by Chinese corporations in European football occurred between 2015 and 2017. Table 1 provides a detailed overview of these investment activities. Chinese corporations acquired clubs from the first and second division in England (six cases), the highest Spanish league (three cases), the second highest league in France (two cases), and the top two Italian leagues (two cases), with Wuhan DDMC Culture having invested in both Granada and Parma. Of these twelve Chinese corporations, five are listed on the Shenzhen Stock Exchange, five on the Hong Kong Stock Exchange, and two on the Shanghai Stock Exchange.

This notable increase in foreign investment presents a peculiar case for multiple reasons. First, while there has been regionally concentrated interest in European football in the past, e.g., from North American investors (Nauright & Ramfjord, 2010), the pooled interest of foreign direct investment from an emerging market economy presents a novelty.

Second, the unique institutional environment for many Chinese corporations, e.g., being partly state-owned, connotes that cross-border investments not merely present corporate interests but also, at least to some degree, reflect governmental priorities (Deng, 2004).

Table 1. Overview of Clubs and Respective Transaction Details for Chinese Corporations' Investments

Club	League	Corporation	Announcement	Purchased Shares	Transaction Size (Million USD)	Market Cap (Million USD)	TS/MC (in %)
Birmingham City	EFL Championship	Birmingham SPTS	24/08/2009	50%	93.88	62.49	150
Aston Villa	EFL Championship	Lotus Health	19/05/2016	100%	111.72	866.45	12.89
Wolverhampton Wanderers	EFL Championship	Fosun International	21/07/2016	100%	59.47	11,458.83	0.52
West Bromwich Albion	English Premier League	Palm Eco-Town Development	05/08/2016	88%	195.99	2,334.4	8.40
Reading	EFL Championship	Renhe COMM	17/05/2017	75%	/	1,106.59	/
Southampton	English Premier League	Lander Sports Development	14/08/2017	80%	259.55	1,370.29	18.94
Atletico Madrid	Primera División	Dalian Wanda	21/01/2015	20%	52.13	878.79	5.93
Granada	Primera División	Wuhan DDMC Culture	15/06/2016	98%	41.59	1,719.08	2.42
Sochaux	Ligue 2	Tech Pro	19/05/2015	100%	7.81	1,429.43	0.55
AJ Auxerre	Ligue 2	ORG Packaging	05/08/2016	59.95%	7.75	3,161.68	0.25
Inter Milan	Serie A	Suning.com	06/06/2016	68.5%	306.60	16,956.85	1.81
Parma	Serie B	Wuhan DDMC Culture	03/11/2017	60%	11.62	1,118.37	1.04

Note: Birmingham SPTS refers to Birmingham Sports Holdings Limited; Renhe COMM refers to Renhe Commercial Holdings Company Limited; and Wuhan DDMC Culture refers to Wuhan Dangdaimingcheng Culture Company Limited.

Third, there are various motivational drivers for outbound foreign direct investment. Corporations look to gain new resources or technologies, enter new markets with their products, or diversify (Deng, 2004). However, in the case of Chinese corporations, the acquisition of strategic assets, i.e., reputation or brand names, seems to be the dominant driver distinguishing them from investments by, e.g., North American investors such as the Fenway Sports Group (Deng, 2009; Rui & Yip, 2009). Finally, previous foreign direct investment in European football stemmed largely from private companies or wealthy individuals (Rohde & Breuer, 2017). The case of Chinese publicly traded corporations, therefore, presents a unique opportunity to investigate the profitability of investments in football clubs.

From an economic perspective, two potential explanations for the heightened interest of Chinese corporations in European football clubs seem to be standing to reason. Either corporations see European football clubs and their operations as viable and profitable businesses worth the investment or Chinese corporations believe that their investments in European football clubs will benefit their core business indirectly, i.e., by gaining popularity in and better access to the European markets to increase future earnings. If capital markets are informationally efficient in Fama's (1991) semi-strong form and therefore incorporate all public information into stock prices, any announcement to acquire a professional European football club should be reflected immediately in the Chinese corporation's stock price.

