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Marc Rohde & Christoph Breuer

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The market for football club investors: a review of theory and empirical evidence from professional European football

Marc Rohde and Christoph Breuer

Institute of Sport Economics and Sport Management, German Sport University Cologne, Köln, Germany

ABSTRACT

Research objectives: The European market for football club investors is undergoing a significant transformation, with German clubs opening up for strategic investors, French clubs being taken over by private majority investors, and English top-league clubs experiencing an influx of foreign investors. Economic and legal politics have played an important role in the deregulation of closed member associations.

Research methods: This paper aims to summarize the history and market situation of the 'Big Five' European leagues, review available theory and empirical evidence on incorporations and public and private investors, and suggest research gaps that deserve further attention. The authors have also constructed a unique database covering all owners in the two premium divisions in England, France, Germany, and Italy for the period from 2003 to 2014.

Results and findings: The available articles in the growing research field of football club investors cover various theoretical areas, such as the application of property rights theory to European football clubs. In addition, several empirical papers analyze the financial and sporting impact of domestic and foreign private investors and public listings. All these studies highlight the increasing importance of club ownership in the rat race of European football.

Implications: Nevertheless, some research gaps remain to be studied at an appropriate depth. First, further empirical studies should analyze the impact of incorporations in German football and the entry of private majority investors in France. Furthermore, future research may address the paradox of de-listings in England and additional listings in continental Europe. Finally, this article identifies the impact of foreign investors and multi-ownership synergies as promising research fields. In this respect, the article provides some managerial implications for football club owners, managers, and regulators.

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Sports economics; club ownership; incorporation; commercialization; internationalization; majority investors; foreign investors; Europe

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Introduction

The market for investors in European football clubs is characterized by low entry barriers, weak profitability despite escalating revenues, and considerable diversity of owner types, objectives, and origins. In contrast to the major sports leagues in the US, there is no artificial limitation of licenses; however, investors can generally take over lower-class teams

CONTACT Marc Rohde marc.rohde@freenet.de

and develop them through promotions into top-class teams (Buraimo, Forrest, & Simmons, 2007). European football is nevertheless also characterized by low profitability; for example, the English Premier League and the German Bundesliga were the only 'Big Five' leagues that were able to generate an operating profit in 2013/2014 (Deloitte, 2015). Compared to other European sports, football is characterized by high national attendance and TV viewership (Buraimo & Simmons, 2009). On the one hand, Deloitte's Annual Review of Football Finance reveals that the revenues of the 'Big Five' leagues have grown by an average rate of 7.0% p.a., from €6.2 mn in 2004/2005 to €11.3 mn in 2013/2014, mostly owing to increasing national and international TV viewership and commercial revenues. On the other hand, wage costs have grown even more, at an average rate of 7.1% p.a. to €6.8 mn in 2013/2014. However, because of the introduction of the Union of European Football Association's (UEFA) Financial Fair Play (FFP) rules, bottom-line club losses have been reduced from €1.7 bn in 2011 to €0.5 bn in 2014 (UEFA, 2015). Similar to regulations in major US sports leagues, multi-club ownership is generally allowed, although investors are not allowed to participate with more than one team simultaneously at UEFA club competitions (UEFA, 2016, p. 15). Moreover, the market for European football club ownership is very diverse. For example, teams may be owned by its members, regional or national businessmen, industrial companies, sports investment firms, other football clubs, or foreign investors. While English football clubs may be utility or profit maximizers, most researchers agree that continental European football clubs are closest to win maximizers (Garcia-del-Barrio & Szymanski, 2009; Késenne, 2000). In fact, most football clubs may implicitly follow a set of several financial and sporting objectives, and recent research has suggested that experimental models should be used to measure the holistic performance of football clubs (Plumley, Wilson, & Ramchandani, 2017).

Since the beginning of the twenty-first century, we have witnessed the increasing importance of club ownership owing to changing economic incentives, the increasing prevalence and financial leverage of private investors, and the increasingly important role of private investors from a sporting perspective (Plumley et al., 2017; Wilson, Plumley, & Ramchandani, 2013). Because European football clubs typically follow financial and/or sporting objectives such as profit or win maximization (Garcia-del-Barrio & Szymanski, 2009), academic scholars have established a growing research stream studying the impact of club ownership and governance systems on the financial and sporting performance of football clubs. Additionally, club managers, owners, and regulators are interested in understanding the implications of football club investments. While early studies provide a comprehensive perspective on the different types of ownership and governance models in the major European football markets (Morrow, 2003; Walters & Hamil, 2010), a comprehensive review of the financial and sporting implications of each of these models is lacking. Thus, this paper reviews existing literature studying the impact of managerial decisions related to club ownership and governance systems on the financial and sporting performance of football clubs. Scholars should be interested in the remaining research gaps that are noted in this review paper, and club managers and owners will benefit from the summary of the historic developments and the status-quo of club ownership in key European leagues and will receive guidance in their choice of ownership model. Specifically, this paper will help owners and managers avoid 'instinctive' decisions based on 'one-sided' considerations. It provides a holistic perspective and summarizes various financial and sporting consequences of ownership and governance models.

Regulators may be interested in this study's trans-national perspective on the financial leverage and sporting impact of private investors. Indeed, regulations such as the UEFA FFP and the German 50 + 1 rule are evaluated based on insights from recent studies, and regulators may choose to adjust their ruleset if the current outcomes are considered detrimental.

Changing economic incentives

European professional football is characterized by an overinvestment environment in which teams increasingly compete based on their spending power (Dietl, Franck, & Lang, 2008). The growing prize money of the UEFA Champions League, the escalating TV revenues for premium competitions, and the internationalization of marketing measures have strengthened the incentives to compete among Europe's leading clubs. Across all the major European leagues, player salaries and transfer fees have outgrown revenues. Consequently, top clubs increasingly require large financial resources to remain competitive (Baroncelli & Lago, 2006), and such revenues are often provided by shareholders acting as non-profit-seeking investors or patrons (Andreff, 2007).

Relevance of club ownership from a financial perspective

The importance of (foreign) majority investors in European football is highlighted by the prevalence and value share of investor-owned clubs in the first two divisions.[1] As of June 2012, approximately three of four professional clubs were majority owned by private investors, and one in six clubs were owned by foreign investors. Considering value shares, private majority investors accounted for 75% of the revenues generated, approximately 80% of the market values and wages, and 90% of the transfer expenses paid in 2011/2012. Considering only foreign private majority investors, these investors accounted for approximately 30% of revenues, market values, and wages and more than 40% of transfer expenses.[2] Given these figures, there is no doubt that (foreign) private investors have arrived in European football.

A club-level analysis reveals the financial leverage of investor-owned clubs compared with member-owned clubs or clubs with distributed ownership. In the 2011/2012 season, clubs owned by private investors generated greater revenues (+4%), had higher team market values (+12%), paid higher wages (+11%), and paid higher transfer expenses (+25%) than the average club in Europe's first two divisions. Further, foreign investors generated even higher premiums with respect to revenues (+67%), market values (+74%), wages (+79%), and transfer expenses (+138%).[3]

Plumley et al. (2017) determine an aggregate financial performance score based on turnover increase, profit increase, profit, ROCE, current ratio, debt, gearing ratio, and wages as a share of turnover. An analysis of the performance of English Premier League clubs against this aggregate measure in 2010 indicates that four of the top five performing clubs were owned by US investors (Arsenal, Manchester United, Aston Villa, Blackburn), while two of the three lowest performing clubs were owned by English investors (Bolton, Wigan).

