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Management Quality of Professional Football Clubs

The Football Management (FoMa) Q-Score 2019

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Managing a football club has become much more complex in recent years as they have turned into football companies and a growing number of stakeholders have entered the industry. The clubs' capabilities to handle the increased complexity vary, turning management quality into a crucial competitive (dis-)advantage. This new edition of the FoMa Q-Score ranking builds on the framework established by ZÜLCH & PALME, 2017, which comprehensively assesses management quality along four dimensions, namely Sporting Success, Financial Performance, Fan Welfare Maximization and Leadership & Governance, in order to perform a longitudinal and cross-sectional analysis of the German and French professional football clubs' management quality. In fact, filled with measurable key performance indicators (KPIs), these dimensions intend to ob-jectively quantify the relevant success factors. Ultimately, the performance in all dimensions, referred to as FoMa Q-Score, indicates a club's management quality. Football managers concerned can make use of our findings and derive specific actions to benchmark their club's setups in order to make up ground or defend their competitive positions.

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List of Abbreviations

| Α | |
|--------|--|
| AG | Aktiengesellschaft (joint stock company) |
| AS | Association Sportive |
| В | |
| В | Branding |
| BQ | Board Quality |
| BSC | Berliner Sport Club |
| С | |
| С | Communication |
| CEO | Chief Executive Officer |
| CG | Corporate Governance |
| Co. | Company |
| CSR | Corporate Social Responsibility |
| D | |
| DFB | Deutscher Fußball Bund (German Football Association) |
| DFL | Deutsche Fußball Liga (German Football League) |
| E | |
| EA | En Avant ("forward", name of a French FC) |
| e.g. | for example (Latin: exempli gratia) |
| e.V. | eingetragener Verein (registered association) |
| ed. | editor, edition |
| et al. | and others (Latin: et alii) |
| etc. | et cetera |
| F | |
| FC | Fußball Club/football club/company |

| FCO | Football Côte-d'Or |
|------|--|
| FCN | FC Nürnberg |
| FMEF | Football Management Evaluation Framework |
| FoMa | Football Management |
| FP | Financial Performance |
| FSV | Fußball- und Sportverein (football and sports associations) |
| FWM | Fan Welfare Maximization |
| G | |
| G | Governance |
| GmbH | Gesellschaft(en) mit beschränkter Haftung (limited company) |
| GP | Growth/Profitability |
| н | |
| HSC | Hérault Sport Club |
| I | |
| I | Internationalization |
| i.a. | among others (Latin: inter alia) |
| i.e. | that is (Latin: id est) |
| IMUG | Institut für Markt-Umwelt-Gesellschaft e.V. |
| | (Institute for Market, Environment, and Society) |
| к | |
| KGaA | Kommanditgesellschaft auf Aktien (partnership limited by shares) |
| KKR | Kohlberg Kraus Roberts & Co. |
| KPI | Key Performance Indicator |
| KPMG | Klynveld Peat Marwick Goerdeler |
| L | |
| LG | Leadership & Governance |

| Μ | |
|-------|--|
| MA | Membership/Attendance |
| 0 | |
| OGC | Olympique Gymnaste Club |
| OSC | Olympique Sporting Club |
| Р | |
| р. | page |
| PCC | Player/Coach Characteristics |
| PD | Player Development |
| PL | Player(s) |
| pp. | pages |
| R | |
| RB | RasenBallsport (lawn ball games) |
| RC | Racing Club |
| Q | |
| Q | Quality |
| S | |
| SA | Société Anonyme (joint stock company) |
| SASP | Société Anonyme Sportive Professionnelle (joint stock company) |
| SC | Sport Club / Sporting Club |
| SCO | Sporting Clubs de l'Ouest |
| SM | Stade Malherbe |
| SPOAC | Sports Business Academy |
| SS | Sporting Success |
| SR | Social Responsibility |
| SV | Sport Verein (sports club) |

| т | |
|------|--|
| т | Transparency |
| ТР | Team Performance |
| TSG | Turn- und Sportgemeinschaft (physical education association) |
| U | |
| UEFA | Union of European Football Associations |
| v | |
| VfB | Verein für Bewegungsspiele (active games club) |
| VfL | Verein für Leibesübungen (physical exercise club) |
| VIP | Very Important Person(s) |
| | |

1 Starting Point

The field of European professional football has shown strong revenue growth in the last seasons, driven by the so called Big 5 leagues (DELOITTE, 2019). Indeed, total revenues for the Top 5 European leagues breached the € 15 billion threshold in the season 2017/2018, supported by increasing TV-right contracts. The latter trend is foreseen to continue in the coming seasons as new TV-right contracts were signed for the French Ligue 1 in the course of 2018 and will be effective from 2020 onwards (EURONEWS, 2018).

Actually, with the development of the professional football field in the last decades, football clubs have transformed themselves into football companies (FCs) (ZÜLCH & PALME, 2017). Although European FCs have traditionally been described as utility maximizers (SLOANE, 1971), contrary to traditional enterprises which are regarded as profit maximizers, FCs have more and more been incentivized to not only focus on their sportive performance, but also on their long term financial stability. In fact, despite the significant revenue growth, some FCs have still entered into financial troubles; for instance, SZYMANSKI (2014) recorded a decline in Premier league participants' profitability between 1986 and 2010, despite an average revenue growth of 16.7% over the period. This is one of the reasons why new regulations, such as the UEFA Financial Fair Play Regulation (FFP) have recently been introduced at European level (UEFA, UEFA Club Licensing and Financial Fair Play Regulations, 2015).

Indeed, the competition to acquire the best players has sharpened among the Top 5 leagues, leading to a strong inflation in transfer fees and football players' salaries. According to the think tank High Pay Centre, "since the creation of the Premier League in 1992, top footballers' salaries have mushroomed, rising by 1,508% to 2010" (BOYLE, 2012). The field's significant salary inflation has been achieved through the support of private and institutional investors. FRANCK & LANG (2014) showed for instance that money injections from private investors have enabled FCs to implement riskier investment strategies, in order to maximize their sportive results.

In fact, the professional football field has been characterized by a strong interaction between FCs' economic and sportive dimensions. As illustrated by BIANCONE & SOLAZZI (2012), improving the competitiveness of a team usually leads to an increase in the number of wins, which positively impacts the FC's revenue streams through higher match day sales, higher sponsoring revenues and/or larger TV-rights for instance, and strengthens its attractiveness for other players. Money injections from private investors have particularly developed in the French Ligue 1 in the aftermath of the French national team's first World Champion title in 1998 (L'ÉQUIPE, 1998). Regarding the German Bundesliga, the so-called 50+1 rule, preventing a single investor - be it private or institutional - from holding an absolute majority of shares still prevails, despite the ongoing discussions in the football community regarding its suppression, which have found a new dynamic since the elimination of the country's national team in the first round of the last World Cup (WELT, 2018). In fact, 50+1-arguers have blamed the rule for having prevented professional FCs from reaching their full development potential (ABENDZEITUNG, 2018), which by the way might have appeared as one part of the explanation of the national team's sportive underperformance.

Among the Top 5 European professional football leagues, the French Ligue 1 and German Bundesliga actually compete for the 4th place of the UEFA country ranking, determining the FCs' position in the draws for the two professional football competitions played at the European level, namely: the UEFA Champions League and the UEFA Europa League. Actually, the ranking aggregates the scores obtained by each European FC engaged in one of the above-mentioned competitions over a 5-year period (UEFA, Country coefficients, 2018). Even if the Bundesliga has historically dominated its French neighbour, recent years may suggest an inversion in that trend as French FCs outperformed German ones during the season 2017/18, leading the French association to record an annual UEFA coefficient of 11,500 versus 9,857 for the German one, which had never happened in the last decade (UEFA, Country coefficients, 2018). Moreover, looking at the aggregated 5-year UEFA coefficients, the historical gap between the Bundesliga and the Ligue 1 has uninterruptedly decreased over the four last seasons, from 27.428 points in 2015/16 to 13.429 in 2018/19.

Therefore, should the trend follow up in the next seasons, the Bundesliga's historical advantage over the Ligue 1 could revert in favour of the latter.

In order to assess both the evolution of the Management Quality of professional FCs and enable a comparison between the Bundesliga and the Ligue 1, we use the FoMa Q-Score theoretical framework, developed by ZÜLCH & PALME (2017), which was derived from the Balanced Scorecard concept (KAPLAN & NORTON, The Balanced Scorecard – Measures that drive performance, 1992), and encompasses the following four dimensions:

- 1. Sporting Success
- 2. Financial Performance
- 3. Fan Welfare Maximization
- 4. Leadership & Governance

Along each dimension, the several measureable KPIs used by the authors to assess FCs' Management Quality are transposed to the Ligue 1. To that extend, only marginal changes are considered, in order to take the French Ligue 1's specificities into account and conserve a cross-sectional comparability. KPI adjustments and methodological changes are respectively detailed in the subchapters 3.4.3. and 3.5.2.

Therefore, we build on previous FoMa Q-Score editions and extend them for the season 2018/19, considering both the German Bundesliga and the French Ligue 1. To our knowledge, it is the first attempt to assess the Management Quality of professional FCs along two dimensions for two different leagues: longitudinally over the seasons 2017/18 and 2018/19, and through a cross-sectional comparison between the Bundesliga and the Ligue 1 during the season 2018/19.

The remainder of this study is structured as follows: chapter two lays out the theoretical foundation from the perspectives of both existing management literature and sport management theory. It concludes with the theoretical framework assessing the management quality of FCs. Chapter three introduces the evaluation method and data analysis approach. Also, this chapter takes a look at the specifications of both the Bundesliga and the Ligue 1 members in the 2018/19 season. Then, the results regarding FCs' management quality are finally presented in chapter four. The latter is divided into four subsections, encompassing

a longitudinal analysis of the 2017/18-2018/19-season results for (1) the Bundesliga, and (2) the French Ligue 1, and (3) a cross-sectional analysis between the Bundesliga and the Ligue 1 for the season 2018/19. (4) Thereon, we provide an overview on the scoring model's implications, a discussion on the findings established previously and their limitations. Finally, chapter five summarizes the procedure which was conducted to derive the final results.

2 Literature Review and Scientific Approach

2.1 Preliminary Remarks

Whether the management of a company is considered successful or not generally depends on its level of goal achievement. Therefore, it is necessary to set up dimensions along which management performance can be assessed. Clearly, the objectives of enterprises vary strongly (financial vs. non-financial, internal vs. external, etc.) and it is challenging to come up with a universal approach. A framework which includes the most important factors seems to be most suitable for this analysis to cover the perspectives of a broad range of companies.

One management tool which fulfills this requirement is the so-called *Balanced Scorecard*, developed by ROBERT S. KAPLAN and DAVID P. NORTON in the early 1990s. The authors criticized the prevailing overemphasis of financial performance indicators and suggested a more balanced approach of financial and non-financial goals. The *Balanced Scorecard* is "perhaps the best known performance measurement framework [...]" (NEELY, GREGORY, & PLATTS, 1995, p. 96) and looks at performance from four different but highly interlinked perspectives (KAPLAN & NORTON, 1996) :

- 1. Financial Perspective
- 2. Customer Perspective
- 3. Internal-Business-Process Perspective
- 4. Learning & Growth Perspective

BRYANT, JONES, AND WIDENER (2004) were able to show a pyramidal hierarchy within the four dimensions, with the *Financial Perspective* being the highest one (see Figure 1). They conclude that the results of each perspective influence all higher-level perspectives. If, for

example, a company improves a certain attribute of the *Learning & Growth Perspective*, this directly effects the *Internal-Business-Process, Customer*, and finally *Financial Perspectives*.



Figure 1: Balanced Scorecard Perspectives

(own illustration, based on Bryant et al. (2004) and Kaplan and Norton (1996, p. 9))

For the topic at hand, the *Balanced Scorecard* serves nicely as a guideline due to three main reasons. Firstly, it was initially designed for top managers to get a comprehensive view of the most important business aspects, which is almost exactly what this analysis aims at, only this time coming from an external point of view (KAPLAN & NORTON, 1992, p. 71). Secondly, it is supposed to be adjusted for the respective industry- or company-specific competitive environments, such as the football industry in the present case (KAPLAN & NORTON, 1993, p. 134). Thirdly, it is highly practical as it ranks top in "most used management tools" among European companies, enhancing this working paper's relevance in terms of real life applicability (BAIN & COMPANY, 2013, p. 9).

The following literature review is guided by the Balanced Scorecard's four dimensions, which are explained in more detail in the respective sections of the following chapter. The general management part utilizes the framework in its initial design, addressing traditional companies with generic application. For the subsequent football-related analysis, several adjustments are to be made.