The purpose of this paper is to analyze the effect of investments in professional European football clubs on the market value of Chinese corporations. In particular, the present research attempts to answer three main research questions: How do announcements of investments into European football clubs affect Chinese corporations' stock market returns? How far are effects on stock market returns heterogeneous across corporations? And, how do corporation or transaction characteristics influence stock market returns following acquisition announcements?

Results of a financial event study approach show that Chinese corporations overall do not earn abnormal returns as a result of their investments in professional European football. There are, however, some corporations that experience abnormal returns in the aftermath of an acquisition announcement. Relatively small transactions in relation to the market capitalization of the acquiring cooperation appear to be perceived more positively by stockholders and investors.

The remainder of the paper is organized as follows. The following section reviews existing literature on cross-border acquisitions and event studies in the field of sport. Next, the underlying data is described, and the event study methodology is elucidated. Then, results are presented and discussed. Finally, the paper concludes with a summary and an outlook for future research.

Literature Review

The present literature review is structured as follows. First, general literature investigating the effects of firm acquisitions on the market values of acquiring firms is reviewed. Second, event studies within the realm of sports are reviewed. And third, the authors discuss literature carrying out inquiries into the motivations and the effects of foreign investment in European football.

Acquisitions and Their Effect on Market Value

There is a vast body of literature on the effect of acquisitions on the market value of acquiring firms. Although the evidence is mixed, most studies show either significant negative or insignificant positive returns to the acquiring firm (Tuch & O'Sullivan, 2007). In order to explain these results, researchers identified a variety of factors. For example, the attributes of the acquisition agreement as well as the characteristics of the acquiring firms seem to significantly influence the stock returns of the acquiring firm (Martynova & Renneboog, 2011). Singh and Montgomery (1987) show that related mergers result in returns higher than unrelated mergers because operating efficiency and market power are more achievable in related mergers and acquisitions. Also, relative transaction size was found to be negatively associated with firm value since the integration cost is directly proportional to the size of the transaction: the greater the size of the transaction, the higher the integration cost (Draper & Paudyal, 2008).

In addition, Faccio, McConnell, and Stolin (2006) argue that firms that acquire larger percentages of the target firm's outstanding shares earn larger synergies in the short term because larger percentages translate into more control power over the target firm, thus facilitating decision-making in the integration process for higher efficiency and greater benefits. With respect to Chinese firms, Gu and Reed (2011) show that Hong Kong-listed companies perform significantly better in acquisitions than mainland-listed firms. For the purpose of investigating the effects of acquisitions on the market value of acquiring corporations, the classical event study methodology developed in finance (e.g., MacKinlay, 1997) seems to be most suitable.

Event Studies in Sports

Event studies have previously been used in various sports contexts. Predominantly, this research investigates the relationship between stock market returns of sponsoring corporations and the endorsement for individual athletes (e.g., Agrawal & Kamakura, 1995; Crawford & Niendorf, 1999; Farrell, Karels, Montfort, & McClatchey, 2000), professional sporting competitions (e.g., Reiser, Breuer, & Wicker, 2012), and US sports leagues (e.g., Cornwell, Pruitt, & Clark, 2005). Event studies have also been conducted to estimate the effect of sport-specific events on the market value of sponsoring corporations. Among these events is the purchase of broadcasting (Gannon, Evans, & Goddard, 2006) and stadium naming rights (e.g., Leeds, Leeds, & Pistolet, 2007) as well as the announcement of event sponsorship agreements for title events (e.g., Clark, Cornwell, & Pruitt, 2009; Kudo, Ko, Walker, & Connaughton, 2015) and Olympic Games (Baim, Goukasian, & Misch, 2015; Farrell & Frame, 1997; Miyazaki & Morgan, 2001; Samitas, Kenourgios, & Zounis, 2008). Within the context of the Olympic Games, Leeds, Mirikitani, and Tang (2009) show that the announcement of Beijing as host of the 2008 Games led to a brief rise in the Shanghai exchange, but the euphoria quickly dissipated.

In addition, several researchers examine potential adverse effects of athletes' misconduct on the market value of their sponsors. These studies cover, for example, doping in professional sports (e.g., Danylchuk, Stegink, & Lebel, 2016; Drivdal, Nordahl, & Rones, 2018; Leeds, 2010) and personal frailties of athletes (e.g., Hood, 2012; Knittel & Stango, 2013).