Relevance of club ownership from a sporting perspective

Club ownership has also become increasingly important from a sporting perspective. For clubs such as Chelsea FC (2005, 2006, 2010), Manchester City (2012, 2014), and Paris Saint-Germain (2013-2016), new wealthy owners have led the club to repeated national championships within a few years of taking over. Wilson et al. (2013) report that English Premier League clubs owned by foreign private investors perform better in the national league than clubs owned by domestic private investors. Plumley et al. (2017) measure sporting success through a holistic score accounting for win ratio, league points, and stadium capacity utilization. Applying this measure to English Premier League clubs, they show that four of the top five performing teams in the 2010 season were owned by foreign private investors (Manchester United, Chelsea, Arsenal, Manchester City) and that one club (Tottenham) was owned by an English investment company. In contrast, two of the three lowest performing teams were majority owned by domestic owners (Bolton, Wigan), while Westham United experienced a change in ownership from Icelandic to Welsh investors. In addition to short-term sporting success, private investors also tend to play a dominant role in long-term investments, such as the establishment of major new training and youth center facilities and the integration of leading youth players into the first squad. According to Transfermarkt.de, in May 2016, the most valuable youth players below the age of 23 years and valued at more than €20 mn were all playing for clubs owned by majority investors.[4] Additionally, investor-owned clubs successfully attracted some of the most successful and sought after managers. For example, Pep Guardiola left Bayern Munich at the end of the 2015/2016 season, as he had signed a three-year deal with Manchester City. Similarly, former Borussia Dortmund coach Jürgen Klopp signed a deal with Liverpool FC one year earlier. According to France Football, eight of the top ten club managers in 2016 were employed by investor-owned clubs; the two exceptions were Real Madrid and FC Barcelona.

Development and status of club ownership

Since the early days of European football in the nineteenth century, professional football has been deregulated and undergone three core trends: professionalization, commercialization, and internationalization. The first phase has been characterized by a professionalization of football clubs linked to the legal unbundling of football clubs from member associations. That is, clubs are founding separate legal entities to accommodate the professional football teams or are converting the member association directly into a corporation. While English clubs converted into joint stock companies as early as the late nineteenth century (Leach & Szymanski, 2015), Italian and French clubs incorporated in the second half of the twentieth century. The German market was the last of the major leagues to allow legal unbundling in 1998 (Dietl & Franck, 2007), and member associations in professional football still existed in early 2016 (e.g. FC Schalke 04, VfB Stuttgart). The second phase has been characterized by the entry of private majority investors. Legal unbundling is a pre-condition for the entry of external owners, but the ownership structure remains unchanged. In contrast, the second phase can be characterized as ownership unbundling, as private investors have acquired majority shares in football companies. While the German '50 + 1 rule' limits the influence of private investors to minority control, clubs in the other major European football leagues can be fully taken over by private investors (Franck, 2010b). Some of the first companies involved in football were industrial companies, such as Royal Arsenal (1886), Parmalat (1913), and Peugeot (1928), which founded company teams and later became the principal team owners when the clubs opened up to outside players. After the national deregulations, additional investors entered the market, including local and national businessmen, sports investment companies (e.g. Sisu in 2007), family dynasties (e.g. Berlusconi family in 1986), and non-traditional investors (e.g. ENIC until 2004, Inter Milan in 2002). The final stage has been characterized by the entry of foreign investors. Historically, England opened up the earliest in the 1990s (Hoehn & Szymanski, 1999), and by the end of the 2013/2014 season, there were a multitude of foreign investors from the US (e.g. Stan Kroenke), Southeast Asia (e.g. Vincent Tan), the Middle East (e.g. the Al-Hasawi family), and other regions. In France, Grenoble was the first foreign investor-owned club with the entry of Inditex in 2005. In Italy and Germany, foreign investors remain a very new phenomenon. In Italy, Thomas Di Benedetto's takeover of AS Roma in 2010/2011 was the first takeover of an Italian professional football club by a foreign investor (A.S. Roma S.P.A., 2011, p. 13). This takeover was followed by the majority acquisition of Inter Milan by Erick Thohir's International Sports Capital in October 2013. Similarly, Hasan Ismaik was the first foreign majority owner of a professional German football club after the acquisition of 1860 Munich in 2011/2012 (Sambidge, 2011). Since the beginning of the 2014/2015 season, Red Bull has been the owner of RB Leipzig, which was promoted to the second division and able to incorporate its professional team at the end of the 2013/2014 season. Most recently, the UEFA introduced the 'FFP' restrictions, which took full effect in the 2013/2014 season and apply to all clubs playing in UEFA competitions (Peeters & Szymanski, 2014). These regulations require that clubs pay their bills, balance their spending with their revenues, and refrain from accumulating debt.

The contemporary European market for football club investors offers the opportunity to analyze clubs and leagues along all three phases (Figure 1). In Germany, about half of the first and second division clubs had incorporated by the end of the 2013/2014 season, while the remaining clubs remained registered as member associations. In France, approximately 75% of the clubs were controlled by private majority investors, while some clubs remained controlled by their members. In England, more than half of the clubs in the first two divisions were already owned by foreign majority investors in the 2013/2014 season. All three markets have been subject to considerable development. Thus, sports economists are able to analyze the financial and sporting impact of incorporation ('professionalization'), the entry of private majority investors ('commercialization'), and the entry of foreign investors ('internationalization') in three key European leagues.

Club ownership and financial and sporting performance

As of early 2016, there has been limited research on the financial and sporting impact of club investors in European football. Some key reasons for this phenomenon are as follows:

- Until recently, the data availability and transparency of football club ownership have been limited. The French football regulator Direction Nationale du Contrôle de

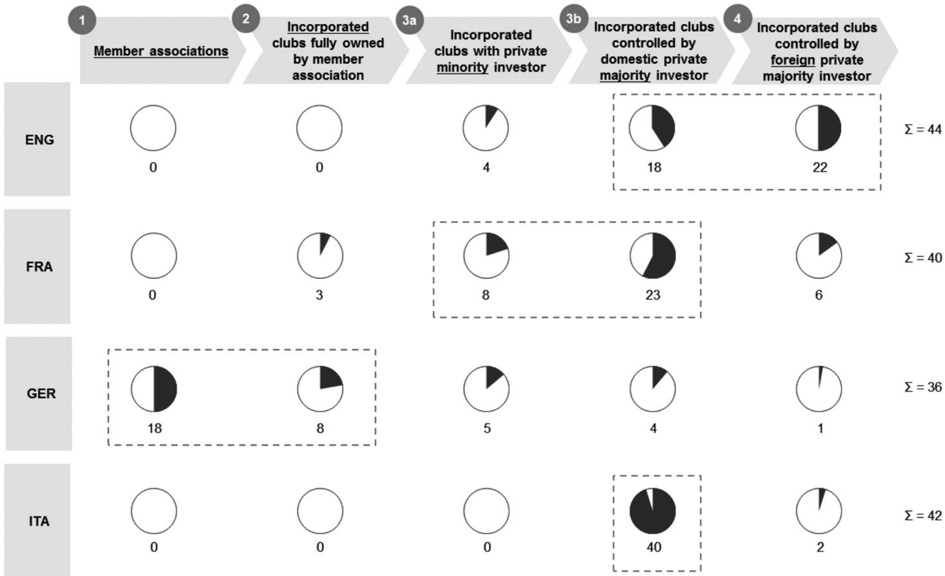

Figure 1. Distribution of European football clubs by type of investor.
Notes: 1st and 2nd division clubs as of 06/2014.

Gestion (DNCG), a directorate of the Ligue de Football Professional (LFP), started to publish the share of clubs owned by private investors in the early 2000s. In 2009, English newspaper The Guardian began to report club ownership in English professional football and published shareholders and stakes for all Premier League clubs.