2.2 Literature Review of General Company's Management

At first one has to obtain a broad understanding of the factors influencing the capability to manage large companies. Those insights are thereafter used to transfer as much of this knowledge as possible on managing FCs. Since the general management literature is very comprehensive, the emphasis is put on meta-analyses¹ and selected, widely recognized academic papers. The review is structured by the *Balanced Scorecard*'s dimensions, namely *Financial, Customer, Internal-Business-Process* and *Learning & Growth*.

2.2.1 Financial Perspective

The highest perspective in the above mentioned pyramidal hierarchy and consequently the most important for managing most companies is the *Financial Perspective*. In the past, companies relied primarily on financial performance measures such as return on investment or economic value analysis. While those still play a vital role in modern companies, they are now broadly enriched with non-financial indicators (CHENHALL & LANGFIELD-SMITH, 2007, p. 266). In contrast to the following *Balanced Scorecard* perspectives, the *Financial Perspective* does not contain substantial levers which can be adjusted in order to improve performance. Rather, adjustments in the lower perspectives are necessary to drive overall financial success (BRYANT ET AL., 2004, p. 113).

KAPLAN AND NORTON (1996, pp. 48–50) reason that financial targets strongly depend on the respective stage of a company's life cycle. They distinguish three main stages: growth, sustain, and harvest. Growth businesses are situated at an early life cycle stage, in which their products and services still have a lot of growth potential. Their emphasis in terms of financial objectives lies on sales growth rates, indicating the success of expansion efforts. Companies in the sustain stage have a proven track record and are expected to defend or improve their market positions by exploiting (re)investments. The focus of those businesses

¹ A meta-analysis is a "[...] statistical analysis of a large collection of analysis results from individual studies for the purpose of integrating the findings." (GLASS, 1976, p. 3)

is put on market share comparisons and profitability measures. Lastly, companies in a mature life cycle stage aim to harvest the investments from the two previous stages without significant new investments. They aim to maximize cash flows, which can eventually be utilized for tapping into new markets. Certainly, companies may find themselves in between two stages or switching from one stage to another when new opportunities arise.

2.2.2 Customer Perspective

The *Customer Perspective* is the second dimension of the *Balanced Scorecard* and has a direct impact on the *Financial Perspective*. Companies increasingly understand the importance of the customer as source of financial success and consequently become more and more customer-oriented. Generally, customers tend to be concerned with matters of time, quality, performance, service, and cost (KAPLAN & NORTON, 1992, p. 73). Companies, therefore, aim to deliver products and services which fulfill those criteria and are consequently valued by customers. Valuable products and services are expected to enhance the main customer measures of satisfaction, loyalty, retention, and acquisition (KAPLAN & NORTON, 1996, p. 63). The influence of those customer-related factors on a company's financial performance is strongly supported by academic literature.

A popular study with Swedish companies indicated that there is a direct correlation between customer satisfaction and superior economic return (ANDERSON, FORNELL, & LEHMANN, 1994). By continuously improving their customer satisfaction measures, firms were able to achieve an average increase in net income of up to 12%. In addition to positive financial influences in terms of purchasing behavior (e.g. future-period retention) and accounting performance (e.g. profit margins), ITTNER AND LARCKER (1998) state that satisfied customers lead to an increase in the number of future customers due to positive word-of-mouth. This is especially valuable for modern companies in digitized environments, which are characterized by considerably higher customer acquisition costs than firms operating in the offline world (REICHHELD & SCHEFTER, 1998, p. 106). Therefore, companies have the ability to significantly reduce acquisition costs by satisfying existing customers and creating a buzz around their products and brands.

For companies it is essential to understand the sources of customer satisfaction in order to appropriately manage quality and communication. SPRENG, MACKENZIE, AND OLSHAVSKY (1996) disentangled the antecedents of customer satisfaction and boiled them down to two major factors: expectations and desires. The authors define expectations as "beliefs about a product's attributes or performance at some time in the future" and desires as "the levels of attributes and benefits that a consumer believes will lead to or are associated with higher-level values" (SPRENG, MACKENZIE, AND OLSHAVSKY, 1996, pp. 16–17). Exemplarily, a higher-level value could be protection, leading to a customer's preference for products which contain attributes of this certain desire. According to the model, customers are satisfied when their perceptions of a product's performance match or exceed both their expectations and desires.

When companies consistently manage to fulfill customers' expectations and desires, they have the opportunity to involve them in a long-term relationship and thus maximize customers' lifetime values. A customer's lifetime value can be understood as "a series of transactions between the firm and its customer over the entire time period the customer remains in business with the firm" (JAIN & SINGH, 2002, p. 35).

2.2.3 Internal-Business-Process Perspective

In order to deliver the appropriate value propositions to customers and meet financial objectives, a company needs to derive pivotal internal functions, which the organization must master (KAPLAN & NORTON, 1996, p. 26). Four generic processes that practically all companies have in common are innovation, customer management, operations and logistics, and regulatory and environmental (KAPLAN & NORTON, 2001, p. 92). Their characteristics and influences on company performance are further described in the following.

Innovation processes concern the development of new products and services as well as the exploitation of new market and customer segments (KAPLAN & NORTON, 2001, p. 93). ADAMS, BESSANT, AND PHELPS (2006, pp. 26–38) unfolded the necessary management processes for being a successful innovator, which, amongst others, include input management (e.g. resource and development intensity), knowledge management (i.e. generating and

sharing ideas and information), and commercialization (i.e. market introduction of innovations). Tapping into new products or markets is often rewarded by positive impacts on sales, profitability, and market share developments, which was verified by multiple academic meta-analyses (e.g. HAUSER, TELLIS, & GRIFFIN, 2006; ROSENBUSCH, BRINCKMANN, & BAUSCH, 2011).

Customer management processes serve the purpose of "expanding and deepening relationships with existing customers" (KAPLAN & NORTON, 2001, p. 93). Both academics and practitioners are increasingly interested in customer relationship management in order to lengthen the interaction with existing customers and thereby raise customer lifetime values, mentioned in the *Customer Perspective* of the *Balanced Scorecard* (CHENHALL & LANG-FIELD-SMITH, 2007, p. 271). REINARTZ, KRAFFT, AND HOYER (2004) structure the customer relationship management process into three parts: relationship initiation, maintenance, and termination. The authors, especially for the maintenance process, confirm a positive correlation with profitability, measured in terms of return on assets. One particularly relevant possibility for modern companies to maintain and expand relationships with customers is utilizing social media as a communication tool.

For operation and logistic processes, managers are involved with issues concerning the efficiency increase of crucial processes, such as supply-chain management and asset utilization (KAPLAN & NORTON, 2001, p. 93). Simply put, operations management allows insights into the inputs, throughputs, and outputs of different processes (CHENHALL & LANGFIELD-SMITH, 2007, p. 268). Clearly, increasing (decreasing) outputs (inputs) while keeping inputs (outputs) constant leads to a higher productivity level and ultimately to better processes. As the processes become more efficient, profitability is increased and management is able to allocate relevant resources to other areas.

Regarding the last aspect of the *Internal-Business-Process Perspective*, regulatory and environmental processes, the management is engaged in positioning the company as "good corporate citizen" and thereby acting in a responsible way (KAPLAN & NORTON, 2001, p. 93). From a regulatory point of view, it is reasonable to expect from a company and its

management to act within the general laws as well as the more industry-specific regulations. The subject of social performance has recently grown in importance and comprises "an organization's behavior on society including the broader community, employees, customers, and suppliers" (CHENHALL & LANGFIELD-SMITH, 2007, p. 277). The strategy to follow in this context is described by the term "Avoiding Bad" (KLEINAU, KRETZMANN AND ZÜLCH, 2016, p. 77). A meta-analysis, incorporating 30 years of cross-industry research, has proven that a higher level of corporate social performance goes hand in hand with an increase in financial success (ORLITZKY, SCHMIDT, & RYNES, 2003). However, there are also articles with findings that mitigate this relationship (e.g. MCGUIRE, SUNDGREN, AND SCHNEEWEIS, 1988, p. 869).

2.2.4 Learning & Growth Perspective

The bottom of the pyramidal hierarchy within the *Balanced Scorecard* is the *Learning* & Growth Perspective. It influences the three higher dimensions and can, therefore, be considered as foundation and enabler of future success. The main components of the Learning & Growth Perspective are intangible assets, which have significantly grown in importance in the Balanced Scorecard (CHENHALL & LANGFIELD-SMITH, 2007, p. 274). It was shown by CHEN, CHENG, AND HWANG (2005, p. 174) that intellectual capital positively influences profitability in present and future periods. KAPLAN AND NORTON (2004, p. 45) synthesized three drivers of the perspective: human, informational, and organizational capital. Firstly, informational capital mainly concerns IT-systems and networks which support a company's strategy. Secondly, human capital relates to all relevant characteristics of the people employed in the company. These can range from relevant skills to specific know-how. Thirdly, organizational capital affects the company's capability to drive and retain change processes, which are required to implement a strategy, and comprises factors such as leadership, organizational structure, and culture. Since the IT-infrastructure is highly firm-specific and can only be poorly evaluated from an external perspective, the emphasis is put on the two latter drivers in the following.

As foundation for human and organizational capital, the principal-agency theory plays a major role in helping to understand the involved and interlinked factors. An agency rela-

tionship is defined as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (JENSEN & MECKLING, 1976, p. 308). The general idea of this theory is that ownership and control are separated. This is usually the case for listed companies, in which the shareholders act as principal and the board of directors as agent. Naturally, assuming both parties aim to maximize their own utility functions, they have diverging interests (e.g. shareholder value vs. revenue increase). Therefore, it is necessary to create incentives such that both parties strive for the same objectives and set up monitoring mechanisms in order to control the agent by limiting their power. This leads to the existence of agency costs, which can be reduced by employing people with similar objective functions and establishing efficient governance² structures.

Generally, there are several ownership types which can be differentiated. One ownership type, institutional ownership³, and its influence on firm performance have received considerable attention by scholars. For example, KRIVOGORSKY (2006) found in an investigation among continental European companies that the percentage of institutional ownership is positively related to profitability, measured as return on equity. It is argued that institutional governance increases the principal's monitoring capabilities. Building on this, ELYASIANI AND JAI (2010, p. 619) add that not only the level of institutional ownership but also institutional shareholding stability has a positive effect on firm performance. They reason that the longer an institution is invested in a firm, the greater the principal's knowledge of and involvement in the firm can become.

The owners of a company or their elected representatives, often in combination with further stakeholders and independent persons, constitute the supervisory board, which monitors the management. The supervisory board is supposed to provide important resources, for example in the form of advice or external connections, rationally monitor the

² Corporate governance relates to all "procedures and processes according to which an organization is directed and controlled". (OECD, 2005)

Institutional ownership refers to " [...] the amount of a company's available stock owned by mutual or pension funds, insurance companies, investment firms, private foundations, endowments or other large entities that manage funds on the behalf of others." (INVESTOPEDIA, 2017)

management, and elect the chief executive officer (HILLMAN & DALZIEL, 2003, pp. 384–386). Since independent board members⁴ have a less emotional point of view and are certainly equipped with external resources, it seems logical that a positive correlation between their representation in the supervisory board and financial performance is indicated by research (KRIVOGORSKY, 2006, p. 191). This line of argumentation was similarly used in a meta-analysis, investigating the relationship between supervisory board size and financial performance (DALTON, DAILY, JOHNSON, & ELLSTRAND, 1999)⁵.

2.2.5 Implications for Assessing Management Quality of Football Clubs

The review of the general management literature based on the *Balanced Scorecard*'s four dimensions has shown that managing large companies heavily depends on a multitude of factors, ultimately determining a company's financial success in the long-term. A broad range of criteria from the *Financial, Customer, Internal-Business-Process,* and *Learning & Growth Perspectives* have to be considered both strategically and on a day-to-day basis. Successful management means that the critical success factors have been identified, are under continuous observation, and regularly lead to new impulses.

As much of the gained knowledge from this chapter as possible is to be transferred to managing FCs and incorporated in the final model to assess management quality of the Bundesliga teams. However, due to football industry's special characteristics, adjustments in terms of the relevant management dimensions as well as certain correlations within these dimensions are necessary.

2.3 Determination of Football Club's Managerial Dimensions

2.3.1 From Management to Sports: a First Reconciliation

The *Balanced Scorecard* was a very suitable and efficient framework to determine the relevant management dimensions of traditional companies and raise awareness for some of the interdependencies within them. Several academic investigations have been made,

⁴ Independent board members generally do not have strong family or business ties to company management or controlling shareholders (KRIVOGORSKY, 2006, p. 187).

⁵ DALTON, DAILY, JOHNSON, & ELLSTRAND (1999) found out that a higher number of board members leads to superior market-based and accounting-based financial performances, which is due to the increased access to resources, such as external capital, and the higher level of counseling to the executive team.

applying the *Balanced Scorecard* in sport-related settings (e.g. VINCK, 2009). Some of these studies utilized the tool's original four dimensions and thereby failed to take the special characteristics of FCs into consideration (e.g. BECSKY, 2011, p. 30). Other studies adjusted the framework for the football environment but did not provide adequate explanation for origin of the new perspectives and reasons for their incorporation (e.g. KELLER, 2008, pp. 313–316).