Finally, a considerable amount of literature considers the link between corporations' market value and sporting success. This literature can be divided in two strands. First, several studies attempt to establish a link between the market value of sponsoring corporations and the sponsored teams' or athletes' sporting success. These studies stem from a variety of sports, such as American Football (e.g., Eisdorfer & Kohl, 2014), baseball (Chen & Chen, 2012; Sung, Nam, Kim, & Hun Han, 2016), football (Bouchet, Doellman, Troilo, & Walkup, 2015), and motor sports (Cornwell, Pruitt, & van Ness, 2001). The second strand focuses on the market value of publicly listed sports teams and the association to their respective sporting success (Benkraiem, Le Roy, & Louhichi, 2011; Benkraiem, Louhichi, & Marquès, 2009; Berument, Ceylan, & Gozpinar, 2006; Brown & Hartzell, 2001; Palomino, Renneboog, & Zhang, 2009; Stadtmann, 2006). However, to the best of the authors' knowledge, there is no research on the effect of investments by corporations into foreign football clubs on the market value of the acquiring firms.

Motivations and Effects of Foreign Investment in European Football

Two major strains of research can be identified in the literature regarding the investment in football clubs. First, few studies analyze the motivation of acquiring firms, such as seeking for potential profits from television rights (Jones & Cook, 2015), superior power and reputation (Hansen, Torp, & Schaumburg-Müller, 2012), geo-political benefits, and multi-ownership synergies (Rohde & Breuer, 2016). Berning and Maderer (2017) reveal that the main motivations for Chinese investment into European football present a combination of above mentioned asset- and market-seeking motivations.

Second, a significant body of literature has investigated the effects of foreign investments at the club level. In detail, this literature has investigated the effect of foreign investments on team values (Scelles, Helleu, Durand, & Bonnal, 2016), team expenditures (e.g., Drut & Raballand, 2012), a football club's profitability (e.g., Storm & Nielsen, 2012) and risk taking behavior (Franck & Lang, 2014), sporting performance (e.g., Lang, Grossmann, & Theiler, 2011), and league competition (e.g., Madden, 2015). Higham (2009) finds that foreign investments into the English Premier League (EPL) led to an international fan base of supporters, helping foreign owners to leverage their investments in order to maximize commercial and financial gains. On the other hand, there is also evidence of negative spillover effects from foreign investments. Jones and Cook (2015), for example, find that the productivity (measured as points-per-total wage costs) of clubs under foreign ownership is lower compared to clubs under domestic ownership.

Since the vast majority of takeovers in European football are by private investors, benefactors, and even states, there is no systematic evidence on the effect of acquisitions by public corporations. Chinese corporations are the first to invest substantially into professional European football with higher frequency. As described in the introduction, this phenomenon of investments by corporations in European football clubs can be considered a Chinese peculiarity, which is worth studying from an economic and financial perspective.

As mentioned above, previous research has not covered the effect of investments by corporations into foreign football clubs on the market value of the acquiring firms. Hence, this study focuses on exactly these corporate investments as the goal is to show how investments in professional European football clubs affect the market value of the investing Chinese corporations.

Methods

This section is organized as follows. First, the data and sample selection are described. Second, the relevant event date, i.e., announcement of the investment and relevant event window for each investment, is defined. Finally, the applied event study methodology is presented.

Data

In total, 24 cases of Chinese firms investing in professional European football clubs are identified. However, only in 13 of these cases was the investing firm publicly listed on one of China's stock exchanges—Shenzhen, Shanghai, or Hong Kong—with readily available reliable market values. All financial data for these corporations, e.g., stock prices, trading volumes, and market capitalizations, were obtained from Bloomberg and Wharton's China Stock Market & Accounting Research (CSMAR) database. Details on each investment in European football were acquired through corporate disclosures and media reports published on major Chinese sports news websites (e.g., lanxiongsports.com).