- Additionally, the availability of profit and loss data and club and player values has been limited. For approximately a decade, Deloitte has regularly published financial information for the top two English divisions in its Annual Review of Football Finance, and LFP has done so for the first two French divisions. Spanish and Italian club data can be purchased from company registers, while German member associations are not required to publish any financial data. The market and transfer values of European football teams can be sourced from a reliable database (http://www.transfermarkt.de).
- The European football market is special because of the peculiar co-existence of non-profit member associations and commercial corporations. In Germany and France, member associations may still control professional football clubs, while other clubs are owned by private investors. Both types of companies compete with each other in the same arena, thus enabling comparisons of financial efficiency and sporting success.
- European football is characterized by the different objective functions of foreign and domestic owners. For example, US investors are generally considered to be profit maximizers, while continental European owners are typically utility or win maximizers.
- Finally, the UEFA as the regulator of European professional football has only recently identified the distorting impact of (foreign) private investors on the competitive balance in European football. While not stated as an official objective, few researchers would doubt that the FFP regulation that took full effect in the 2013/2014 season aimed to limit ‘overinvestments’ by wealthy owners.

The newly available detailed information on club ownership in European professional football, the importance of governance structures, and the recent introduction of UEFA's FFP regulations for the state of play in European football demand a thorough analysis of the impact of football club investors. The structure of this article follows the seminal work of Frick (2007), who studies the status of the labor market for football players. This article adapts this structure to the market for football club investors. In particular, the paper analyzes three key phases in the liberalization of football club ownership: incorporations, private (and public) investors, and foreign private investors. For each of these three phases, this review paper provides a short introduction, key descriptive findings, a literature review of the relevant theoretical insights and empirical studies, and a critical evaluation of the available literature and potential research gaps. Then, the article summarizes the benefits and weaknesses of the literature and suggests areas for further research. Finally, the article provides some managerial implications for football club owners, managers, and regulators.

The market for football club investors

Incorporations

Generally, there are three types of legal forms in European professional football: member associations, private limited companies, and publicly listed corporations (Franck, 2010). Member associations are the original club form in which members own the club. In Germany, many professional football clubs remains registered as member association, including leading traditional clubs such as Schalke 04 and VfB Stuttgart, while the Spanish regulator has allowed only four clubs (Real Madrid, FC Barcelona, Osasuna, Athletic Bilbao) to remain member associations to reduce the excessive debt of Spanish clubs in 1990 (García & Rodríguez, 2003). In England, the majority of clubs had converted into joint stock companies as early as the late nineteenth century (Leach & Szymanski, 2015). The Italian regulator allowed clubs to transform into corporations voluntarily after 1966, before it required them to do so in 1981. In France, clubs have also been required to convert into private companies or publicly listed corporations; however, some French member associations still own a majority share in their clubs (Gouguet & Primault, 2006).

The German football association was the last of the 'Big Five' leagues to allow the legal unbundling of clubs in 1998 (Franck, 2010b). Figure 2 summarizes the cumulative

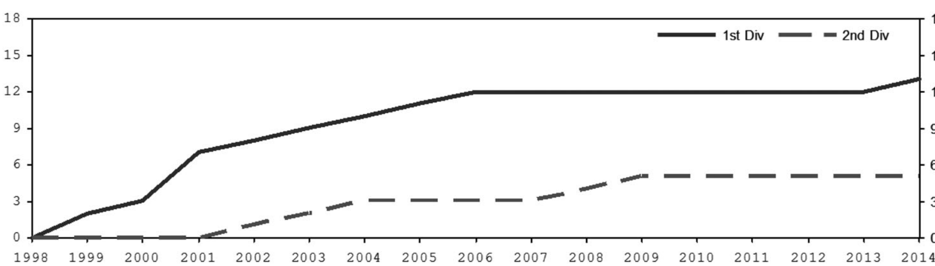

Figure 2. Cumulative incorporations of first and second division clubs in Germany since 1998. Sources: German company register; Club homepages.

Note: No incorporations prior to 1998; balanced panel based on 1st and 2nd division clubs as of 06/2014.

incorporations of the first and second division Bundesliga clubs since 1998. Bayer Leverkusen and Hannover 96 were the first Bundesliga teams to spin off their professional football teams in 1999. By 2006, two-thirds of Bundesliga teams had incorporated. In 2014, HSV Hamburg was the next candidate to incorporate, while VfB Stuttgart plans the incorporation of its professional football team in 2016. Interestingly, second division teams have started to incorporate significantly later. By 2009, only five second division clubs had spun off their teams, and no other team has done so since.

Based on club accounts and the German company register, we determined that as of December 2014, approximately 50% of the first and second division clubs had converted into corporations and that only five clubs in the first division and 13 clubs in the second division remained as registered member associations (Table 1). On the one hand, as commercial entities, private limited companies (GmbH, GmbH & Co KG, etc.) and publicly listed corporations (AG) are considered to be more suitable to lead professional football clubs because they have annual revenues of such high magnitude. On the other hand, incorporation is a pre-requisite for the entry of private investors. Thus, some clubs have allowed the entry of private investors shortly after incorporation (e.g. Bayern Munich, Borussia Dortmund, Hamburger SV), while other clubs have remained fully owned by member associations thus far (e.g. 1. FC Köln, Werder Bremen). Except for Schalke 04, all the German clubs participating in the 2014/2015 UEFA Champions League (Bayer 04 Leverkusen, Bayern Munich, Borussia Dortmund) were among the first to incorporate between 1999 and 2001. Nevertheless, incorporation has been by no means a guarantee of success. For example, traditional clubs such as Alemannia Aachen, MSV Duisburg, Offenbacher Kickers, and VfL Osnabrück experienced financial

Table 1. Legal forms of first and second division Bundesliga clubs.

1. Bundesliga			2. Bundesliga		
Club	Legal form	Year of incorporation	Club	Legal form	Year of incorporation
Bayer 04 Leverkusen	GmbH	1999	1860 München	GmbH & Co. KGaA	2002
Hannover 96	GmbH & Co. KGaA	1999	Greuther Fürth	GmbH & Co. KGaA	2003
Eintracht Frankfurt	AG	2000	FC Ingolstadt	GmbH	2004
Borussia Dortmund	GmbH & Co. KGaA	2001	Eintracht Braunschweig	GmbH & Co. KGaA	2008
Bayern München	AG	2001	FSV Frankfurt	GmbH	2009
Hertha BSC Berlin	GmbH & Co KGaA	2001	1. FC Heidenheim	e.V.	n/a
VfL Wolfsburg	GmbH	2001	1. FC Kaiserslautern	e.V.	n/a
1. FC Köln	GmbH & Co. KGaA	2002	1. FC Nürnberg	e.V.	n/a
SV Werder Bremen	GmbH & Co. KGaA	2003	Erzgebirge Aue	e.V.	n/a
Borussia M'Gladbach	GmbH	2004	FC St. Pauli	e.V.	n/a
TSG 1899 Hoffenheim	GmbH	2005	Fortuna Düsseldorf	e.V.	n/a
FC Augsburg	GmbH & Co KGaA	2006	Karlsruher SC	e.V.	n/a
Hamburger SV	AG	2014	RB Leipzig	e.V.	n/a
Mainz 05	e.V.	n/a	SV Darmstadt 98	e.V.	n/a
FC Schalke 04	e.V.	n/a	SV Sandhausen	e.V.	n/a
SC Freiburg	e.V.	n/a	Union Berlin	e.V.	n/a
VfB Stuttgart	e.V.	n/a	VfL Bochum	e.V.	n/a
SC Paderborn	e.V.	n/a	VfR Aalen	e.V.	n/a

Note: Legal form as of December 2014.
Sources: Bundesanzeiger; Club homepages; Author research.

Table 2. Literature review: the financial impact of member associations on football clubs and sports institutions.