In one recent case, an adjusted version of the *Balanced Scorecard* was actually applied at a Bundesliga club in practice. When the former CEO of IBM Germany, Erwin Staudt, became president of then-Bundesliga member VfB Stuttgart in 2003, he implemented the internal management tool together with the management consulting firm Horváth & Partners (HANDELSBLATT, 2004). The aim of this initiative was to improve controlling and management capabilities of the FC by introducing goals and strategies for all dimensions and making the most important success factors traceable (WEHRLE & HEINZELMANN, 2004, p. 350). While this shows the theoretical and practical relevance of internally professionalizing an FC's management by applying the *Balanced Scorecard*, the study at hand strives to approach the topic from a strictly external perspective.

The equivalent of traditional companies' products and services on the part of FCs is the sporting performance. The initial question which traditional companies must ask themselves in the *Internal-Business-Process Perspective* of the *Balanced Scorecard* (see Figure 1 on page 5) is: **"What must we excel at?"**. FCs first and foremost have to deliver high quality on the pitch and excel at the sport-related factors enabling it. **An evaluation of management quality in FCs cannot be undertaken without incorporating a sport dimension because it constitutes the centerpiece of each FC and is assessed by the public on a daily basis (KELLER, 2008, p. 56). Therefore, the** *Internal-Business-Process Perspective* **is adjusted to a sport dimension, which better suits the management of football companies (1**st **Dimension:** *Sporting Success [SS]*).

The football literature is dominated by the broad consent that, in the case of modern FCs, sport objectives are accompanied by financial goals. Since the *Financial Perspective* is also part of the traditional *Balanced Scorecard*, there is no need to make any adjustments.

The interdependence of sport and finance perspectives is extensively reviewed by KELLER (2008, pp. 49–81). The author states that the two perspectives are highly correlated and strongly depend on each other. An improvement in sporting performance goes hand in hand with an increase in financial performance due to factors such as higher merchandising and TV revenues or new sponsorship agreements. Resulting financial resources, in turn, can be used for investments in team squad or youth academy, which will under normal circumstances eventually lead to better sporting performance. Thus, sport and finance dimensions form a spiral, which can turn both directions, upwards and downwards. This effect has been verified by research. Examining the top 30 EU FCs (based on revenues), ROHDE AND BREUER (2016, pp. 12–14) provide evidence for the highly positive influence of sporting performance on revenues. Simultaneously, the data shows superior sporting performance in terms of league points per game caused by additional team investments, which are enabled by an increase in revenues. Nonetheless, the relative importance of the two dimensions is not necessarily the same and has been subject to scientific investigations. In a sophisticated statistical model analyzing the behavior of professional FCs from the Spanish and English top leagues the FCs are found to rather act in a win-maximization than profit-maximization way (GARCIA-DEL-BARRIO & SZYMANSKI, 2009). As German FCs directly compete with those from Spain and England and resemble them on many levels, there is no reason to assume any contrasting behavior in the Bundesliga. This assumption is supported by a recent survey among top managers from all 18 Bundesliga clubs (KAWOHL, ZEIBIG, & MANZ, 2016, p. 13). In the short-run, they report a strong emphasis on sporting performance while only aiming to break even in financial terms. In the long-run, optimizing business-related factors becomes increasingly important, though still subordinated to sporting success (2nd Dimension: Financial Performance [FP]).

"The pressure is unbelievably high because every third day [we] are under review, [and] have to deliver in front of the eyes of the public. That's not the case in any corporation in the world." (HORIZONT, 2017, p. 20) This quote by HANS-JOACHIM WATZKE, CEO of Borussia Dortmund, sums up the extraordinary status the public, and especially the fans, have in the football industry. Managers of the other Bundesliga clubs agree with this view by stating that "without fans, everything is nothing" (KAWOHL ET AL., 2016, p. 13). Especially in the modern, commercialized football industry, FCs are highly dependent on fans and spectators to generate merchandising, ticket, and TV revenues. Therefore, it can be concluded that the ultimate purpose of FCs is to serve their fans. Recent research supports the stance of a third dimension in the target system of FCs. In addition to win and profit maximization, MADDEN (2012) statistically discovered a further objective, namely fan welfare maximization. The author attributes this effect to the special characteristics adherent to FCs, in which "fans (or supporters) have a particular allegiance to a club, are the consumers of its products, and directly influence club policies" (MADDEN, 2012, p. 560). Fan welfare maximization orientation was particularly strong for Bundesliga clubs. The fundamental reason for this is the prevalent 50+1 rule in the German Football Association's statutes (DFB, 2017). It determines that either at least 50% plus one additional vote of a club's voting rights are in the hands of a registered association (e.V.) or similar organizational structures are in place, guaranteeing the same dominating status. Thereby, single external shareholders are prevented from accumulating too much power, which consequently leaves a lot of rights with the e.V. and the fans. An equivalent rule prevailed in the Ligue 1 until 1999, which imposed FCs to be partly in the hand of an association, i.e. for at least one third of their voting rights; however, this rule was then abandoned to make the overall Ligue 1 more attractive for new investors (DERMIT-RICHARD, 2013). The adoption of three dimensions in the target system of FCs has recently been used by other investigations as well (e.g. JUSCHUS ET AL., 2016a). Based on these findings, the *Customer Perspective* of the traditional *Balanced Scorecard* is slightly adjusted to an increased focus on fans (3rd Dimension: Fan Welfare Maximization [FWM]).

The previous remarks in this chapter have revealed a target system for FCs, consisting of the three dimensions *Sporting Success, Financial Performance,* and *Fan Welfare Maximization*. All three objectives have to be properly managed and weighed out against each other, which is becoming increasingly challenging in the complex football environment. Conventional wisdom has it that the professionalization of management skills and structures lacks behind the intense commercialization in the industry (HOLZMÜLLER, CRAMER, & THOM, 2014, p. 69; HÜPPI, 2014, p. 86). Practical examples from the recent past, such as

frequent changes in the leadership team of Hamburger SV or the unclear compensation structure of Mainz 05's president Harald Strutz support this view. Therefore, a fourth dimension, which is concerned with an FC's organizational and human capital, is part of the following considerations. It is largely in line with the *Learning & Growth Perspective* from the traditional *Balanced Scorecard*, but renamed for this specific purpose (**4**th **Dimension**: *Leadership & Governance [LG]*).

Figure 2 summarizes the findings from this chapter by illustrating the four relevant football club's managerial dimensions *Sporting Success, Financial Performance, Fan Welfare Maximization*, and *Leadership & Governance*. It represents a guideline for the following literature review of FC's special characteristics. In order to analyze the particularities of FCs, evidence not only from the Bundesliga but from all European leagues is used.



Figure 2: Managerial Dimensions of Football Clubs (own illustration)

2.3.2 Sporting Success

The most important *Sporting Success* reference for each FC is its overall professional team performance. In the 2018/19 season, there are four main club competitions, which dominate the German football landscape. Nationally, the clubs compete in the Bundesliga, Germany's primary football league with 18 teams, and the DFB-Pokal, a knockout cup with

64 teams including all professional and additional amateur clubs. Internationally, six teams are able to qualify for either UEFA Champions League or UEFA Europa League, depending on their performance in the previous season. When it comes to the French professional football landscape, FCs take part in five competitions, among them three occurring at the national level: (1) the Ligue 1 championship, which is the French equivalent of the Bundesliga, opposes 20 clubs over the season, (2) the Coupe de France, which corresponds in Germany to the DFB-Pokal, engages over 4,000 professional and amateur clubs across the country, and (3) the Coupe de la Ligue, engaging only professional FCs. At the European level, French FCs may take part in the UEFA Champions League or UEFA Europa League, depending on their performance in the previous season.

As the Bundesliga position at the end of each campaign is one of the decisive influences on an FC's immediate future, it can be considered as the most significant club competition (KELLER, 2008, p. 117). Places one to six qualify for one of the two international club competitions; place 16 goes along with a relegation match against the third-place finisher from the 2. Bundesliga, while places 17 and 18 imply a direct relegation. The DFB-Pokal as Germany's second main club competition is a chance for FCs to earn additional revenues by reaching subsequent rounds and to qualify for the UEFA Europa League if they manage to win the cup⁶. Qualifying for the international club competitions significantly increases revenues but also requires additional player capacities because the number of matches and associated travels get higher. In the French Ligue 1, the 2 teams ranking at the top of the table at the end of the season are qualified for the Champions League tournament, while the FC ranked 3rd takes part in the tournament's qualification round. The 2 teams ranking at the bottom of the table (i.e. at places 19 and 20) are relegated in the second division, i.e. the Ligue 2 or Domino's Ligue 2, and are replaced by the teams established at the 1st and 2nd places of the second division. A play-off game opposes each year the club ranked at the 17th place in the French Ligue 1 and the club ranked at the 3rd place in the French Ligue 2;

⁶ In case the cup winner has already qualified for an international competition through its Bundesliga performance, the additional participation right for the UEFA Europa League is allocated to the 7th place of the Bundesliga.

the winner of the match either stays, or respectively gets access to the French first professional division.

Taking the previous elements into account, to maintain comparability across countries, we adopt an analogical rationale for the evaluation of French professional FCs; we thus only take the Ligue 1 championship and the Coupe de France into account to assess FCs' management quality, i.e. keeping the Coupe de la Ligue outside of the spectrum at the KPI level.

Given the differences in financial resources, not all FCs pursue the same targets. According to KAWOHL ET AL. (2016, pp. 18–19), FCs can be categorized into four general groups, based on their strategic positioning. The first group, International Players such as FC Bayern München and Borussia Dortmund, is active on the global transfer market and aims to keep up in financial terms with the international competition, especially from the English Premier League. National Traditional Clubs (e.g. Borussia Mönchengladbach and Eintracht Frankfurt) form the second group and are characterized by a strong regional rootedness as well as a long-term establishment in the Bundesliga. They aim to maintain their regional embeddedness and fight for the places behind the international players. The third group comprises the likes of SC Freiburg and 1. FSV Mainz 05, FCs which benefit from their strong youth academies and depend on regularly selling their best players to more successful teams. These so-called Training Clubs strive to become less dependent on big financial transfer injections by constant sporting success. Lastly, the group of Project Clubs has emerged in the recent past and managed to permanently settle in the Bundesliga. FCs such as RB Leipzig and VfL Wolfsburg are the result of long-term plans to establish FCs in the Bundesliga, often to satisfy business goals of the owners (e.g. Red Bull in Leipzig and Volkswagen in Wolfsburg). A complete overview of all FCs' group allocations can be found in Table 10 on page 60. A similar classification was conducted for the Ligue 1 participants. Here, the Paris Saint-Germain and the Olympique Lyonnais were for instance clustered within the International Players, while FCs such as the AS Saint-Etienne or the Girondins Bordeaux were gathered among National Traditional Clubs; contrary to the Bundesliga, the Ligue 1 does not encompass any Project Clubs, and therefore, FCs such as RC Strasbourg or Amiens SC were grouped within *Training Clubs*.

In addition to their individual targets, the FCs can distinguish the evaluation of their sporting performance along four time horizons, namely myo- (single matchday), micro- (one campaign), meso- (two to three campaigns), and macro-cycle (more than three campaigns) (KELLER, 2008, p. 120). This seems reasonable considering the example of an FC which has recently been promoted to the Bundesliga and has to balance out the long-term goal of establishing itself in the first division (macro-cycle) with the short-term goal of maximizing the points on each matchday (myo-cycle).

Two main ingredients of an FC's sporting success are its players and coaches. FRITZ (2006, p. 162) investigated the influences of these two factors on sporting performance. Amongst others, he figured out that investments in higher-quality players, which he measured in relative team salary, significantly lead to better performance on the pitch. Additionally, FCs benefit from a stable core team, meaning that a limited number of players, which are highly familiarized with their team-mates and the tactical formations, are responsible for the majority of playing time. Regarding the employment of coaches, FRITZ found similar evidence. The number of managerial dismissals is negatively correlated to sporting success, which implicitly means that ensuring consistency by giving a coach enough time to implement his concept should be a priority of FCs. This is in line with a finding from AUDAS, DOBSON, AND GODDARD (2002, p. 643), who prove the same effect in the English football leagues. They state that, while there is a higher variance in sporting performance after a within-season managerial change, overall, FCs perform worse in the remainder of the same season. Higher variance, therefore, explains why sometimes a managerial change within the season leads to an improved sporting performance. Nonetheless, from a strategic point of view a within-season change is suboptimal as the sustainable long-term development of the FC suffers (KAWOHL ET AL., 2016, p. 13). Other researchers have examined the influence of the coach's prior experiences on performance. DAWSON AND DOBSON (2002, p. 480) figured out that in the English Premier League there exists a positive correlation between a coach's career points ratio as coach and the reduction of technical inefficiencies, which ultimately results in higher sporting performance (FRICK & SIMMONS, 2008, p. 599).