Trading for shares of Rastar Group was suspended during the period of nine days until one day prior to the announcement of acquiring a majority stake of RCD Espanyol Barcelona. As a result, there is not enough relevant data for this case

Table 2. Overview of Acquiring Chinese Corporations and Their Relation to the Sports Industry

Corporation	Sector	Industry	Sports Industry Relatedness
Birmingham SPTS	Consumer Services	Leisure & recreational facilities	None
Lotus Health	Consumer Staples	Food manufacturing industry	None
Fosun International	Conglomerates	Financial, property, steel, and healthcare businesses	None
Palm Eco-Town Development	Industrials	Construction of green urban landscapes	None
Renhe COMM	Properties & Construction	Operation of shopping malls and agriculture wholesale markets	Owner of Beijing Renhe Football Club since 2012
Lander Sports Development	Financials & Properties	Real estate	Renamed itself from Lander Real Estate to Lander Sports Development on 17/08/2015; close cooperation with the government of Tonglu County to build an international football town
Dalian Wanda	Properties & Construction	Property development, property leasing, property management	Cooperation with the Chinese Football Association since 2011 on talent development; acquired the international sports marketing company Infront Sports & Media in 2015
Wuhan DDMC Culture	Consumer Discretionary	Real estate development and commercial residential building and distribution industry	Acquired a sports marketing company and sports management agency in February and March 2016
Tech Pro	Industrials	Manufacture and sale of Light Emitting Diode (LED) lighting products	None
ORG Packaging	Materials	A large-scale specialized metal packaging enterprise	Marketing partner of Boston Bruins (NHL) since November 2015
Suning.com	Consumer Discretionary	A retail shop offering electronic appliances	Owner of Jiangsu Suning Football Club in Chinese Super League since December 2015

to properly estimate the announcement effect. The case was dropped from the sample, resulting in a final sample of 12 investment cases from 11 Chinese corporations. Table 2 summarizes relevant characteristics of these Chinese corporations. They operate in various sectors, such as consumer services, consumer staples, industries, properties and materials, but none of them had main businesses in sports before the acquisitions.

Event Date and Event Window

This study defines the date on which the acquisition was initially publicly announced by either the acquiring Chinese corporation or the acquired European football club as the event date, denoted by $t = 0$. If this date fell on one of the stock exchange closing days (e.g., weekends, holidays), the following trading day was defined as the event date.

There is no consensus among researchers on the appropriate length of the event window (McWilliams & Siegel, 1997). However, following Krivin, Patton, Rose, and Tabak (2003), three possible approaches to determine the length of the

Table 3. Abnormal Days Based on Trading Volume (in TSD Shares)

Corporation	Mean	SD	Min	Max	Abnormal Days (Mean+SD)	Abnormal Days (Mean+2SD)
Birmingham SPTS	40,566.3	55,691.4	2	418,282	-40,-36,-35,-23,-22,-19, 0,+1,+6	-35
Lotus Health	48,573.7	35,389.8	1,026.4	250,526	/	/
Fosun International	13,211.7	11,879.6	2,946.5	139,650.4	-35	/
Palm Eco-Town Development	43,129.5	41,159.9	51.9	292,533.9	-39,-37,-36,-35,-34,-33,-31,-30,-28,-21,-18, -16,-15,-14,-13,-12,-9,-7,-6,+9,+13,+16	-31,-15,-14,+16
Renhe COMM	24,628.7	31,531.4	628	280,314	/	/
Lander Sports Development	20,800.5	14,831.1	3,486.5	125,594.3	-38	/
Dalian Wanda	2,540	5,732	21	70,403.8	-39,-38,-37,-36,-34	-39,-38,-37
Wuhan DDMC Culture (Granada)	3,861.5	2,612.2	604.6	24,508.9	-21,-15,-10,-9,-8,-7,-6,-5,-4,-2,-1,0,+4,+9,+15	-21,-9,-7,-6,-2,+9
Tech Pro	8,049.1	4,205.5	1,504	25,456	-38,-30,-29,-24,-20,-19,-11,-10,0,+1,+2,+3,+4	-38,-30,0,+2,+3,+4
ORG Packaging	13,380.9	7,450.2	2,177	55,493.9	-39,-37,-29,-28,-24,-23,-18,-17,-16,-14,-8,-7,-6, +1,+2,+6,+7,+8,+9, +13,+14,+15,+16,+17	-39,-29,-18,-17,-7,+1, +6,+8,+13,+14,+15,+16
Suning.com	212,612.7	172,490.4	5,239.1	856,001.3	/	/
Wuhan DDMC Culture (Parma)	5,100.7	3,672	1,224.2	22,643	-34,-33,-32,-31,-30,-29,-25,-24,-17,-16,-15,-14,-12	-33,-32,-31,-24,-17,-16