Author(s) and year of publication	Theoretical vs. empirical paper	Applied theories	Data/scope	Dependent variable/ estimation technique	Hypothesized impact/ significant findings
Fritz (2006)	*Empirical*	Market-based view, resource-based view, efficiency analysis	German Bundesliga clubs (1997/1998–2002/2003)	Relative net revenues	Incorporation (no effect)
Franck and Dietl (2007)	Theoretical	Property rights theory	German professional football	Economic value creation Profitability	Member association (+) Investor (+)
Dilger (2009)	Theoretical	Capital market theory	Professional team sport	Risk-adjusted return	Member associations (+)
Smith (2009)	*Empirical*	Property rights theory	Swedish riding schools ($n = 60$ non-profit schools and $n = 11$ private reading schools)	Strategy/structure fit No strategy/structure fit	Non-profit organizations Private organizations
Franck (2010a)	Theoretical	Firm theory, overinvestment, property rights theory	European football	Channeling of funds into team (vs. extraction of profits) Access to private funds (i.e. willingness to invest in team)	Member association (+), public corporation (−) Member association (−), private companies (+)
Dietl and Weingaertner (2011)	Theoretical	Platform theory, property rights theory	Professional European football clubs	Sponsoring revenue	Member association (+)
Wicker et al. (2012)	*Empirical*	Platform theory, property rights theory	Nationwide online survey of amateur equestrian sports institutions in Germany in 2009 ($n = 574$ private firms and $n = 1165$ member associations)	Sponsoring revenue	Member association (+)
Nowy et al. (2015)	*Empirical*	Property rights theory	Nationwide online survey of amateur equestrian sports institutions in Germany in 2013 ($n = 1640$ non-profit and $n = 732$ for-profit sports organizations)	Overall financial performance Price structure	For-profit organizations (+) Non-profit organizations (−)

troubles and went bankrupt or had to be bailed out by the state despite being incorporated (Hamann, 2013).

A number of research articles have analyzed the financial impact of the legal form and associated governance structure of professional sports clubs (Table 2). Based on property rights theory and the assumption that the zero transaction cost notion generally does not hold in reality, Franck and Dietl (2007) argue that the German football governance system and its focus on member associations have a positive impact on value creation because this legal form attracts fans and sponsors. In contrast, national systems that are open to investors have a positive impact on profitability because the primary objective of private owners is profit maximization. Dilger (2009) suggests that member associations would facilitate the generation of a risk-adjusted return, as profit-oriented organizations would not be willing or able to compete in the competitive environment of professional team sports.

Franck (2010a) theoretically analyzes the impact of the legal form on the spending power of European football clubs. He suggests that in the overinvestment environment of European football (Dietl et al., 2008), football clubs generate a competitive advantage through superior spending power rather than profitability. Superior spending power in turn results from the club's capability to channel funds into football and its ability to access private funds to invest in the team.

Dietl and Weingaertner (2011) apply platform theory to professional football clubs and show that – consistent with Franck's (2010) analysis – member associations are the preferred legal form to maximize sponsorship revenues. In contrast, private companies and public corporations tend to have higher broadcasting and match-day revenues.

In the view of the authors, there is a clear lack of empirical studies applying property rights and platform theory to professional football. The vast majority of empirical studies are based on amateur horse sports and riding schools (Nowy, Wicker, Feiler, & Breuer, 2015; Smith, 2009; Wicker, Weingaertner, Breuer, & Dietl, 2012) because they are characterized by the co-existence of for-profit and non-profit organizations. One notable exception is a study by Fritz (2006), who performed a stochastic frontier analysis of German Bundesliga clubs from 1997/1998 to 2002/2003. In contrast to the widely held perception that private companies operate more efficiently than non-profit organizations, the study does not find any empirical support for the notion that legal form has an impact on total net revenues generated by clubs. In fact, German professional football offers a rich sample containing considerable internal variation in legal forms following the liberalization in 1998. Approximately 75% of first division clubs and 25% of second division clubs had incorporated as of the end of 2014. Nevertheless, except for the study by Fritz (2006), most papers remain on the level of descriptive analyses. For example, Franck and Dietl (2007) suggest that member associations are superior in attracting revenues from fans and sponsors by referring to the leading attendance and commercial revenue figures of the German Bundesliga in Europe. In our view, further empirical studies confirming the causational relationships established by previous theoretical research would greatly benefit the discussion on the impact of incorporations in German and European football.

Public investors

The listing of a firm on a stock exchange allows investors to acquire a share of the ownership of the firm and allows the firm to source capital at the lowest cost from a large number of investors. In contrast to the US major leagues where only very few selected clubs have decided in favor of this instrument, initial public offerings (IPOs) have been quite common in European football since the 1990s (Andreff & Staudohar, 2000). In general, European football club owners may have two motives to go public (Késenne, 2014). Profit-maximizing owners will financially restructure the firm. For example, Manchester United has used the proceeds from its IPO in 2012 to reduce its club debt. Win-maximizing owners, however, will invest the additional funds into the team or infrastructure.

Since 1983, the number of publicly listed football clubs in Europe has increased rapidly, and this trend continued until the turn of the millennium (Figure 3). In 1983, Tottenham Hotspur was the first European club to undertake a stock exchange listing. After the next IPOs, Millwall in 1989 and Manchester United in 1991, the 1990s witnessed a rapid increase in the number of English clubs going public (Morrow, 2003; Walters & Hamil, 2010). In 2000, this trend reached its peak, with more than 20 English clubs being traded on a stock exchange. However, all but two English clubs were delisted again in the 2000s, and as of 2014, Manchester United and Arsenal London were the only remaining listed English football clubs. There are myriad reasons for this trend, and clubs often cite the ongoing costs of maintaining a stock exchange listing, the lack of liquidity, and the high share price volatility as reasons to go private (Aglietta, Andreff, & Drut, 2010; Benkraiem, Le Roy, & Louhichi, 2011). Walters and Hamil (2010, pp. 20–22) find that the majority of publicly listed English clubs were unprofitable following their IPOs, which reduced the interest of public investors. Furthermore, many English clubs have been taken private by new majority investors.

Outside England, however, the entry of clubs into the stock market has taken a different path. In 1987, Brøndy IF became the first publicly listed football club outside England (Morrow, 2003, p. 104). Since the mid-1990s, a large number of top European football clubs, including Celtic Glasgow (1995), FC Kopenhagen (1997), FC Porto (1998), Lazio Roma (1998), and Glasgow Rangers (2000), have gone public. In contrast to the trend in England, the number of stock exchange listings was still increasing by 2015, with the authors identifying 33 non-English clubs listed on a stock exchange. As of March 2015, 23 of these 33 clubs were included in the Stoxx® Europe Football Index. The stock market is a popular instrument, particularly in Denmark, where 10 teams were listed as

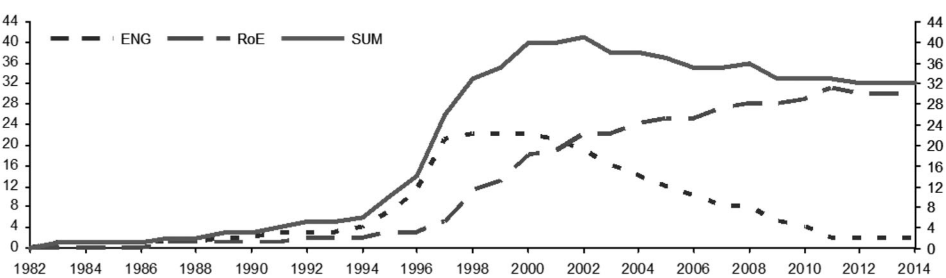

Figure 3. Public ownership of clubs in England and the rest of Europe since 1983. Sources: Stoxx® Europe Football Index (2015); Bloomberg Eurokick Football Index (2013); Baur & McKeating (2011); Footballeconomy.com (2008); Author research.

Note: No stock exchange listing prior to 1983; excluding GKS Katowice AS (Poland), Sileks Kratovo and Teteks Ad Tetovo (both Macedonia) due to missing information on share issue.

of 2015; further, in Portugal, Turkey, and Italy, at least 3 teams were traded on a public stock market. Additional public clubs are found in France, Scotland, Poland, Macedonia, Sweden, the Netherlands, and Germany.