Especially Training Clubs, but also those from the other three categories of FCs, aim to continuously develop their players and thus benefit from either increased sporting success or additional transfer revenues (Relvas, LITTLEWOOD, NESTI, GILBOURNE, & RICHARDSON, 2010, p. 179). The most systematic and integrated development approach is to accompany players from early on in an FC-internal youth academy and support them in becoming part of the professional team. Bundesliga clubs have recently intensified their efforts to seize this opportunity by almost tripling their investments in academies, from €62 million (2006/07 season) to €177 million (2017/18) (DFL, 2019, p. 23). Not only did the investments grow in absolute terms during this period but also in relation to the total expenses, indicating the increased importance of developing players in-house. In 2001, the DFL, responsible for organizing and marketing the Bundesliga, decided that German FCs are obliged to operate youth academies in order to obtain a license for playing in the Bundesliga (DFL, 2016, p. 7); even if no equivalent obligation exists for French Ligue 1 participants, which even need to apply to obtain the right to develop an academy (LFP, 2017) the 20 FCs participating in the Ligue 1 championship during the season 2018/19 have all developed their own so-called "centre de formation". In Germany, youth academies are regularly reviewed and certified by the external agency Double PASS (DFB, 2015). For that purpose, eight categories are incorporated in the final score, with dimensions ranging from coaching staff to off-pitch support and education. One of the most important criteria within this certification process is efficiency and permeability, which amongst others measures the number of youth players reaching the professional team and the amount of national players in the youth teams.

2.3.3 Financial Performance

In Germany, in addition to the youth academies, FCs' financials are also under examination as part of the DFL's yearly licensing procedure (DFL, 2016, pp. 21–33). Financial insights are important factors for evaluating the FCs' capabilities of maintaining the professional team activities and, amongst others, include the analyses of income statements and balance sheets (LITTKEMANN, OLDENBURG-TIETJEN, & HAHN, 2014). Some researchers have argued that FCs are not mainly concerned with earning significant profits but rather with ensuring constant survival by any means (e.g. ANDREWS & HARRINGTON, 2016). Generally, this survival can be guaranteed either by operating profitably and thereby being able to react to unexpected developments or by having an investor on board who balances out potential losses. However, the *UEFA Financial Fair Play Regulations*, which are relevant for all clubs competing in international competitions and therefore play a vital role for the majority of Bundesliga clubs, have comprised a "break even" clause since 2014 (UEFA, 2015). This clause "require[s] clubs to balance their spending with their revenues and restricts clubs from accumulating debt". Capital from owners or related parties can only limitedly compensate for operating losses. Therefore, operating sustainably in financial terms is a necessity for FCs and provides them with the ability to make investments in team and infrastructure, which ultimately improves sporting success.

Partly due to its rigorous licensing procedure, the Bundesliga is considered as one of the most stable European football leagues in terms of financial sustainability (LITTKEMANN ET AL., 2014, p. 1). The revenue and expenditure components of the income statement and their year-on-year development are illustrated in Figure 3 and Figure 4, respectively. Overall, the Bundesliga clubs accumulated revenues of €3.81 billion in the 2017/18 season, which is 13% more than in the previous one. The largest and simultaneously strongest growing revenue contributors were those of advertising, incoming transfer fees, and media receipts. Further major sources of FCs' revenue streams, namely other takings and merchandising, contributed to a lesser extent to the overall revenue increase, showing only 1-digit year-on-year growth rates, while match day revenues declined by 2% compared to the previous season.



Figure 3: Bundesliga Revenue Mix 2017/18 (own illustration, based on DFL (2019))

Such as in the season 2016/17, the revenue performance in the season 2017/18 was accompanied by a slightly unbalanced increase in expenditures of 15%, resulting in a total of \leq 3.71 billion. Since expenditures grew faster than revenues, the Bundesliga as a whole experienced a 31.2%-decline in its after-tax earnings to \leq 102 million. At an FC-level, five FCs generated net losses in the season 2017/18 (DFL, 2019, p. 40), i.e. two more than in the season 2016/17. The expenditure side of Bundesliga clubs is dominated by investments in players and coaches (salaries and transfers), accounting for more than half of the total expenses (58.1%). Transfers were also the fastest-growing expenditure sub-component, which goes hand in hand with the strong increase in transfer activities in the Chinese and English football leagues, fueling the entire transfer market. The remainder of expenditures consists of match operations, administrative staff, investments in young players, amateurs, and academies, and a rather large block of other expenditures.



Figure 4: Bundesliga Expenditure Mix 2017/18 (own illustration, based on DFL (2019))

Looking at the French Ligue 1, total revenues ranged €1.2 billion lower than Bundesliga ones at €2,532 million in the season 2017/18. This represents a 34%-increase compared to 2016/17. In fact, the Ligue 1 benefited from larger revenues from media receipts (+€589 million), match revenues (+€71 million), and advertising (+€8 million), which over-compensated the cumulated €31 million-decline in other takings and income from transfers.



Figure 5: Ligue 1 Revenue Mix 2016/17 (own illustration, based on DNCG (2018))

On the other side, expenditure ranged at €2,357 million, representing an under proportional increase of 23% compared to the previous season, which drove the Ligue 1's operating profitability improvement from a €24 million loss in 2016/17 to a profit of €175 million in 2017/18. The increase in expenditure was mainly driven by increased personnel costs,



as well as transfers. Overall, five clubs recorded losses over the season 2017/18; among those, the OSC Lille experienced the largest one, ranging over € 100 million over the season.

Revenues and expenditures are highly dependent on the other two dimensions of the target system, *Sporting Success* and *Fan Welfare Maximization*. FRITZ (2006, p. 184) found out that the sporting performance of current and previous seasons has a significant effect on revenues. This is intuitive as a higher rank at the end of the season leads to increased media revenues and attracts new sponsors. The investigation also reveals the positive influence of a larger fan base on the financial performance, which can be explained through higher match and merchandising revenues as well as an increased attractiveness for sponsors.

Next to the analysis of the income statements, a thorough examination of the Bundesliga clubs' balance sheets also reveals important financial insights. Key performance indicators such as the equity ratio (total equity in relation to total assets) or total debt level allow for crucial conclusions about the financial health of an FC. This information is of high interest for several stakeholders, such as sponsors, fans, or public authorities in order to assess an FC's long-term survival capabilities (ANDREWS & HARRINGTON, 2016, p. 69). However, due to the varying legal forms and ownership structures, the transparency level of FCs is highly diverse. For example, German FCs with the legal form of e.V. have very few

Figure 6: Ligue 1 Expenditure Mix 2017/18, (own illustration, based on DNCG (2019))

disclosure obligations besides basic revenue and expenditure records (DEUTSCHER BUNDES-TAG, 2012, p. 8). While some FCs proactively pursue an open and transparent disclosure policy, others hide their financials in their owners' annual reports or simply pass on any detailed, financial publications. This situation of asymmetric information within the industry ultimately increases the risk of mismanagement (DEUTSCHER BUNDESTAG, 2012, p. 10).

In the football industry, financial performance is also closely related to an FC's brand. BAUER, SAUER, AND SCHMITT (2005) found out that brand equity, which can be defined as "the added value a brand contributes to a product or service" (p. 498), has a significantly positive effect on FCs' economic success. Especially brand awareness, incorporating a brand's recall and recognition measures, plays a vital role in determining financial success as one of brand equity's main components. In addition, a second study shows that brand equity dimensions, in this case consumers' associations with regards to a club (brand image), positively influence fan loyalty, an important factor of the *Fan Welfare Maximization* dimension (BAUER, STOKBURGER-SAUER, & EXLER, 2008, p. 220). Establishing, maintaining, and fostering strong, positive relationships with their fans is a crucial challenge for FCs and can be improved by maintaining an appropriate brand image.

The topics of transparency and branding are likely to increase in the near future as FCs strive to exploit international markets around the world. When getting involved in activities abroad, FCs aim to build up and maintain an international brand, which then can be monetized in the form of new sponsorship deals and additional merchandising revenues (KAWOHL ET AL., 2016, p. 20). *International Players* as defined in Chapter 2.3.2 have already started to set up own offices in different parts of the world, including Borussia Dortmund in Singapore or FC Bayern München in New York City (BORUSSIA DORTMUND, 2014; FC BAYERN MÜNCHEN, 2014). But also smaller clubs like Eintracht Frankfurt, which already went on trips to the United States, have identified the financial opportunities of an internationalization strategy (EINTRACHT FRANKFURT, 2017). To enter new markets, KAWOHL ET AL. (2016, pp. 21– 22) differentiate four approaches, which are the clubs' physical presences in local markets (e.g. training camps), use of digital media (e.g. English YouTube channels), cooperation with global sponsors (e.g. joint international events of clubs and main sponsors), and support of youth development programs (e.g. local football schools).

2.3.4 Fan Welfare Maximization

With trends like the increased internationalization, the balancing act between commercialization and satisfying traditional fans becomes an increasing challenge for FCs (QUITZAU, 2016). So far, the Bundesliga clubs were able to maintain close ties with their most loyal fans, the members, which is indicated by continuously increasing membership numbers since the 1990s (PRIGGE, 2015, p. 2). The author emphasizes in his article the special relationship between German FCs and their members. He argues that, historically, the Bundesliga consisted solely of registered associations (e.V.), in which the members had significant voting influence via the members' assembly, the clubs' central decision bodies. In the 2018/19 season, only five FCs with the traditional form remain, whereas the remainder operates under different corporation forms. However, due to the 50+1 rule, briefly described in the previous chapter, the members still have substantial influence in FCs' decision-making processes.

Not only do the members have decision-making power, they also regularly enjoy priority access to match tickets. Consequently, many of the spectators in the stadiums are also club members. Therefore, the general match attendance can point out the overall satisfaction of the members with their preferred FCs. In terms of match attendance, the Bundesliga as a whole is considered the strongest football league worldwide (DFL, 2019, p. 52). In the 2017/18 campaign, on average, 43,879 spectators attended the Bundesliga matches, exceeding 40,000 for the tenth consecutive time. This appears to be almost twice as much as in France, despite the 15%-year on year growth regarding match attendance in France, as 23,019 spectators were present in the French stadiums on average in 2017/18. A study published by the LFP showed that French stadiums still lack good accessibility and gastronomical services (LFP 2017). Moreover, in its latest strategic plan, the French Ligue 1 organization body put the focus on the strengthening of FCs' B2C relations, to improve fans' experiences in- and outside stadiums, taking the Bundesliga as a benchmark (LFP, 2017). Actually, one specific study investigates the relationship of an FC and its fans in detail.
HEIDBRINK, KOCHANEK, BRANDS, AND JENEWEIN (2014) had a closer look at Bundesliga member Schalke 04. Interviews with both club and management representatives were conducted and revealed that the dependence goes both ways. On the one hand, fans feel highly emotional about their preferred FC and consider it as part of their lives. On the other hand, these strong feelings and extraordinary levels of loyalty are important drivers for the FC's brand, which makes maintaining a stable fan base a key priority. One way to foster relationships with their fans is for FCs to regularly communicate and interact with them.

The fans as brand assets of FCs and the members as their democratic basis require a carefully planned communication approach to strengthen trust and loyalty levels as well as to build up understanding for the FCs' actions (BURK, GRIMMER, & PAWLOWSKI, 2014, p. 34). In their study, the researchers investigate the sources used by more than 11,000 members of Bundesliga club Hamburger SV to receive information. The results reveal that, with regards to club-owned communication tools, the webpage (more than 90% of members at least sometimes visit it) is still the most commonly used source. However, with an increasing number of digital natives caused by demographic change in Germany, it seems likely that in the near future social media and mobile applications (at the moment ca. 35%-40% of members use it at least sometimes) gain in importance. This argument is supported in a broad study among sport managers conducted by the SPOAC-Sports Business Academy (SPOAC, 2017). The managers consider digital media, including social networks such as Snapchat with its great reach, as by far the strongest revenue growth segment within the next five years.