event window prevail: (1) use a fixed length of time, (2) take an ad hoc approach, or (3) follow a rule based on the trading behavior of the stock during the potential event window.

As a first step, the authors establish a rule based on the abnormal trading volume to define the event window. For this purpose, we calculate the mean and standard deviation (SD) of each corporation's trading volume for the one-year period before the event day. Next, we identify all trading days during the period of 40 days before and 20 days after the announcement (event) in which the trading volume is at least more than one (two) SD(s) above the mean.

Overall, on a number of days, trading volumes exceed two SDs from the mean (see Table 3). However, most of these cases are rather distant from the event day, e.g., more than 30 days prior to the event. Although there are more cases of abnormally high trading volumes after lowering the rule to one SD, a considerable number of cases that are relatively far from the event remain. Only four corporations show abnormally high trading volumes on days that are relatively close to the event day. These corporations are Birmingham SPTS, DDMC Culture, Tech Pro, and ORG Packaging. Since markets react to newly available information rather quickly, abnormally high trading volumes should be noticeable close to the event date. Therefore, determining the event window based on abnormal trading volumes seems inappropriate in the present case.

This study, therefore, turns to previous literature to determine the event window. In line with Chen, Srinidhi, and Su (2014), we adopt a period of seven days, allowing for the possibility that the acquisition affected the market value up to three days before and three days after the announcement. Further, we follow Leeds et al. (2009) and extend the event window from 7 to 21 days. The benchmark (normal) returns are estimated based on the stock prices over 117 (110) days prior to the beginning of the event window.

Research Method

In line with previous event study research in the field of sports (e.g., Clark et al., 2009; Leeds, 2010), the present study is based on the efficient market hypothesis (Fama, 1991) assuming that all publicly available information is reflected by current stock prices and that changes in stock prices consequently reflect additional information. Following Brown and Warner (1985) and MacKinlay (1997), we estimate the market model in order to assess abnormal stock returns. Applying OLS regression, the conditional expected return of stock across the estimation window is estimated as follows:

$$E(R_{i\tau}|R_{m\tau}) = \alpha_{it} + \beta_{it}R_{m\tau} \tag{1}$$

where R_{it} is the actual return of the stock during the observed period and R_{mt} is the return of the respective stock market within the same period. Next, abnormal stock returns (AR_{it}) are calculated as the difference between the actual stock return and the expected return based on the model presented:

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau}|R_{m\tau}) \tag{2}$$

In order to test deviations from expected returns on an aggregate level, daily abnormal returns are averaged across all firms in the sample (*N*=12) and average abnormal returns (AAR_t) are computed as follows:

$$AAR_\tau = \frac{1}{N}\sum_{i=1}^{N} AR_{i\tau} \tag{3}$$

These average abnormal returns are cumulated over different event windows, ranging from t_0 to t_0. Cumulated average abnormal returns ($CAAR_t$) are computed in order to test for the significance of cumulative effects:

$$CAR_{i(t_0,t_1)} = \sum_{j=t_0}^{t_1} AR_{ij} \tag{4}$$

Finally, cumulative abnormal returns (CAR_i) are calculated to measure corporation-specific effects:

$$CAR_{i(t_0,t_1)} = \sum_{j=t_0}^{t_1} AR_{ij} \tag{5}$$

Differences between expected and abnormal returns are tested applying one-sample *t*-tests.

Results and Discussion

This results section is organized as follows. First, the overall effect of Chinese investments into European football is presented and discussed. Second, corporation-specific effects are reported. Third, the adjusted overall effect is analyzed excluding the peculiar case of Birmingham SPTS.