There are limited available studies on the sporting and financial impact of stock exchange listings (Table 3). Most studies analyze the impact of a public listing on sporting and financial performance (Baur & McKeating, 2011; Gerrard, 2005), a potential change in the objective function (Conn, 1997; Leach & Szymanski, 2015), and changes in governance structure (Franck, 2010a). Gerrard (2005) develops a resource-utilization model and applies it to Premier League teams for the period 1998–2002. His findings suggest that a stock market listing improves financial performance. In contrast, Baur and McKeating (2011) find that IPOs do not generally improve sporting performance, likely because the funds are used for balance sheet consolidation rather than for team investments. According to the study, there is an improvement in national league performance for second division teams and the 'Big Five' leagues, while an IPO has no significant effect on either league performance in first divisions or international performance in UEFA competitions.

Conn (1997, p. 154) suggests that floated public companies pursue profit maximization for their shareholders as their primary objective. However, Leach and Szymanski (2015) find no evidence that publicly listed English football clubs have shifted toward profit maximization after being listed. In particular, they show that a stock exchange listing has only a short-term positive effect on revenues but that long-term revenues are not significantly improved. This finding is consistent with their view that English football clubs were already heavily oriented toward profit maximization before the trend in stock exchange listings. Franck (2010a) argues that the governance structure of a publicly listed football club is not optimal in the overinvestment environment in which European football clubs operate. Team investments are smaller than those of private companies. This finding is partly challenged by Leach and Szymanski's (2015) observation that the wage bills of publicly listed clubs are significantly higher, despite the assumption that the shareholder structure should improve transparency and governance.

One key shortfall of the available articles is that they do not account for the property rights theory. Because publicly listed companies may be subject to different shareholder structures, their governance and property rights may also differ. For example, Leach and Szymanski (2015) report that only 3 of the 16 English clubs in their sample placed 100% of their shares on a stock exchange and that only 2 additional clubs placed a majority of their shares on a stock exchange. Thus, comparing clubs with distributed ownership with clubs owned by a majority investor may be more meaningful.

Moreover, given the very different experiences in and outside England, we would encourage future articles to analyze the financial and sporting impact of public listings separately for English and non-English teams.

Private investors

Private investors can take many forms, acquire majority or minority stakes, and invest in public or private companies (Franck, 2010a). One of the earliest types of private investors were company clubs (Hoehn & Szymanski, 1999). The origins of these company clubs can be traced back to the worker movement in the late nineteenth century when companies founded clubs to enact company sports. Prominent European examples of such

Table 3. Literature review: the financial impact of public investors on football/sports clubs.

Author(s) and year of publication	Theoretical vs. empirical paper	Applied theories	Data/scope	Dependent variable/estimation technique	Hypothesized impact /significant findings
Gerrard (2005)	*Empirical*	Resource-based view	Premier League clubs (1998–2002)	Wages	Stock exchange listing (−)
				Sporting performance	Stock exchange listing (no effect)
				Team revenue	Stock exchange listing (+)
				Profit margin	Stock exchange listing (+)
Franck (2010a)	Theoretical	Firm theory, overinvestment, property rights theory	European football	Team investments	Public corporation (−)
Baur and McKeating (2011)	*Empirical*	Corporate finance	27 publicly listed European football clubs quoted on the Dow Jones STOXX football index (1990–2008)	National performance ('Big Five' leagues, points per game)	Initial public offering (+)
				National performance (second division, points per game)	Initial public offering (+)
				National performance (first division, points per game)	Initial public offering (no effect)
				International performance (UEFA club coefficient)	Initial public offering (no effect)
Leach and Szymanski (2015)	*Empirical*	Profit maximization vs. utility maximization	16 English football clubs that acquired a stock exchange listing in the mid-1990s	Performance	Stock exchange listing (no effect)
				Short-term revenues	Stock exchange listing (+)
				Long-term revenues	Stock exchange listing (no effect)

company clubs include Manchester United (1878), Arsenal London (1886), Carl Zeiss Jena (1903), Bayer 04 Leverkusen (1904), Stade Reims (1910), AC Parma (1913), PSV Eindhoven (1913), and FC Sochaux (1928). Later, wealthy regional and national businessmen and families also became interested in acquiring European football clubs. For example, the Agnelli family began to support Juventus Turin as early as 1923, when Eduardo Agnelli began to sponsor the club and Juventus Turin completed the first documented professional player transfer. As of 2016, the Agnelli family still owns the majority share of the club. Other family-owned clubs include, for example, the Peugeuot family's FC Sochaux-Montbeliard (since 1928), the Pinault family's Stade Rennais (since 1998), the Sensi family's AS Roma (2004–2011), the Semerano family (1994–2012) and the Savino family (since 2012) with Lecce, and the Resta family (2003–2006) and the Da Salvo family (since 2006) with Novara.

The entry of individual businessmen as investors is a phenomenon observed throughout Europe. For example, SAP co-founder Dietmar Hopp has invested in German club 1899 Hoffenheim and was allowed to take over 96% of the club's shares by July 2015. The President and CEO of Italian leather goods company Tod's, Diego Della Valle, acquired ACF Fiorentina in 2002. Robert Louis-Dreyfus, the former CEO of Adidas and Saatchi & Saatchi, acquired a majority stake in Olympique de Marseille in 1996 and henceforth invested heavily in the club. Since the beginning of the 1980s, non-traditional investors have begun to acquire European football clubs. These include industrial goods companies (e.g. Danone, M6 Group), strategic investors (e.g. Canal+, Bet365), sports investment companies (e.g. Sisu Capital, Otium Entertainment Group, Fenway Sports Group, General Sports & Entertainment), and other football clubs (e.g. AC Milan).

The theoretical importance of the majority ownership of a club is based on property rights (Franck, 2010a). The residual decision rights of the majority investors create a decision autonomy that allows the investor to use the club as an instrument to foster his other businesses, gain access to particular club resources and transactions, receive public acclaim, and enjoy decision autonomy in the club (Franck, 2010b). In fact, sugar daddies such as Hannover 96's Martin Kind have admitted publicly that they have no interest in maintaining a minority share and that they aim to take over the club fully after they have passed the period of 20 years of supporting the club as demanded by German league regulation.

Franck (2010b) notes that sugar daddies have become the dominant financing concept in England, Eastern Europe, and parts of Italy. In countries without an abundance of sugar daddies, access to injections of funds is considered a key requirement to improve a club's international competitiveness (Barajas & Rodriguez, 2014). The financing concept of sugar daddies entails the direct injection of funds into football operations through so-called 'soft loans' that allow clubs to use interest-free debt (Franck & Lang, 2014). The pure size of these monetary injections through soft loans may exceed the €100 mn threshold. For example, in 2008, Roman Abramovich (Chelsea, £701 mn), Mike Ashley (Newcastle United, £238 mn), and Mohamed Al Fayed (Fulham, £175 mn) provided tremendous funds to their teams. Similarly, Kuper (2009) suggests that there are only two contemporary financing models in European football. First, there are few traditional clubs such as Manchester United or FC Barcelona, which are able to capitalize on their global brands. All other clubs would need to find a sugar daddy to stay competitive in the long run.