When FCs engage in social media activities, they aim to establish and maintain emotional fan loyalty, which is manifested in FC-specific fan cultures and ultimately translates into stronger brands (KAINZ, OBERLEHNER, KREY AND WERNER, 2014, p. 45). According to the authors, four ingredients for successful social media communication can be differentiated, namely multimediality, interaction, cross-mediality, and activation. In practical terms, this means that FCs should offer their fans exclusive content in different forms (i.e. text, photo, video, etc.) and on multiple channels (e.g. Facebook, Instagram, Snapchat), encouraging them to get involved. Aside from social media, FC managers see a lot of growth potential in digital innovations along the customer journey (KAWOHL ET AL., 2016, pp. 25–30). These digital innovations can range from stadium experience enhancements (e.g. free stadium WLAN for spectators) to the introduction of entirely new fan experiences (e.g. provision of virtual reality-enabled videos). While the aforementioned approaches are rather closely linked to an FC's core business, other innovations (e.g. involvement in eSports activities) are less so. At the moment, most of the Bundesliga and Ligue 1 members are in a hesitating and observing state with regards to digital innovativeness. However, according to the SPOAC survey (2017, p. 14), exploiting new business areas through digital business models and new technologies is the top requirement among sport managers in order to maintain future viability. Therefore, it seems likely that those FCs which experiment with digital innovations from early on will eventually be rewarded for those efforts.

FCs can also demonstrate innovativeness in a completely different field, which has increased in importance with the ongoing commercialization of the industry. The topic of corporate social responsibility (CSR) in modern football can be seen as a counterbalance to the partly irrational economic and ecologic developments (LAUFMANN, 2016). LAUFMANN, who holds the position of director of CSR as well as fan and member support at SV Werder Bremen, created a case study about CSR at the FC, in which she quotes Klaus-Dieter Fischer, initiator of many CSR activities. The club's honorary president stated that SV Werder Bremen's aim is to "give something back to the region" (LAUFMANN, 2016, p. 202). MEYNHARDT AND FRANTZ (2016) demonstrate that an FC's ability to contribute to the public good indeed goes far beyond its sporting success. FCs can have a significant impact on deeply-rooted regional aspects of culture and identity, as shown in their investigation of Bundesliga member RB Leipzig. But CSR is not limited to social aspects only. Sustainability in a broader sense, including ecological and economic factors, can be covered to holistically provide benefits for a region. The importance of this topic is unambiguous, evidenced by the fact that first studies of the FCs' sustainability activities have been published, with the one from IMUG (2016), a consultancy firm for social and ecological innovations, being by far the most comprehensive one. FCs benefit from CSR activities by satisfying external and internal

stakeholders, which can lead to concrete implications such as fan base increase or acquisition of new sponsors (LAUFMANN, 2016). The topic of CSR is likely to increase in the near future as commercialization continues to dominate the Bundesliga. Regarding the Ligue 1, research shows that CSR is still being regarded as a communication tool for FCs to legitimate their different actions (FRANCOIS, 2012). Nevertheless, the LFP pursues the objective of structuring an "ambitious CSR plan" at the league level (LFP 2017). The Ligue 1 thus still lags behind the Bundesliga despite the creation of foundations (OL, 2018) (FONDATION.ORG, 2018) and the development of social initiatives (LFP, 2018); the current advantage of the German football league is also reflected in the annual social responsibility ranking published by RESPONSIBALL, where the Ligue 1 ranks 11 out of 25 among analyzed leagues, while the Bundesliga ranked 3rd, just behind the Danish Superliga and English Premier League (RESPONSIBALL, 2018).

2.3.5 Leadership and Governance

As the previous chapters have shown, the target system of FCs has become increasingly sophisticated in the recent past. Finding the right balance among the three targets and satisfying their respective stakeholders heavily depends on the leadership structures of the FCs (KELLER, 2008, p. 315). In addition, through increases in financial resources, political power, and public interest, the risk of agents' opportunistic behaviors has grown, making enhanced governance mechanisms inevitable (JUSCHUS ET AL., 2016a, p. 212).

The leadership of German FCs generally consists of an executive and a supervisory board, which are separated bodies. In this matter, the Bundesliga clubs differ from many European competitors (see for example FC Barcelona, Manchester United F.C., or Juventus F.C.). These clubs combine executive and supervisory functions in a combined board of directors, which is also the case for most Ligue 1 FCs. Therefore, the findings of DIMITROPOULOS AND TSAGKANOS (2012), who investigated the single-bodied boards of directors of 67 European FCs, partly concern both executive and supervisory boards in the case of German FCs. The authors demonstrate a significant positive effect of increased board size and board independence on the financial performance of FCs. These findings, as well as the reasoning behind it, are largely in line with those of the general management literature in Chapter

2.2, suggesting that general management criteria of leadership and governance are also applicable for FCs. In their corporate governance ranking approach of Bundesliga clubs, JUSCHUS ET AL. (2016a) allocate the highest importance to the executive and supervisory board dimension, further indicating the major relevance of the two leadership bodies.

Usually, executive and/or supervisory boards contain owners of the FCs, who directly or indirectly want to keep track of the decision-making processes and have their say in important strategic moves. In the Bundesliga, besides the registered associations and public investors (Borussia Dortmund), three general types of owners can be differentiated (Juschus ET AL., 2016a, pp. 215, 218): private individuals (e.g. Dietmar Hopp at TSG 1899 Hoffenheim), financial investors (e.g. KKR at Hertha BSC), and strategic investors (e.g. Adidas at FC Bayern München). These shareholder types have diverging agendas and, to date, can't be unambiguously assessed with regards to their performance contributions. However, what has been proven to be a significant driver of success is the general presence of investors (BIRKHÄUSER, KASERER, & URBAN, 2015). In their study of more than 300 international FCs, the researchers find additional investor funds to positively influence squads' market values and ultimately overall sporting performances. This finding resonates with DIMITROPOULOS AND TSAGKANOS (2012, pp. 291–292), who provide evidence that higher managerial and institutional ownership levels are associated with better financial performance. They reason that managers and institutions as shareholders contribute to reductions in agency costs and enhanced decision-making processes.

The possibility of and attractiveness for external investors to acquire shares in an FC partly depends on its legal form. As of the 2017/18 season, four legal forms, which to some degree differ with regards to their legal obligations, are prevalent in the Bundesliga (see LANG (2008, pp. 56–70) for a detailed discussion of the legal forms): AG (e.g. Bayern München), e.V. (e.g. 1. FSV Mainz 05), GmbH (e.g. VfL Wolfsburg), and GmbH & Co. KGaA (e.g. Hertha BSC). Borussia Dortmund GmbH & Co. KGaA constitutes an exception as it is the only German Bundesliga club which is publicly traded. Table 10 on page 60, amongst others, provides an overview of the legal forms of all Bundesliga members. JUSCHUS ET AL.'S (2017b)

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corporate governance ranking allows for assessing the legal status of Bundesliga clubs, including the fact whether they are publicly-listed or not, according to their contribution to good corporate governance. It is evident that a publicly-listed football company secures the highest level of corporate governance, which is mainly due to high formal requirements. Excluding the case of Borussia Dortmund, the study reveals that the legal form AG can be considered the strongest with regards to corporate governance, followed by GmbH & Co. KGaA and GmbH. The least efficient legal form is e.V., which can be attributed to the lack of legal obligations. While the pattern of the legal forms' varying capabilities to contribute to good corporate governance is evident in the data, Bundesliga clubs can nonetheless implement high governing standards with less efficient legal forms. Looking at the situation in the French professional football field, we find that all Ligue 1 participants have adopted the statutes of corporations; actually, two similar legal forms coexist in the French league: the SA (Société Anonyme)⁷, and SASP (Société Anonyme Sportive Professionnelle). Similarly to the Bundesliga, one FC, the Olympique Lyonnais, has been listed since 2007 (OL, 2018). In fact, the professional football field evolved in the aftermath of France's first world champion title in 1998. French FCs were namely asking the national regulatory authorities for providing them new legal forms to improve their attractiveness for private and institutional investors, in order to develop and become more competitive at the European level. In this way, the SAs and SASPs statutes have entitled French FCs to remunerate their management and distribute dividends to their shareholders (DERMIT-RICHARD, 2013).

2.3.6 Intermediate Result

This chapter has derived the main dimensions, determining the success of an FC: *Sport-ing Success, Financial Performance, Fan Welfare Maximization* and *Leadership & Govern-ance*. Detailed insights into each of these dimensions have been provided. The variety of factors, influencing the dimensions, turns the management of FCs into a sophisticated challenge. Successful management means balancing the dimensions and achieving the objectives within them.

⁷ The AS Monaco, which operates under the S.A. legal form, is however subject to the Monegasque legal system.

As this study aims to establish a method for evaluating management quality, the next chapter transfers the achieved findings into an evaluation approach, based on the theoretical remarks from this chapter and enriched by industry expert insights.

3 Evaluation Procedures and Data Foundation

3.1 Preliminary Remarks

Within the previous chapter of this study we have analyzed both general company management and specific football management literature. The lessons learned from the extensive theoretical review allowed for the creation of a preliminary evaluation framework (see the high-level framework in Figure 2 on page 16), which served as basis for discussions with industry experts.

3.2 Validation Using Expert Interviews

In order to enrich theoretical with practical insights as well as to validate the findings, semi-structured interviews with ten industry experts were conducted from February to March 2017. In semi-structured interviews an interview guideline with a list of questions or topics to be covered is available, "but there is flexibility in how and when the questions are put and how the interviewee can respond" (Edwards & Holland, 2013, p. 29 and Bogner & MENZ, 2009). This interview design was beneficial for the present case as it left space for taking into account the interviewee's different areas of expertise and for developing new ideas. Interview partners were high-level representatives of FCs (Borussia Dortmund, Eintracht Frankfurt, FC Bayern München, Hamburger SV, RB Leipzig), media (11 Freunde, FI-NANCE) and further external stakeholders (Lagardère Sports Germany, Puma). A detailed list of the interview partners can be found in Appendix I. The interviews were conducted via phone in German and lasted on average 36 minutes. Interviewees were presented with the preliminary evaluation framework and were asked to provide feedback with regards to completeness of the model, relative importance of the four dimensions, and specific ideas for the measurement of sub-categories. Practitioner feedback was then calibrated with the existing theoretical groundwork. Ultimately, both input sources were combined to create the final evaluation model.

3.3 Football Management Evaluation Framework (FMEF)

Figure 7 depicts the final evaluation framework, from here on referred to as Football Management Evaluation Framework (FMEF). The FMEF consists of the four dimensions described in Chapter 2.3, which are specified by three sub-dimensions each. The relative importance of each dimension was determined by the average relative importance given by all expert interviews on the one hand and the authors' personal impression based on the extensive literature review described in the previous chapter on the other hand. The two factors contributed equally to the final value respectively the final score referred to as Football Management (FoMa) Q-Score. In general, the difference between experts' and authors' opinions didn't exceed a value of 6% in any of the dimensions. However, while the experts put slightly more emphasis on Sporting Success and Fan Welfare Maximization, the authors have gained the impression that, within academic literature, Financial Performance and Leadership & Governance strongly increase in importance. The chosen middle course allocates the following fractions to the dimensions: 40% Sporting Success, 25% Financial Performance, 17.5% Fan Welfare Maximization and 17.5% Leadership & Governance. The sub-dimensions are briefly introduced before the FMEF gets filled with key performance indicators (KPI) in the following chapter.



Figure 7: Football Management Evaluation Framework (own illustration)

The first dimension, *Sporting Success*, emerged as the most important one in both expert interviews and authors' literature review. Consequently, it accounts for the largest fraction of the total **FoMa Q-Score (40%)**. The sub-categories *Team Performance*, *Player/Coach Characteristics* and *Player Development* are included in this dimension.

- Team Performance (TP): The ultimate sporting achievement of clubs is the on-pitch performance. This sub-dimension evaluates performance levels in the national and international competitions along different time horizons.
- Player/Coach Characteristics (PCC): Team performance is heavily dependent on a variety of individual characteristics. This sub-dimension looks at the player- and coach-related KPIs.
- Player Development (PD): Refining (youth) players is an important aspect of the sport-related performance of FCs and improves the future outlook. This sub-dimension assesses players' development opportunities within FCs.

The second dimension, *Financial Performance*, is worth **25%** of the **FoMa Q-Score** and comprises the sub-dimensions *Growth/Profitability*, *Branding* and *Internationalization*.

- Growth/Profitability (GP): The majority of FCs currently find themselves between growth and harvest stages according to the definition in chapter 2.2. This sub-dimension takes a closer look into the FCs' financial information.
- **Branding (B):** A strong brand is one of the keys to attract sponsors and supporters. This sub-dimension investigates the strength of FCs' brands.
- _ Internationalization (I): The football business increasingly takes place on a global scale. This sub-dimension examines FCs' internationalization efforts.

The third dimension, *Fan Welfare Maximization*, amounts to **17.5%** of the total **FoMa Q-Score**. It contains the sub-categories *Membership/Attendance*, *Communication* and *Social Responsibility*.

- _ **Membership/Attendance (MA):** Fulfilling expectations and desires of their customers is of highest importance for FCs. This sub-dimension scrutinizes fan and member metrics.
- Communication (C): FCs can maintain and foster their fan bases by regular interaction, which in today's football environment can be facilitated by online technologies. This sub-dimension rates FCs' (digital) communication efforts.
- Social Responsibility (SR): Through their high impact on society, FCs bear high levels of responsibility.
 This sub-dimension measures sustainability efforts along several criteria.