Overall Effect

Average abnormal returns across all events are calculated to examine the effect on an aggregate level. Table 4 shows the average abnormal returns and cumulative average abnormal returns and their respective *t*-statistic. Notably, (cumulative) average abnormal returns are statistically insignificant within a 7-day event window. Neither for selected days within the event window nor for the entire event window did abnormal average returns occur. This finding indicates that shareholders of Chinese corporations do not seem to anticipate future profits or losses from the investments in European football clubs.

By large, (cumulative) average abnormal returns remain statistically insignificant after extending the event window to 21 days. However, significantly negative average abnormal returns show on the fifth, seventh, and tenth day following the event announcement. Significant, negative abnormal returns might hint at a deferred market response to the acquisition announcements and discloses a sense of skepticism by shareholders, yielding negative returns for corporations. Somewhat contradicting this general negative pattern, results show significantly positive abnormal returns on the ninth trading day

Table 4. Abnormal Returns for [-3;3] and [-10;10] Day Event Windows (N=12)

	7-Day Event Window		21-Day Event Window	
Days	AAR	t	AAR	t
-10	-	-	.0068343	1.026268
-9	-	-	.00439	.9928616
-8	-	-	-.0069816	-.9524673
-7	-	-	-.0136095	-1.551915
-6	-	-	-.0014564	-.2431044
-5	-	-	-.0080618	-.812162
-4	-	-	-.0054505	-.8049154
-3	-.0010073	-.3544729	-.0014569	-.5551268
-2	-.0034762	-.2762884	-.0039763	-.3250124
-1	.0053356	.5957254	.0047353	.5095498
0	.0003315	.041904	-.0003087	-.0378407
1	.0002245	.0414851	.0002785	.0506761
2	-.0023047	-.2525641	-.0027668	-.298839
3	-.0029484	-.3612869	-.0034508	-.416246
4	-	-	.0015673	.2908655
5	-	-	-.0108473	-2.948426***
6	-	-	-.0027303	-.4067152
7	-	-	-.0049462	-2.009076**
8	-	-	-.0039698	-.8035669
9	-	-	.0110416	2.041629**
10	-	-	-.0151806	-1.957079*
CAAR	-.0038451	-1.119973	-.0563465	-.7547979

Note: ***p<0.01; **p<0.05; *p<0.1

following the announcement. With respect to the first research question presented earlier, it can be stated that there is no conclusive overall effect of announcements of investments into European football clubs on Chinese corporations' stock market returns. This finding is in line with previous findings on the effect of acquisitions on the market value of acquiring firms (Tuch & O'Sullivan, 2007) However, it stands in contrast to previous literature showing a positive relationship between the stock market returns of corporations involved in individual athlete endorsements (e.g., Agrawal & Kamakura, 1995; Crawford & Niendorf, 1999) or event sponsorships (e.g., Baim et al., 2015).

Corporation-Specific Effects

To gain a better understanding of corporation-specific effects, the relative importance of the investments for the respective corporations are assessed. Next, cumulative abnormal returns are estimated on the individual firm level.

To assess the relative importance of the transactions for each case individually, the ratio of transaction size to market capitalization of the acquiring corporation is calculated. Table 1 reports the relevant information and results. For six corporations, these ratios are below 3%, with the smallest percentage at 0.25% (ORG Packaging), implying a rather small financial relevance of the acquisition to the respective Chinese corporations. Four ratios lie between 5% and 20%. In these cases, the investments in football clubs represent a considerable investment relative to the financial potency of the acquiring corporation. The single outlier is the case of Birmingham SPTS, whose acquisition of Birmingham City amounted to 150% of its own market capitalization prior to the announcement. Notably, the company even renamed itself from Grandtop International Holdings Limited to Birmingham SPTS in light of the acquisition. The relative importance of the acquisition of FC Reading by Renhe COMM cannot be assessed since neither the club nor the corporation disclosed any information on the size of the transaction.