A league that has witnessed considerable variation in private club ownership is French Ligue 1. According to DNCG, the watchdog of French club finances, the number of Ligue 1 clubs controlled by private investors has grown to 18 of 20 clubs since the 1980s. By 2008, 14 of 20 Ligue 1 clubs were already controlled by private investors. As of 2014, AC Ajaccio was the only Ligue 1 club fully controlled by its member association. Stade Brest was controlled by three major shareholders with no single investor owning a majority stake. All other Ligue 1 clubs were controlled by private majority investors with a dominant stake. In Ligue 2, 11 clubs were controlled by majority shareholders, 7 clubs had minority investors, and 2 clubs were fully controlled by their members.[5]

The literature on private investors is already extensive and continues to grow, and it concentrates mainly on the impact of private owners on the objective functions of teams and the role of sugar daddies in the overinvestment environment of European professional football (Table 4). The impact of private owners is generally suggested to be contrary to Rottenberg's (1956) invariance proposition that talent distribution is independent of legal ownership. Vrooman (1997) theoretically derives results indicating that so-called sportsman owners, that is, private owners, of MLB franchises sacrifice franchise value for winning. He also shows the presence of the 'Steinbrenner effect' for syndicated, that is, minority, owners, who face incentives to increase their team investment compared to sole owners. Lang, Grossmann, and Theiler (2011) extend Vrooman's model based on contest theory and find that sugar daddies have a positive impact on the sporting success and revenues of professional sports clubs. However, the influence of private owners on competitive balance and social welfare depends on the market size of the team supported. If a sugar daddy injects money into a small market team, he may increase the competitive balance but reduce social welfare. In the event of a sugar daddy investing in a large market team, the impact is the reverse. Ruoss (2009, pp. 138–142) studies the impact of supporter trust on the financial and sporting performance of English football clubs. He finds that the operating margins of Championship clubs are positively affected by the involvement of supporter trust in club corporate governance, while league rankings are negatively affected in the short term.

Sugar daddies – private owners who invest tremendous sums into their clubs – have also been credited with playing a special role in the overinvestment environment of European football. For example, private owners have been suggested to increase team investment and debt levels and reduce profitability more than public corporations (Franck, 2010a). Furthermore, the constitutions of privately owned clubs are better able to absorb the capital that sugar daddies are willing to inject. In this context, the German 50 + 1 rule that bans the entry of sugar daddies has a negative impact on team investments (Franck, 2010b). Using similar logic, Sass (2016) finds that the introduction of the UEFA FFP rules reduces team investment by sugar daddies, which in turn leads to lower sporting success, lower revenues, smaller market size, and – in the case of a sugar daddy supporting a small market team – less competitive balance. Madden (2015) develops a laissez-faire model of a sports league with benefactor owners and shows that in leagues with benefactor owners and a relatively elastic supply of talent, the UEFA FFP regulations will reduce the quality of all teams, season ticket prices, fan utility, and player wages. Further, Sass (2016) and Madden (2015) implicitly question whether the entry of sugar daddies poses a second external shift in the competitive balance of European football after the increase of payouts

Table 4. Literature review: the financial impact of private investors on football/sports clubs.

Author(s) and year of publication	Theoretical vs. empirical paper	Applied theories	Data/scope	Dependent variable/estimation technique	Hypothesized impact/significant findings
Vrooman (1997)	Theoretical	Profit and win maximization	MLB franchises	Winning	Sportsman owner (+)
				Franchise value	Sportsman owner (–)
Franck (2010a)	Theoretical	Overinvestment, sugar daddies	European football	Team investment	Private owners (+)
				Profitability	Private owners (–)
				Debt	Private owners (+)
Franck (2010b)	Theoretical	Overinvestment, sugar daddies	German football	Team investment	German 50 + 1 rule (–)
Lang et al. (2011)	Theoretical	Contest theory, profit and win maximization, sugar daddies	Professional team sports	Win percentage	Sugar daddy (+)
				Revenues	Sugar daddy (+)
				Competitive balance	Sugar daddy of large market team (–), Sugar daddy of small market team (+)
				Social welfare	Sugar daddy of large market team (+), Sugar daddy of small market team (–)
Storm and Nielsen (2012)	Theoretical	Soft budget constraints, overspending	European football clubs (England, Italy, and Spain)	Soft budget constraints (persistent losses, growing debt, economic stability)	Sugar daddy owners (+), loose taxation (+), soft or interest-free loans (+), stadium/ infrastructure subsidies (+)
Franck and Lang (2014)	Theoretical	Risk taking, sugar daddies	Football clubs	Riskiness of investment strategy	Sugar daddy (+), public sugar daddy (+), competitor's sugar daddy (+), club size (+)
				Volatility of revenues	Sugar daddy owner (+)
				Competitive imbalance	Sugar daddy owner (+)
Sass (2016)	Theoretical	Competitive balance, sugar daddies, overinvestment	European football	Spending by sugar daddies	UEFA Financial Fair Play (–)
				Competitive balance	UEFA Financial Fair Play (–)
Grossmann (2015)	Theoretical	Evolutionary game theory, contest theory	Sports contests	Investment	Evolutionary stable strategies (+)
				Profits	Evolutionary stable strategies (–)
Madden (2015)	Theoretical	Welfare, sugar daddies	European football	Quality of all teams	UEFA Financial Fair Play (–)
				All season ticket prices	UEFA Financial Fair Play (–)
				Utility of all fans	UEFA Financial Fair Play (–)
				Wage per unit of talent	UEFA Financial Fair Play (–)

in the UEFA Champions League in 1999/2000 (Pawlowski, Breuer, & Hovemann, 2010). Franck and Lang (2014) suggest that sugar daddy owners pursue riskier investment strategies that lead to more volatile revenues and argue that public sugar daddies employ an even riskier investment strategy than private sugar daddies. Owing to the common league environment, sugar daddy owners will also increase the riskiness of the investment strategies of competitors of the sugar daddy club.

Finally, a few additional theories have been applied to the concept of sugar daddies. For example, applying the concept of soft budget constraints to the overspending environment in European football, Storm and Nielsen (2012) apply show that sugar daddy owners lead to soft budget constraints as characterized by persistent losses and growing debt with simultaneous economic stability. Grossman (2013) adapts evolutionary game theory to sports contests and suggests that evolutionary stable strategies increase team investment and reduce profits more than profit maximization strategies. Dimitropoulos and Tsagkanos (2012) find that managerial ownership (i.e. managers owning a stake) and institutional ownership (i.e. institutional investors owning a stake) of European football clubs positively affect financial performance.

An evaluation of the reviewed literature reveals two major deficits and associated research gaps. First, the vague concept of a sugar daddy as a money-injecting private owner may be sufficient for game-theoretical analyses (Franck, 2010b; Franck & Lang, 2014; Sass, 2016). However, any application to real-world settings requires a clear definition to distinguish sugar daddy owners from other private owners. Some so-called sugar daddies may inject money into football clubs as long as their motivation endures. However, if they lose interest for whatever reason, their financial injections may stop. For example, Silvio Berlusconi has been reported to have invested enormous sums into AC Milan during his active political career but has recently reduced his team investments sharply and is said to be looking for new owners. From this perspective, Vrooman's (1997) approach of analyzing the effect of sole or majority owners on the one hand and minority owners on the other hand is considered a reliable approach to empirical research.

In general, the core research gap lies in the area of empirical evidence. Many of the presented theoretical studies would benefit from empirical analysis testing the suggested financial impact of sugar daddies on team investments, sporting success, profitability, and competitive balance.