The fourth dimension, *Leadership & Governance*, adds the remainder of **17.5%** to the total **FoMa Q-Score** and is formed by the sub-dimensions *Board Quality, Governance* and *Transparency*.

- Board Quality (BQ): The leadership bodies are important to calmly and consistently steer FCs and determine their future directions. This sub-dimension assesses specific characteristics of both executive and supervisory boards.
- **_____ Governance (G):** The FCs' governance capabilities are crucial to prevent managerial misconduct and ensure that the FCs stick to the given rules of the game. This sub-dimension looks at the predefining bases of governance mechanisms.
- _ **Transparency (T):** Publicly disclosed processes and responsibilities have the ability to create trust among stakeholders. This sub-dimension evaluates the disclosure policies of the FCs.

The FMEF aims to deliver a comprehensive view on the complex management system of FCs. It relies on academic evidences and has been challenged and modified with the support of industry experts. After the derivation of the FMEF including its four dimensions and 12 sub-dimensions, the next step is to describe the methodological approach on how to measure each sub-dimension and how this is transferred into a management quality ranking, namely the FoMa Q-Score.

3.4 The Football Management (FoMa) Q-Score

3.4.1 KPIs - Basics

In order to obtain a score for each of the FoMa Q-Score's four dimensions, the sub-dimensions needed to be filled with measurable KPIs. The following criteria, based on GLOBER-SON (1985, p. 640) but adjusted for the specific context of this study, were applied to derive and explain the KPIs:

- 1. KPIs must have a close relation to their respective dimensions.
- 2. KPIs must allow a direct comparison among FCs.
- 3. The purpose of each KPI must be clear.
- 4. Data sources and calculation methods of KPIs must be clearly defined.
- 5. Ratio-based KPIs are preferred to absolute numbers.
- 6. FCs' management teams should be able to control each KPI.
- 7. KPIs should be derived through discussions with relevant stakeholders.
- 8. Objective KPIs are preferred to subjective ones.

Many investigations in the football environment rely on FCs which have a highly transparent disclosure policy and therefore allow for a comprehensive comparison of very specific KPIs (cf. DIMITROPOULOS & TSAGKANOS (2012)). However, this approach is only suitable if the object of investigation is rather broad and flexible, for example when analyzing the European football market in general. In those cases, a selection of which FCs to include and exclude can be undertaken, eliminating the problem of non-available data. Since this working paper is concerned with the management quality of the German Bundesliga and the French Ligue 1 in their entirety, the strongly varying transparency levels of FCs have to be taken into account. The consequence is that creating a level playing field⁸ becomes a challenge in itself. It is not possible to purely rely on official statements, such as annual reports or detailed press statements. Therefore, the general aim in this study is to include a broader range of KPIs, which can be measured for all FCs. In doing so, realistic scores can be approximated.

In total, 66 KPIs were measured in the four dimensions, with a maximum of 22 KPIs in Fan Welfare Maximization and a minimum of seven KPIs in Leadership & Governance. Due to the special characteristics of the scoring model, described in more detail in Chapter 3.5, the mere quantity of measured KPIs doesn't influence the final results. The KPIs were derived based on a mix of traditionally applied indicators (cf. KPMG (2017) for a selection), suggestions by the industry expert interview partners, and authors' ideas to approximate the quality of certain FCs' management areas. All measured KPIs can be observed in Table 1 to Table 4 on the following pages. The first four columns of each KPI show the corresponding sub-dimension, an ID, a brief definition, as well as an indication as to why a certain KPI was incorporated in the final FoMa Q-Score. Since the KPIs vary in their importance, each of them was allocated a low, medium, or high priority (based on the authors' personal opinion). This allows in a subsequent step to determine different weights for each of the priorities. It was the authors' goal to mainly use KPIs for which a clear preference regarding the desired outcome exists. Nonetheless, different perceptions may exist, making it necessary to detail the order of the KPI outcome (ascending [lower score preferable] or descending [higher score preferable]). Lastly, the tables state the underlying data sources.

3.4.2 Data Collection for the German Bundesliga

For the data collection process, a purely external view was presumed. In the months from May to July 2019, extensive desk research was conducted. July 19th marked the final evaluation day for the *Sporting Success* dimension. The season was finished at this time

⁸ Level playing field is a philosophical approach to describe the equality of opportunity (STANFORD UNIVERSITY, 2015). In this working paper, the level playing field notion is expanded and refers to a data base which provides data points for all FCs. Thereby, all FCs have the same opportunity to score and the results are not distorted by the absence of information.

and no competition (in both senior and junior championships) was outstanding.⁹ All football-related data points were derived from major German and French football webpages (e.g. KICKER (2019b) or TRANSFERMARKT (2019), the DNCG (2019)), FCs' own webpages (see Appendix II for an overview), and industry reports (e.g. IMUG (2016) or TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG (2017)). Further sources (e.g. SIMILARWEB (2019) or FANPAGE KARMA (2019), WHOSCORED (2019)) were used to determine football non-related values, such as webpage or Facebook activities.

⁹ Further information on the described KPIs (calculations, notions, and explanations necessary to obtain a full understanding of each KPI's origin) can be obtained on request (<u>henning.zuelch@hhl.de</u>).

| | Measured KPIs – Sporting Success (SS) – 1/2 | | | | | | | | | | |
|--------------------|---|--|--|---|----------|------------|---|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | TP1 | Bundesliga performance (micro-cycle) | Points accrued in the current season | Indicates the team performance in the current Bundesliga season | High | Descending | Transfermarkt (2019) | | | | |
| | TP ₂ | Bundesliga performance efficiency (micro-cycle) | Points accrued per professional squad budget in the current season | Indicates the team performance in the current Bundesliga season taking into account the professional squad budget | Medium | Descending | Transfermarkt (2019) Broad internet search | | | | |
| ice (TP) | TP ₃ | Bundesliga performance (meso-cycle) | Avg. number of points accrued in the last three seasons | Indicates the team performance in the last three Bun- desliga seasons | Medium | Descending | Transfermarkt (2019) | | | | |
| erforman | TP4 | Bundesliga performance efficiency (meso-cycle) | Avg. number of points accrued per squad market value in the last three seasons | Indicates the team performance in the last three Bun- desliga seasons taking into account the squad market value | Low | Descending | Transfermarkt (2019) | | | | |
| Team P | TPs | DFB-Pokal performance (macro-cycle) | Avg. number of DFB-Pokal matches won in the last five seasons | Indicates the team performance in the last five DFB-Pokal seasons | Medium | Descending | Transfermarkt (2019) | | | | |
| | TP ₆ | International performance (macro-cycle) | Average UEFA club coefficient in the last five seasons | Indicates the team performance in international competi- tions in the last five seasons | Medium | Descending | UEFA (2019) | | | | |
| | TP ₇ | Title performance (macro-cycle) | Number of titles won in the last five seasons | Indicates the team performance in terms of national and international titles won in the last five seasons | Medium | Descending | Transfermarkt (2019) | | | | |

Table 1: Measured KPIs – Sporting Success (own illustration)

| | Measured KPIs – Sporting Success (SS) – 2/2 | | | | | | | | | | |
|--------------------|---|--|---|--|----------|------------|----------------------|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | PCC ₁ | Player performance | Players' average rating according to a Ligalnsider evaluation | Indicates the performance levels of individual players | Medium | Descending | WhoScored (2019) | | | | |
| ()) () | PCC ₂ | Players' mean age | Mean age of the professional squad | Indicates the sporting development potential of the FC's players | Medium | Ascending | Transfermarkt (2019) | | | | |
| eristics (P | PCC ₃ | New players' performance contributions | Average deviation of team average rat- ing and top-3 new players' ratings | Indicates the performance levels the main transfer acquisi- tions add to the FC | Low | Descending | WhoScored (2019) | | | | |
| h Charact | PCC ₄ | Top players' contract lengths | Average remaining contract length of top-5 players | Indicates the longevity of the FC's most valuable players and thereby the future stability of its core team | Low | Descending | Transfermarkt (2019) | | | | |
| er / Coacl | PCC ₅ | Head coach job security | Average days on the job per head coach in the last five seasons | Indicates the FC's continuity on the coaching position and thus long-term development capability | Medium | Descending | Transfermarkt (2019) | | | | |
| Playe | PCC ₆ | Head coach quality | Head coach' average points per game achieved in his career | Indicates the quality level of the FC's coach | Low | Descending | Transfermarkt (2019) | | | | |
| | PCC ₇ | Coaching team contract length | Average remaining length of coaching team members' contracts | Indicates the longevity and future stability on the coaching team positions | Low | Descending | Transfermarkt (2019) | | | | |
| | PD1 | Homegrown players | Fraction of homegrown players in the current squad | Indicates the youth academy's permeability | Medium | Descending | Transfermarkt (2019) | | | | |
| | PD ₂ | Appearances of home- grown players for FC | Bundesliga matches played for FC per homegrown player in the current squad | Indicates the FC's ability to integrate youth players from the academy | Low | Descending | Transfermarkt (2019) | | | | |
| ent (PD) | PD ₃ | Development of former homegrown players | Average market value of top-10 home- grown players currently playing for an- other club | Indicates the career potential homegrown players receive through the FC's youth academy | Low | Descending | Transfermarkt (2019) | | | | |
| evelopm | PD ₄ | Internal development of non-homegrown players | Average yearly market value growth of top-5 non-homegrown players since ac- quisition | Indicates the FC-internal development quality for non- homegrown players | Medium | Descending | Transfermarkt (2019) | | | | |
| Player De | PD ₅ | Youth academy perfor- mance (micro-cycle) | Average league position of youth teams (U23, U19, U17) in the last five seasons | Indicates the performance of the FC's youth teams in the current season | Low | Ascending | DFB (2019) | | | | |
| | PD ₆ | Youth academy perfor- mance (macro-cycle) | Number of titles won in youth leagues (U23, U19, U17) in the last five seasons | Indicates the performance of the FC's youth teams in the last five seasons | Low | Descending | DFB (2019) | | | | |
| | PD ₇ | National youth team mem- bers | Fraction of international players in youth team squads (U23, U19, U17) | Indicates the individual quality of FC's youth team players and thus the potential provision of high-quality player ma- terial in the future | Low | Descending | Transfermarkt (2019) | | | | |

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Table 2: Measured KPIs – Financial Performance (own illustration)

| | Measured KPIs – Financial Performance (FP) – 1/2 | | | | | | | | | | |
|--------------------|--|------------------------------|---|--|----------|------------|---|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | GP1 | Revenue | Total revenue in the previous season | Indicates the FC's success in generating income across the various income sources in the last season | High | Descending | Bundesanzeiger (2019); Sport.de (2019), | | | | |
| | GP ₂ | Costs for professional staff | Fraction of revenue spent on profes- sional squad budget | Indicates the portion of total revenue the FC spends on players and coaches' salaries | Medium | Ascending | Geld (2019); Statista (2019) Bun- desanzeiger (2018); Sport.de (2019) | | | | |
| ility (GP) | GP ₃ | Wage efficiency | Squad market value in relation to pro- fessional squad budget | Indicates how much quality the FC attains in relation to the salaries it pays for coaches and players | Medium | Descending | Geld (2018); Statista (2019); Transfermarkt (2019) | | | | |
| ŝrowth / Profitabi | GP4 | Jersey sponsor | Revenue generated through jersey sponsoring in the current season | Indicates the FC's success in attracting sponsors | Medium | Descending | Statista (2019) | | | | |
| | GP5 | Buying price mark-up | Average of transfer fees paid in relation to transfer acquisitions' market valua- tions | Indicates the capability to close financially attractive trans- fer deals when acquiring new players | Low | Ascending | Transfermarkt (2019) | | | | |
| | GP ₆ | Selling price mark-up | Average of transfer fees gained in rela- tion to existing players' market valua- tions | Indicates the capability to close financially attractive trans- fer deals when selling existing players | Low | Descending | Transfermarkt (2019) | | | | |
| | GP ₇ | VIP Stadium boxes | VIP boxes per stadium capacity | Indicates the ability to generate significant matchday reve- nues through premium hospitality | Low | Descending | Transfermarkt (2019) | | | | |
| | B1 | Brand attitude | Brand attitude according to a survey conducted by TU Braunschweig | Indicates the attitudes football fans have towards the FC | Medium | Descending | Technische Universität Braun- schweig (2018) | | | | |
| Branding (B) | B ₂ | Brand awareness | Aided brand awareness according to a survey conducted by TU Braunschweig | Indicates the football fans' familiarity of the FC | Medium | Descending | Technische Universität Braun- schweig (2018) | | | | |
| | B ₃ | Brand development | Year-on-year growth of the brand index according to a survey conducted by TU Braunschweig | Indicates the year-on-year development of the FC's brand dimensions attitude and awareness | Low | Descending | Technische Universität Braun- schweig (2017, 2018) | | | | |
| | B ₄ | Brand strength | Value of brand strength according to a survey conducted by HORIZONT | Indicates the strength of the FC's brand and thereby the at- tractiveness for sponsors, fans, and media | Low | Descending | HORIZONT (2018) | | | | |

| | Measured KPIs – Financial Performance (FP) – 2/2 | | | | | | | | | | |
|--------------------|--|-----------------------------------|---|---|----------|------------|--|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| ion (I) | I ₁ | International sponsors | Fraction of international sponsors in the sponsoring pool (1 st to 3 rd sponsoring level) | Indicates the FC's ability to attract international sponsors | Medium | Descending | FCs' webpages (2019); FC sponsors' webpages (2019) | | | | |
| | I ₂ | Physical presence | Physical presence in different parts of the world | Indicates the FC's efforts to attract fans abroad and main- tain international relationships | Medium | Descending | Broad internet research (e.g. bundesliga.de and sport1.de) | | | | |
| tionaliza | I ₃ | International webpage vis- its | Fraction of international webpage visits in the last month | Indicates the FC's success in reaching out to international fans via the official webpage | Low | Descending | SimilarWeb (2019) | | | | |
| Interna | 14 | Webpage languages | Number of languages on the official webpage | Indicates the FC's efforts to communicate with fans from different parts of the world | Low | Descending | FCs' webpages (2019) | | | | |
| | I ₅ | International players | Fraction of international players in the professional squad | Indicates the internationality within the FC's professional squad | Low | Descending | Transfermarkt (2019) | | | | |