Next, cumulative abnormal returns (CAR) are calculated on the level of individual corporations by measuring the effect of the acquisition announcement on their (individual) market value. Table 5 shows the abnormal returns and test results for each corporation during the 7- and 21-day event windows. Regarding the second research question, the CARs seem to vary quite notably across corporations. Within the 7-day event window, three corporations within the sample experienced significant cumulative abnormal returns. These corporations are Birmingham SPTS investing in Birmingham City, Tech Pro investing in Sochaux, and Palm Eco-Town Development investing in West Bromwich Albion. While Birmingham SPTS and Palm Eco-Town Development faced a significant decrease in stock prices, Tech Pro has earned significant positive abnormal returns during the 7-day event window. While the first two transactions took place in the EFL Championship and the EPL, the later transaction took place in the French Ligue 2. Notably, the relative importance of the transaction in terms of the ratio of transaction size to market capitalization is by far the lowest for the French case.

Columns four and five in Table 5 show the CAR after extending the event window to 21 days. Within the extended event window, the three corporations mentioned above show significant CARs. Consistent with the 7-day event window, Birmingham SPTS and Palm Eco-Town show highly significant and negative cumulative abnormal returns. The CAR of Tech Pro remains positive and significant. Through the investment in AJ Auxerre, ORG Packaging has earned highly significant and positive cumulative abnormal returns during the 21-day event window; so did Lander Sports Development, which showed no significant CAR in the 7-day event window but positive and significant CAR after prolonging the event

Table 5. Cumulative Abnormal Returns in a [-3;3] and [-10;10] Day Event Windows

	7-Day Event Window		21-Day Event Window	
Corporation	CAR	t	CAR	t
Birmingham SPTS	-.2690512	-3.038682***	-.5361006	-3.686717***
Lotus Health	.0178059	.2293767	-.0388552	-.3519829
Fosun International	-.0540683	-1.428018	-.1143448	-1.877969*
Palm Eco-Town Development	-.0517829	-2.35321**	-.357325	-3.762924***
Renhe COMM	-.0150364	-.4858296	-.0581504	-.9216228
Lander Sports Development	.1161076	1.634438	.2099106	2.424418**
Dalian Wanda	-.0133928	-.1326276	-.0954814	-.6682096
Wuhan DDMC Culture (Granada)	-.0650783	-1.211221	.0831631	.7793986
Tech Pro	.1887288	2.731831***	.213518	2.206245**
ORG Packaging	.0078353	.2441543	.1827789	2.843681***
Suning.com	.0234775	.3516237	.0172753	.2371574
Wuhan DDMC Culture (Parma)	.0683136	.7656147	-.1689693	-1.102603

Note: ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

window to 21 days. Interestingly, both of these corporations invested in second French division clubs. Last, considering a 21-day event window, Fosun International appears to have suffered from significant, negative abnormal returns associated with the investment into the Wolverhampton Wanderes. Similar to the 7-day event window, it is noteworthy that both transactions within the French Ligue 2 are associated with positive abnormal returns, while all but one (Lander Sports Development investing in Southampton) case from the English leagues show negative significant abnormal returns.

Note Birmingham SPTS earned highly significant, negative abnormal returns in both the 7- and 21-day event window. Similar to results on individual athlete endorsements by Farrell et al. (2000), a potential explanation could be related to the exceptionally large relative transaction size (150%) mentioned above. Investors might have assessed the acquisition as particularly risky, leading to the highly significant negative abnormal returns.

In addition, it can be noted that Palm Eco-Town Development and ORG Packaging announced acquisitions on the same date (05/08/2016) but earned quite different abnormal returns. Preceding the acquisition, Palm Eco-Town Development did not have any business operations in the sports industry, while ORG Packaging had invested in youth football, sport marketing, and player agency prior to its acquisition of AJ Auxerre. This industry relatedness of ORG Packaging to the sports sector might offer a potential explanation for the significant positive abnormal returns.

Even though results described above provide a notion of the importance of industry relatedness and the relative transaction size regarding investors' stock returns, they do not provide a clear-cut picture. In order to fully answer the third research question stated in the introduction and analyze how corporation or transaction characteristics influence stock market returns following acquisition announcements, a more thorough analysis, e.g., regression analysis, would be required. Unfortunately, considering the limited sample size of 12 acquisitions, such an analysis does not seem feasible at this point.