Foreign investors

The latest step in the historic development of European football clubs is internationalization and the entry of foreign investors. Clubs increasingly source players from emerging countries, establish so-called 'feeder clubs' as cooperation partners, and conduct international marketing travel to and open commercial offices in key future sales regions. In addition to the increasing commercial activities and presence of clubs abroad, league associations have also played a pivotal role in deregulating the market and growing the international reach of clubs (Hoehn & Szymanski, 1999; Nauright & Ramfjord, 2010). These measures by league associations include the legal and ownership unbundling of clubs (see above), the central negotiation of regional TV deals, and the support of clubs in their internationalization activities through subsidies for marketing tours or the

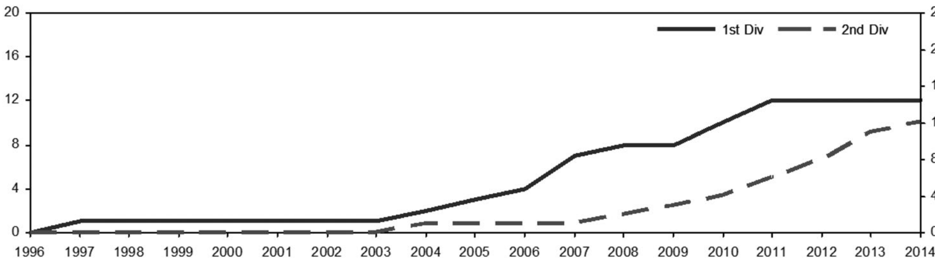

Figure 4. Foreign ownership of first and second division clubs in England since 1996. Sources: Forbes; The Guardian; Club homepages; Author research.

Notes: No foreign investors prior to 1997; balanced panel based on 1st and 2nd division clubs as of 06/2014.

provision of infrastructure and contacts abroad. An important exception to and structural break from the deregulation of national markets, however, is the introduction of the UEFA FFP rules, which are expected to have a significant financial and sporting impact on national leagues (Peeters & Szymanski, 2014).

The origin of investors is essential because of the presence of different objective functions in different markets. For example, owners in the US market are generally considered to be profit maximizers (e.g. Rottenberg, 1956). On the other hand, owners in Central Europe and to some degree in England are considered to be win or utility maximizers (Andreff & Staudohar, 2000; Garcia-del-Barrio & Szymanski, 2009; Sloane, 1971). Thus, the influx of foreign investors into European football may lead to a shift in the objective functions pursued by clubs.

The number of foreign investors in English football has grown significantly over the past two decades (Figure 4). Prior to 1997, when the Egyptian businessman Mohamed Al Fayed acquired Fulham, there were no foreign majority investors in English football (Nauright & Ramfjord, 2010). However, foreign investors remained skeptical until June 2003, when the Russian investor Roman Abramovich bought Chelsea London. After the perceived success of Abramovich, additional investors soon followed, including Antonio Calliendo in the Queens Park Rangers in August 2003, the American businessmen George Gillett and Tom Hicks in Liverpool in February 2004, and Malcolm Glazer in Manchester United in May 2005. By 2010, foreign investors owned half of all the Premier league clubs.

Based on the Guardian and other public sources, we determined that in 2014, 60% of Premier League clubs and half of Championship clubs were majority owned by foreign shareholders (Table 5). US investors represented the largest group, with five in the Premier League (Stan Kroenke, Randy Lerner, Fenway Sports Group, Glazer family, Drumaville Consortium) and two in the Championship (General Sports and Entertainment, John Berylson).

Few notable articles on the financial impact of international investors on football clubs exist. Most articles in this area compare the European and US sporting systems (e.g. Dobson & Goddard, 2011). For instance, Hoehn and Szymanski (1999) analyze the commercialization and Americanization of European football, which in turn has increased the attractiveness of European football clubs to American and foreign investors (Nauright & Ramfjord, 2010). The latter article is a notable exception, as it suggests that North

Table 5. Foreign owners of English Premier League and championship clubs.

Premier League			Championship		
Club	Majority owner	Origin	Club	Majority owner	Origin
Arsenal London	Stan Kroenke	US	Derby County	General Sports & Entertainment	US
Aston Villa	Randy Lerner	US	Millwall	John Berylson	US
Liverpool	Fenway Sports Group	US	Queens Park Rangers	Tony Fernandes	MAL
Manchester United	Glazer family	US	Birmingham City	Carson Yeung	HK
Fulham	Drumaville Consortium	US	Leicester City	Vichai Srivaddhanaprabha	THA
Sunderland	Shahid Khan	PAK	Blackburn Rovers	VH Group	IND
Cardiff City	Vincent Tan	MAL	Nottingham Forest	Fawaz Al-Hasawi	KUW
Manchester City	Sheikh Mansour	UAE	Reading	Anton Zingarevich	RUS
Hull City	Allam family	EGY	Watford	Pozzo family	ITA
Chelsea	Roman Abramovich	RUS	Sheffield Wednesday	Milan Mandarić	SER
Southampton	Katharina Liebherr	SUI	Bournemouth	Maxim Demin	RUS
West Ham United	David Sullivan & David Gold	WAL	Charlton Athletic	Roland Duchatelet	BEL
Newcastle United	Mike Ashley	ENG	Bolton Wanderers	Eddie Davis	ENG
Norwich City	D. Smith/M. Wynn-Jones	ENG	Wigan Athletic	Dave Whelan	ENG
Stoke City	Peter & Denise Coates	ENG	Yeovil Town	John Fry	ENG
Tottenham Hotspur	Enic International Limited	ENG	Barnsley	Peter Ridsdale	ENG
West Bromwich Albion	Jeremy Peace	ENG	Blackpool	Owen Oyston	ENG
Crystal Palace	n/a[1]	n/a[1]	Brighton & Hove Albion	Tony Bloom	ENG
Swansea City	n/a[1]	n/a[1]	Doncaster Rovers	The Westferry Consortium	ENG
Everton	n/a[1]	n/a[1]	Ipswich Town	Marcus Evans	ENG
			Leeds United	Ken Bates	ENG
			Middlesbrough	Steve Gibson	ENG
			Huddersfield Town	Dean Hoyle	ENG
			Burnley	n/a[1]	n/a[1]

Notes: Ownership as of 2013/2014 season; Country codes: BEL = Belgium, EGY = Egypt, IND = India, KUW = Kuwait, MAL = Malaysia, PAK = Pakistan, RUS = Russia, SUI = Switzerland, WAL = Wales, THA = Thailand, UAE = United Arab Emirates, US = United States, ITA = Italy, SER = Serbia, (1) Distributed ownership.
Sources: Forbes; The Guardian; Club homepages; Author research.

American investors drive the profitability and professionalization of the marketing and management practices of European clubs. Wilson et al. (2013) analyze the financial performance of three competitive ownership models in the English Premier League. Based on straightforward correlation analyses, ANOVA tests, and post hoc procedures, the study finds that the foreign private ownership model is less financially efficient than the stock market model. However, clubs owned by foreign private investors perform better in the national league than domestically owned private clubs and publicly listed corporations. In a novel study, Rohde and Breuer (2016) analyze the financial impact of foreign private investors by applying property rights theory to a seven-season panel from the English Premier League, and they find that foreign private investors have a positive impact on wages and a negative impact on profits. In summary, many researchers are aware of the importance of foreign investors and focus their research on the scope of selected club or player acquisitions by foreign investors (Franck & Lang, 2014; Storm & Nielsen, 2012); however, very few articles analyze the financial impact of foreign investors in more detail. Further empirical analyzes studying the impact of foreign investors are thus recommended.

Given the prevalence and impact of foreign investors in European football, it is very surprising that more studies have not yet been devoted to the financial impact of foreign investors. Two potential reasons for this research gap are the novelty of this research area and the absence of a systematic, public database of foreign investors that goes beyond the top 20 richest owners on the Forbes list. This article has drawn on a unique database covering all the owners in the two premium divisions in England, France, Germany, and Italy since 2003.

With respect to the novel phenomenon of multi-ownership, the authors are not aware of any theoretical or empirical articles studying this phenomenon in European football. Based on the rapid growth of this phenomenon, its economic importance and the interest among regulators in addressing this trend in the future, further studies are urgently needed.

Summary of available studies and remaining research gaps

An increasing number of theoretical and empirical studies have aimed to examine the market for football club investors since approximately 2010. This growth in the literature stream is largely due to three reasons. First, the increased commercialization of the football market has led to the exponentiation of revenues. TV revenues have reached unprecedented levels, while revenues from social media and regional sponsoring have emerged as new income sources. Second, football club investors have gained importance in the clubs' rat race to increase salaries and transfer fees and thus to improve club competitiveness. No less importantly, the introduction of the UEFA FFP rules highlighted a potentially ruinous development in European football for the general public. Finally, the increasing availability of information about European football, including P&L data, transfer data, and team salaries and budgets, has created the opportunity the test available theories through empirical studies.