Table 3: Measured KPIs – Fan Welfare Maximization (own illustration)

| | Measured KPIs – Fan Welfare Maximization (FWM) – 1/2 | | | | | | | | | | |
|--------------------|--|-----------------------------|---|--|----------|------------|---|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | MA ₁ | Fan base | Number of fans in Germany | Indicates the FC's national popularity in terms of general preferences | High | Descending | Sportbild (2017); own assumption | | | | |
| | MA ₂ | Member base | Number of members | Indicates the FC's national popularity in terms of its closest supporters | High | Descending | Statista (2019) | | | | |
| | MA ₃ | Member conversion | Number of FC's members in relation to its overall fans | Indicates the fraction of the FC's overall fan base that feels extraordinarily strong about the FC | Medium | Descending | Sportbild (2017); Statista (2019); own estimations | | | | |
| | MA ₄ | Member base growth | Year-on-year growth in members | Indicates the FC's success to increase its member base | High | Descending | Sportbild (2016, 2017); Statista (2019); own estimations | | | | |
| e (MA) | MA ₅ | Stadium utilization | Average match attendance per stadium capacity | Indicates fans' levels of support and loyalty towards the FC | High | Descending | Transfermarkt (2019) | | | | |
| ttendanc | MA ₆ | Minimum match attendance | Lowest match attendance in relation to stadium capacity | Indicates fans' willingness to support the FC also in less in- teresting matches or at less convenient kick-off times | Medium | Descending | Transfermarkt (2019) | | | | |
| ership / A | MA ₇ | Stadium standing capacity | Fraction of standing places in the sta- dium | Indicates stadium atmosphere and FC's consideration of fan organizations' wishes (i.e. more standing places) | Low | Descending | Transfermarkt (2019) | | | | |
| Membe | MA ₈ | TV spectators | Average number of spectators per match | Indicates TV spectators' interest in matches of the FC | Low | Descending | Statitsta (2019) | | | | |
| | MA ₉ | Membership fee | Costs to become an FC member | Indicates the FC's willingness to enable fans to become members | Low | Ascending | FCs' webpages (2019) | | | | |
| | MA ₁₀ | Season ticket price | Costs of average season ticket | Indicates the FC's willingness to enable fans to acquire sea- son tickets | Low | Ascending | FCs' webpages (2019) | | | | |
| | MA ₁₁ | Day ticket price | Costs of average day ticket | Indicates the FC's willingness to enable fans to attend sin- gle matches | Low | Ascending | FCs' webpages (2019) | | | | |
| | MA ₁₂ | Jersey price | Costs of a jersey | Indicates the FC's willingness to enable fans to purchase the jersey | Low | Ascending | Broad internet search | | | | |

| | Measured KPIs – Fan Welfare Maximization (FWM) – 2/2 | | | | | | | | | | |
|-----------------------|--|----------------------------|--|--|----------|------------|--|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | C ₁ | Webpage visits | Average monthly webpage visits in the last six months | Indicates the overall number of visits the FC can generate on its webpage | Medium | Descending | Similarweb (2019) | | | | |
| | C ₂ | Webpage conversion | Webpage visits in relation to overall fans | Indicates the utilization of the FC's internet presence by its fan base | Low | Descending | Similarweb (2019) | | | | |
| _ | C ₃ | Webpage growth | Monthly growth in webpage visits over the last six months | Indicates the FC's internet presence development in terms of webpage visits | Low | Descending | Similarweb (2019) | | | | |
| cation (C | C ₄ | Webpage visit duration | Average visit duration in the last month | Indicates the level of engagement the FC's webpage visi- tors have on the FC's internet presence | Low | Descending | Similarweb (2019) | | | | |
| ommuni | C ₅ | Facebook fan base | Number of fans on the official Facebook account | Indicates the overall number of followers the FC can attract on its Facebook account | Medium | Descending | Facebook (2019) | | | | |
| 0 | C ₆ | Facebook conversion | Facebook fans in relation to overall fans | Indicates the utilization of the FC's Facebook presence by its fan base | Low | Descending | Facebook (2019); Sportbild (2017); own estimations | | | | |
| | C ₇ | Facebook fan base growth | Monthly growth in Facebook fans over the last six months | Indicates the FC's Facebook presence development in terms of fans | Low | Descending | Fanpage Karma (2019) | | | | |
| | C ₈ | Facebook engagement | Average of daily likes, comments, and shares per Facebook fans | Indicates the level of engagement the FC's Facebook fans have on the FC's account | Low | Descending | Fanpage Karma (2019) | | | | |
| ial nsibil- SR) | SR ₁ | Sustainability performance | Sustainability ranking according to a study conducted by imug | Indicates the sustainability performance of the FC with re- gards to ecological, economical, and social factors | High | Descending | imug (2016); SWR3 (2017); own estimations | | | | |
| Soc Respoi | SR ₂ | Fines | Total fines in 2016/17 campaign | Indicates the peacefulness of the FC's fans and the efforts the FC undertakes to prevent misconduct | Low | Descending | Geld (2018); Fußballmafia (2019) | | | | |

Table 4: Measured KPIs – Leadership & Governance (own illustration)

| | Measured KPIs – Leadership & Governance (LG) | | | | | | | | | | |
|----------------------------|--|--------------------------------|--|--|----------|------------|--|--|--|--|--|
| Sub-di- mension | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| Board Quality (BQ) | BQ1 | Management performance | Management score according to a sur- vey conducted by HORIZONT (+ bonus for management education) | Indicates the current and future performance of the FC's management | Medium | Descending | HORIZONT (2018); FCs' webpages | | | | |
| | BQ ₂ | Independent board mem- bers | Fraction of independent members in the supervisory board | Indicates the rationality and thereby decision-making qual- ity of the FC's supervisory board | Low | Descending | Broad internet research (i.a. FCs' webpages) | | | | |
| | BQ₃ | Number of board members | Total number of supervisory and execu- tive board members | Indicates resource access and knowledge provision of the FC's boards | Low | Descending | Broad internet research (i.a. FCs' webpages) | | | | |
| (9) | G1 | Corporate governance quality | CG ranking according to a study con- ducted by Juschus, Leister, and Prigge | Indicates the FC's overall CG quality based on a variety of indicators | Medium | Descending | Juschus et al. (2017a, 2017b); own estimation | | | | |
| /ernance | G2 | Legal form | Allocated rank according to the legal form | Indicates the FC's CG quality based on its legal form | Low | Descending | FCs webpages | | | | |
| Gov | G₃ | Institutional shareholders | Fraction of shares held by non-control- ling institutional shareholders (here: ex- tended to companies in general) | Indicates the FC's monitoring capabilities due to institu- tional governance | Low | Descending | Broad internet research (e.g. of- ficial FC press statements) | | | | |
| Trans- paren- cy (T) | т | Public disclosure | Access to annual report, organigram, ex- ecutive and supervisory board members (incl. CVs), and statutes | Indicates how transparently the FC operates and thereby lets the public comprehend its general setup | Medium | Descending | Bundesanzeiger (2019); FCs' webpages (2019) | | | | |

3.4.3 Data Collection for the French Ligue 1

Due to a lack of consistent information for individual French football clubs, the FMEF used for the Ligue 1 contains five KPIs less than the one used for the Bundesliga. The five KPIs eliminated in the present adaptation are the following: (a) *brand awareness* (B₂) and (b) *brand score* (B₄), since no analogous study to the one from the TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG was available, (c) *TV spectators* (MA₈), as no official figures were published for individual clubs, (d) *Day ticket price* (MA₁₁), since daily ticket prices regularly fluctuate in the Ligue 1, depending not only on the stadium's zones, but also on the opponent club playing (i.e. prices follow the law of supply and demand). Last but not least, even if the social responsibility has already been addressed by both the French LFP and individual clubs, which have implemented CSR programs through foundations, associations, and endowments for instance (FONDATION.ORG, 2018), no evaluation of the CSR policies was available at an individual club level. Therefore, the KPI *Social Responsibility* (SR₁) is not part of the framework relative to the Ligue 1 and the *Social Responsibility* sub-dimension is here replaced by the sub-dimension *Financial Integrity*, which takes into account the amount of financial penalties each individual club paid during the previous season.

Table 5: Measured KPIs – Sporting Success

| | Measured KPIs – Sporting Success (SS) – 1/2 | | | | | | | | | | |
|-------------------------|---|---|--|---|----------|------------|-------------------------------------|--|--|--|--|
| Sub-di- men- sion | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| :e (TP) | TP ₁ | Ligue 1 performance (mi- cro-cycle) | Points accrued in the current season | Indicates the team performance in the current Ligue 1 season | High | Descending | FFF (2019) | | | | |
| | TP ₂ | Ligue 1 performance effi- ciency (micro-cycle) | Points accrued per professional squad budget in the current season | Indicates the team performance in the current Ligue 1 sea- son taking into account the professional squad budget | High | Descending | FFF (2019); DNCG (2019) | | | | |
| | TP ₃ | Ligue 1 performance (meso-cycle) | Avg. number of points accrued in the last three seasons | Indicates the team performance in the last three Ligue 1 seasons | Medium | Descending | FFF (2019) | | | | |
| erforman | TP ₄ | Ligue 1 performance effi- ciency (meso-cycle) | Avg. number of points accrued per squad market value in the last three seasons | Indicates the team performance in the last three Ligue 1 seasons taking into account the squad market value | Medium | Descending | FFF (2019); Transfermarkt (2019) | | | | |
| Team Pe | TP ₅ | Coupe de France perfor- mance (macro-cycle) | Avg. number of Coupe de France matches won in the last five seasons | Indicates the team performance in the last five Coupe de France seasons | Medium | Descending | FFF (2019) | | | | |
| | TP ₆ | International performance (macro-cycle) | Average UEFA club coefficient in the last five seasons | Indicates the team performance in international competi- tions in the last five seasons | Medium | Descending | UEFA (2019) | | | | |
| | TP ₇ | Title performance (macro-cycle) | Number of titles won in the last five seasons | Indicates the team performance in terms of national and international titles won in the last five seasons | Medium | Descending | Transfermarkt (2019) | | | | |