Overall Effects Excluding Birmingham SPTS

Due to the particularity of Birmingham SPTS regarding relative transaction size and acquisition time, a disproportionate effect on (C)AAR is assumed. As a robustness check, overall effects presented above are re-estimated excluding Birmingham SPTS. Table 6 presents the results of overall effects of investments in European football clubs, excluding Birmingham SPTS, on Chinese corporations' stock market returns. Results appear to be robust and consistent with the results presented in Table 4. Again, the results do not show any significant average abnormal and consequently no cumulative average abnormal returns in the 7-day event window. Prolonging the event window to 21 day shows some significant negative abnormal returns following day five but no significant cumulative average abnormal returns. Overall, shareholders of Chinese corporations do not seem to earn abnormal returns as a result of the acquisition of European football clubs.

Our results raise the question why Chinese corporations invest in professional European football clubs. Any economic rationale should show up in the market valuation as long as capital markets are informationally efficient. If so, Chinese corporations' investments in professional European football clubs must be regarded as the result of severe agency problems between stockholders and managers of these corporations.

Conclusion

Our findings reinforce and extend the existing literature. First, results show that the general findings on acquisitions by Tuch and O'Sullivan (2007) also hold for the specific case of acquisitions of professional European football clubs by Chinese corporations. On average, Chinese corporations do not earn any sort of abnormal returns as a result of acquisition announcements. Second, examining the relationship between market returns and announcements of football club acquisitions presents an extension of the literature in sports. On the individual corporation level, results are ambiguous. While some corporations earned significant positive abnormal returns, others show significant negative abnormal returns surrounding acquisition announcements of European football clubs. Third, results indicate that relative transaction size is potentially associated with shareholders' perception of an acquisition. If the transaction is large relative to the market capitalization of the acquiring corporation, investors might evaluate the endeavor as too risky, resulting in significant negative abnormal returns. On the contrary, relatively small acquisitions (e.g., ORG Packaging) showed significant positive abnormal returns. The role of industry relatedness remains inconclusive. Overall, it does not seem to be related

Table 6. Abnormal Returns for [-3;3] and [-10;10] Day Event Windows (N=11)

Event day	AAR	AAR	AAR	t
-10	-	-	.009207	1.350759
-9	-	-	.0046494	.9615498
-8	-	-	-.0073754	-.9198491
-7	-	-	-.0135359	-1.409082
-6	-	-	-.0037847	-.6258876
-5	-	-	.0005596	.1038381
-4	-	-	-.0053161	-.7168072
-3	-.0008844	-.2843655	-.0011794	-.4125652
-2	.0050505	.4983283	.0045043	.4663072
-1	.0075654	.7961556	.0070347	.7131951
0	.0039426	.5113857	.0032609	.4058806
1	.0006644	.1124468	.0008759	.1463626
2	.0025259	.2978292	.0021567	.2510968
3	.0014002	.1850923	.0010704	.140614
4	-	-	.00108	.1837234
5	-	-	-.0082244	-2.687874***
6	-	-	.0006418	.0982034
7	-	-	-.0051152	-1.901179*
8	-	-	-.0015876	-.3348719
9	-	-	.0132273	2.440912**
10	-	-	-.0143367	-1.697319*
CAAR	.0202645	1.378474	-.0121875	-.6272031

Note: ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

to abnormal returns in this study. However, the example of ORG Packaging appears to challenge this conclusion. A more in-depth investigation on the determinants of positively perceived transactions seems warranted.

Some limitations of the present study need to be acknowledged. First, while 12 acquisition cases are included in this study, it should be noted that a total of 24 cases of Chinese major investments in European football can be identified. Private investors might systematically select different clubs compared to corporations, which is why the results of this study might not be generalizable to all acquisition cases. Further, even though it presents all available cases of Chinese corporations' investments, the sample size needs to be acknowledged as rather small. However, since the corporate investment into European football seems to be a Chinese peculiarity, it is unlikely that much more data will become available in the near future. Hence, an alternative approach would be to conduct in-depth case studies to shed more light on the motivation of Chinese corporations to acquire European football clubs.

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