With respect to the topics studied, the literature stream on football club investors has developed four distinct but related research fields. The first field covers the application of property rights theory to European football clubs in order to analyze the impact of incorporations on team revenues, profitability, and team investments (Dietl & Weingaertner, 2011; Franck, 2010a; Franck & Dietl, 2007; Nowy et al., 2015; Wicker et al., 2012). However, the financial impact of member associations remains in dispute. On the one hand, property rights theory predicts that member associations are beneficial in channeling funds to the team (Franck, 2010a) and driving sponsoring revenue (Dietl & Weingaertner, 2011). On the other hand, empirical studies from other industries have shown the positive influence of for-profit organizations on overall financial performance. Previous empirical research in European football has found no effect of incorporations on relative revenues (Fritz, 2006). The second research field that is also controversially discussed analyzes the financial and sporting impact of public listings of European football clubs (Baur & McKeating, 2011; Leach & Szymanski, 2015). Despite consistent evidence of the negative influence of public listings on team investments (Franck, 2010a; Gerrard, 2005), the evidence regarding its impact on sporting performance ranges from no effect (Gerrard, 2005; Leach & Szymanski, 2015) to a positive effect that is limited to second division teams to no effect on international performance (Baur & McKeating, 2011). The third area comprises theoretical studies on capital injections by private investors in the overinvestment environment of European football. On the one hand, such studies have dealt with the impact of sugar daddies on team investment, budget constraints and profitability

(Franck, 2010a, 2010b; Grossmann, 2015; Storm & Nielsen, 2012). These mostly theory-based studies generally conclude that there is a trade-off between desired consequences (e.g. increased team investments, better team performance, higher revenues) and undesired consequences (e.g. increased debt, lower profits, higher risk and revenue volatility) with private majority ownership. On the other hand, an increasing number of papers study the influence of sugar daddies on competitive balance and social welfare (Lang et al., 2011) and the limiting effect of the UEFA FFP rules (Madden, 2015; Sass, 2016). Finally, a research field that is still small but that is expected to gain significantly in importance analyzes the impact of foreign investors on profitability and sporting success (Nauright & Ramfjord, 2010; Rohde & Breuer, 2016; Wilson et al., 2013). Existing research consistently finds a positive impact of foreign investors on team investment and sporting performance but disagrees with other research regarding the impact on club profitability. While North American investors are said to be profit maximizers (Nauright & Ramfjord, 2010), empirical studies have found foreign investors in the English Premier League to be less financially efficient (Wilson et al., 2013) and to have a negative impact on profits (Rohde & Breuer, 2016).

A review of the development and status-quo of the literature reveals that the following research gaps remain to be studied at an appropriate depth. First, this review paper has shown the need for further empirical studies and the existence of data and samples to test the available theories. This is especially true with regard to empirical tests of the application of property rights theory to European football. Two very interesting developments to be studied are the process of incorporation in German football, as well as the potential associated increase in efficiency, and the entry of private majority investors in France, along with the corresponding financial and sporting consequences. Additionally, there is a need for comparative studies of stock exchange listings inside and outside England to explain the paradox of de-listings in England and further listings in continental Europe. Furthermore, except for a few studies, the promising new research field studying the impact of foreign investors and multi-ownership synergies has scarcely been addressed. Finally, research on the impact of football club investors would benefit from a holistic analysis examining not only a single dependent variable such as profitability or league points but also a combination of various sporting and financial variables that more realistically reflect the optimizing behavior of managers (Plumley et al., 2017).

Management implications

Based on the presented literature, football club owners and managers can draw conclusions regarding their preferred ownership and governance model. First, the fully member-owned club seems to be an ownership model that only a few large global brands can use while sustainably remaining competitive. These clubs tend to generate significant sponsoring and merchandise revenues (Dietl & Weingaertner, 2011), and their revenue growth is based on a strong fan base that regularly opposes the entry of private investors. Required financial resources may be sourced from internal income or alternative financing instruments, such as fan bonds. In 2016, leading member-owned clubs include Real Madrid, FC Barcelona, Benfica Lisbon, and Schalke 04. Smaller member-owned clubs such as VfB Stuttgart, Werder Bremen, or Hamburger SV would be well advised to attract strategic advisors if they aim to regain national and international competitiveness on the basis of increased spending power.

Second, public listings have a positive impact on short-term revenues and national league performance, but neither a long-term revenue effect nor an effect on international performance in UEFA competitions could be determined (Baur & McKeating, 2011; Leach & Szymanski, 2015). Thus, this model may be beneficial for clubs from smaller leagues with a primary focus on national competitions (e.g. Denmark, Turkey, and Portugal) or German clubs that are prevented from privatizing due to the 50 + 1 rule (e.g. Borussia Dortmund). In contrast, top clubs from the 'Big Five' European leagues that are listed (e.g. Juventus, Olympique Lyonnais, AS Roma) may consider going private to attract additional resources. An exception to this conclusion may be Manchester United, which managed to go public in a foreign market and attract additional resources.

Third, private majority investors have been shown to drive team investment, sporting success, and revenues, but they lead to lower profitability and increase the volatility of revenues and the risk of financial mismanagement (Franck, 2010a; Franck & Lang, 2014; Lang et al., 2011). Owners will have the strongest incentives to invest if they own concentrated property rights and thus gain control over a club. However, this model critically depends on the alignment of interests between the club and the owner. For example, Silvio Berlusconi's AC Milan performed very well during his political career when he invested heavily in the club but suffered from poorer performance thereafter. Additionally, the model is subject to an increased risk of financial mismanagement, as evidenced by, for example, the Italian and Greek football scandals (Carmichael, Thomas, & Rossi, 2014). Thus, elaborate control mechanisms by the league and club management are required. This may be particularly the case for foreign investors who often have larger private resources that they may inject into a club but that may also follow different objectives that need to be aligned with the club's objectives.

Finally, this review paper has informed league administrators and the UEFA of the effects of regulations on team investments by private owners. It has been argued that both the UEFA FFP regulations and the German 50 + 1 rule reduce team investment (Franck, 2010b; Sass, 2016). Given the objective of the FFP rules of improving the financial health of European football, the UEFA may be credited with successfully reducing the incentives for owners to overinvest. However, it may be argued that the German 50 + 1 rule constitutes a competitive disadvantage for those German clubs competing in UEFA competitions, as they are prevented by the regulation from benefitting from private majority owners' spending power. Within the German league, the rule may also be criticized as benefitting clubs exempted from the rule. Notwithstanding the protection of sporting interests from the putatively conflicting interests of an owner, German league administrators would be well advised to further loosen or abandon the 50 + 1 rule and/or encourage a strict(er) enforcement of the UEFA FFP rules to foster the international competitiveness of its clubs.

Notes

1. The following analyses are based on revenue and wage data from Deloitte, DNCP, and club accounts; market value and transfer fee data from Transfermarket.de; and author calculations. The detailed results are available from the authors upon request and refer to first and second division football clubs in England, France, Germany, and Italy as of June 2012.

2. The figures are based on author calculations using public data for first and second division clubs in England, Germany, Italy, and France as published by Deloitte, DNCP, club accounts, and Transfermarkt.de. "Leverage" implies correlation rather than causation. Data summaries are available upon request.
3. See note 2.
4. As of 10 May 2016, Transfermarkt.de lists nine UEFA Champions League players worth more than €20 mn. A detailed list is available upon request.
5. A detailed overview of the private ownership of Ligue 1 and Ligue 2 clubs is available from the authors upon request.

Disclosure statement

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