| | Measured KPIs – Sporting Success (SS) – 2/2 | | | | | | | | | | |
|-------------------------|---|--|---|--|----------|------------|---|--|--|--|--|
| Sub-di- men- sion | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | PCC ₁ | Player performance | Players' average rating according to a Ligalnsider evaluation | Indicates the performance levels of individual players | Medium | Descending | WhoScored (2019) | | | | |
| eristics (PCC) | PCC ₂ | Players' mean age | Mean age of the professional squad | Indicates the sporting development potential of the FC's players | Medium | Ascending | Transfermarkt (2019) | | | | |
| | PCC ₃ | New players' performance contributions | Average deviation of team average rat- ing and top-3 new players' ratings | Indicates the performance levels the main transfer acquisi- tions add to the FC | Low | Descending | Transfermarkt (2019); WhoScored (2019) | | | | |
| h Charact | PCC ₄ | Top players' contract lengths | Average remaining contract length of top-5 players | Indicates the longevity of the FC's most valuable players and thereby the future stability of its core team | Low | Descending | Transfermarkt (2019) | | | | |
| er / Coacl | PCC ₅ | Head coach job security | Average days on the job per head coach in the last five seasons | Indicates the FC's continuity on the coaching position and thus long-term development capability | Medium | Descending | Transfermarkt (2019) | | | | |
| Playe | PCC ₆ | Head coach quality | Head coach' average points per game achieved in his career | Indicates the quality level of the FC's coach | Low | Descending | Transfermarkt (2019) | | | | |
| | PCC ₇ | Coaching team contract length | Average remaining length of coaching team members' contracts | Indicates the longevity and future stability on the coaching team positions | Low | Descending | Transfermarkt (2019) | | | | |
| | PD ₁ | Homegrown players | Fraction of homegrown players in the current squad | Indicates the youth academy's permeability | Medium | Descending | Transfermarkt (2019) | | | | |
| | PD ₂ | Appearances of home- grown players for FC | Ligue 1 matches played for FC per homegrown player in the current squad | Indicates the FC's ability to integrate youth players from the academy | Low | Descending | Transfermarkt (2019) | | | | |
| ent (PD) | PD ₃ | Development of former homegrown players | Average market value of top-10 home- grown players currently playing for an- other club | Indicates the career potential homegrown players receive through the FC's youth academy | Low | Descending | Transfermarkt (2019) | | | | |
| evelopme | PD ₄ | Internal development of non-homegrown players | Average yearly market value growth of top-5 non-homegrown players since ac- quisition | Indicates the FC-internal development quality for non- homegrown players | Medium | Descending | Transfermarkt (2019) | | | | |
| Player De | PD ₅ | Youth academy perfor- mance (micro-cycle) | Average league position of youth teams (U23, U19, U17) | Indicates the performance of the FC's youth teams in the current season | Low | Ascending | FFF (2019) | | | | |
| | PD ₆ | Youth academy perfor- mance (macro-cycle) | Number of titles won in youth leagues (U23, U19, U17) | Indicates the performance of the FC's youth teams in the last five seasons | Low | Descending | FFF (2019); | | | | |
| | PD7 | National youth team mem- bers | Fraction of international players in youth team squads (U23, U19, U17) | Indicates the individual quality of FC's youth team players and thus the potential provision of high-quality player ma- terial in the future | Low | Descending | FCs' webpages (2019) | | | | |

Table 6: Measured KPIs – Financial Performance

| | Measured KPIs – Financial Performance (FP) – 1/2 | | | | | | | | | | |
|-------------------------|--|------------------------------|---|--|----------|------------|---|--|--|--|--|
| Sub-di- men- sion | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | GP1 | Revenue | Total revenue in the previous season | Indicates the FC's success in generating income across the various income sources in the last season | High | Descending | DNCG (2019) | | | | |
| | GP ₂ | Costs for professional staff | Fraction of revenue spent on profes- sional squad budget | Indicates the portion of total revenue the FC spends on players and coaches' salaries | Medium | Ascending | DNCG (2019); Transfermarkt (2019) | | | | |
| ility (GP) | GP ₃ | Wage efficiency | Squad market value in relation to pro- fessional squad budget | Indicates how much quality the FC attains in relation to the salaries it pays for coaches and players | Medium | Descending | DNCG (2019); Transfermarkt (2019) | | | | |
| Profitab | GP4 | Jersey sponsor | Revenue generated through jersey sponsoring in the current season | Indicates the FC's success in attracting sponsors | Medium | Descending | DNCG (2019) | | | | |
| Growth / | GP ₅ | Buying price mark-up | Average of transfer fees paid in relation to transfer acquisitions' market valua- tions | Indicates the capability to close financially attractive trans- fer deals when acquiring new players | Low | Ascending | Transfermarkt (2019) | | | | |
| | GP ₆ | Selling price mark-up | Average of transfer fees gained in rela- tion to existing players' market valua- tions | Indicates the capability to close financially attractive trans- fer deals when selling existing players | Low | Descending | Transfermarkt (2019) | | | | |
| | GP7 | VIP Stadium boxes | VIP boxes per stadium capacity | Indicates the ability to generate significant matchday reve- nues through premium hospitality | Low | Descending | FCs' webpages | | | | |
| ng (B) | B1 | Brand attitude | Brand attitude according to a survey conducted by the French LFP | Indicates the attitudes football fans have towards the FC | Medium | Descending | Cloudfront.net (2018); own esti- mations | | | | |
| Brandi | B ₃ | Brand development | Year-on-year growth of the brand index | Indicates the year-on-year development of the FC's brand dimensions attitude and awareness | Low | Descending | DNCG (2018); DNCG (2019) | | | | |

| | Measured KPIs – Financial Performance (FP) – 2/2 | | | | | | | | | | | |
|-------------------------|--|--------------------------------|---|--|----------|------------|-------------------------|--|--|--|--|--|
| Sub-di- men- sion | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | | |
| ion (I) | I1 | International sponsors | Fraction of international sponsors in the sponsoring pool (1 st to 3 rd sponsoring level) | Indicates the FC's ability to attract international spon- sors | Medium | Descending | FCs' webpages (2019) | | | | | |
| | l ₂ | Physical presence | Physical presence in different parts of the world | Indicates the FC's efforts to attract fans abroad and maintain the international relationships | Medium | Descending | Broad internet research | | | | | |
| ıtionaliza | l ₃ | International webpage visitors | Fraction of international webpage visitors in the last three months | Indicates the FC's success in reaching out to interna- tional fans via the official webpage | Low | Descending | SimilarWeb (2019) | | | | | |
| Interna | I 4 | Webpage languages | Number of languages on the official webpage | Indicates the FC's efforts to communicate with fans from different parts of the world | Low | Descending | FCs' webpages (2019) | | | | | |
| | I ₅ | International players | Fraction of international players in the professional squad | Indicates the internationality within the FC's profes- sional squad | Low | Descending | Transfermarkt (2019) | | | | | |

Table 7: Measured KPIs – Fan Welfare Maximization

| | Measured KPIs – Fan Welfare Maximization (FWM) – 1/2 | | | | | | | | | | |
|-------------------------|--|-----------------------------|---|--|----------|------------|---|--|--|--|--|
| Sub-di- men- sion | ID | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | | | | |
| | MA1 | Fan base | Number of fans in Germany | Indicates the FC's national popularity in terms of general preferences | High | Descending | Eurosport (2018); own estima- tions | | | | |
| | MA ₂ | Member base | Number of members | Indicates the FC's national popularity in terms of its closest supporters | High | Descending | L'équipe (2018) | | | | |
| | MA ₃ | Member conversion | Number of FC's members in relation to its overall fans | Indicates the fraction of the FC's overall fan base that feels extraordinarily strong about the FC | Medium | Descending | Eurosport (2018); L'équipe (2018); own estimations | | | | |
| e (MA) | MA ₄ | Member base growth | Year-on-year growth in members | Indicates the FC's success to increase its member base | High | Descending | L'équipe (2018) | | | | |
| ttendanc | MA ₅ | Stadium utilization | Average match attendance per stadium capacity | Indicates fans' levels of support and loyalty towards the FC | High | Descending | LFP (2018); Transfermarkt (2019); Soccerstats.com (2019) | | | | |
| ership / A | MA ₆ | Minimum match attendance | Lowest match attendance in relation to stadium capacity | Indicates fans' willingness to support the FC also in less in- teresting matches or at less convenient kick-off times | Medium | Descending | LFP (2018); Soccerstats.com (2019) | | | | |
| Membe | MA ₇ | Stadium standing capacity | Fraction of standing places in the sta- dium | Indicates stadium atmosphere and FC's consideration of fan organizations' wishes (i.e. more standing places) | Low | Descending | Transfermarkt (2019) | | | | |
| | MA ₉ | Membership fee | Costs to become a FC member | Indicates the FC's willingness to enable fans to become members | Low | Ascending | Broad internet search | | | | |
| | MA ₁₀ | Season ticket price | Costs of average season ticket | Indicates the FC's willingness to enable fans to acquire sea- son tickets | Low | Ascending | Sport 24 (2017) | | | | |
| | MA ₁₂ | Jersey price | Costs of a jersey | Indicates the FC's willingness to enable fans to purchase the jersey | Low | Ascending | Broad internet search | | | | |

| Measured KPIs – Fan Welfare Maximization (FWM) – 2/2 | | | | | | | | |
|--|-----------------|---|--|---|--------|------------|---|--|
| Sub-di- men- sion | ID | ID KPI Definition Reasoning for Inclusion | | Priority | Order | Source | | |
| Communication (C) | C1 | Webpage visits | Webpage visitors in the last three months | Indicates the overall number of visits the FC can generate on its webpage | | Descending | Similarweb (2019) | |
| | C ₂ | Webpage conversion | Webpage visits in relation to overall fans | Indicates the utilization of the FC's internet presence by its fan base | Low | Descending | Eurosport (2018); Similarweb (2019); own estimations | |
| | C ₃ | Webpage growth | Monthly growth in webpage visits over the last six months | Indicates the FC's internet presence development in terms of visitor numbers | Low | Descending | Similarweb (2019) | |
| | C ₄ | Webpage visit duration | Average visit duration in the last three months | Indicates the level of engagement the FC's webpage visi- tors have | Low | Descending | Similarweb (2019) | |
| | C ₅ | Facebook fan base | Number of fans on the official Facebook account | Indicates the overall number of followers the FC can attract on its Facebook account | Medium | Descending | Facebook (2019) | |
| | C ₆ | Facebook conversion | Facebook fans in relation to overall fans | Indicates the utilization of the FC's Facebook presence by its fan base | Low | Descending | Eurosport (2018); Facebook (2019); own estimations | |
| | C ₇ | Facebook fan base growth | Monthly growth in Facebook fans over the last six months | Indicates the FC's Facebook presence development in terms of fans | Low | Descending | Fanpage Karma (2019) | |
| | C ₈ | Facebook engagement | Average of daily likes, comments, and shares per Facebook fans | Indicates the level of engagement the FC's Facebook fans have | Low | Descending | Fanpage Karma (2019) | |
| FI ¹⁰ | SR ₂ | Fines | Total fines in 2016/17 campaign | Indicates the peacefulness of the FC's fans and the efforts the FC undertakes to prevent misconduct | Low | Descending | Broad internet search | |

10 FI: Financial Integrity

Table 8: Measured KPIs – Leadership & Governance

| Measured KPIs – Leadership & Governance (LG) | | | | | | | | |
|--|-----------------|--------------------------------|--|--|----------|------------|--|--|
| Sub-di- men- ID KPI sion | | КРІ | Definition | Reasoning for Inclusion | Priority | Order | Source | |
| (BQ) | BQ1 | Management performance | Management score based on Financial stability and CEO tenure (+ bonus for management education) | Indicates the current and future performance of the FC's management | Medium | Descending | DNCG (2016-2019); Transfer- markt (2019); FC's wepages | |
| Board Quality | BQ ₂ | Independent board mem- bers | Fraction of independent members in the supervisory board | Indicates the rationality and thereby decision-making qual- ity of the FC's supervisory board | Low | Descending | Broad internet research (i.a. FCs' webpages) | |
| | BQ₃ | Number of board members | Total number of supervisory and execu- tive board members | Indicates resource access and knowledge provision of the FC's boards | Low | Descending | Broad internet research (i.a. FCs' webpages) | |
| Governance (G) | G1 | Corporate governance quality | CG ranking according to a study con- ducted by Juschus, Leister, and Prigge | Indicates the FC's overall CG quality based on a variety of indicators | Medium | Descending | Broad internet research (i.a. FCs' webpages) | |
| | G ₂ | Legal form | Allocated rank according to the legal form | Indicates the FC's CG quality based on its legal form | Low | Descending | FCs webpages | |
| | G3 | Institutional shareholders | Fraction of shares held by non-control- ling institutional shareholders (here: ex- tended to companies in general) | Indicates the FC's monitoring capabilities due to institu- tional governance | Low | Descending | Broad internet research (e.g. of- ficial FC press statements) | |
| Trans- paren- cy (T) | т | Public disclosure | Access to annual report, organigram, ex- ecutive and supervisory board members (incl. CVs), and statutes | Indicates how transparently the FC operates and thereby lets the public comprehend its general setup | Medium | Descending | DNCG (2019) FCs' webpages | |

3.5 The FoMa-Scoring Model

3.5.1 Overview

To finally allocate scores to each KPI, several scoring models were considered and evaluated with regards to their fit to the present study. The options ranged from a relatively simple ranking (scores are compared among all FCs) to a more sophisticated peer group approach (deviation from peer group average measured). Even within these basic options, several alternatives were possible. For example, the ranking approach could have been implemented with a given score per rank or by allocating points relative to the respective KPI's benchmark. Ultimately, the fact that this study is a highly explorative one with few successfully proven underlying procedures was pivotal in making the decision. It was the maxim that future discussions about this study were supposed to rather revolve around dimensions, sub-dimensions, and measured KPIs as opposed to the chosen evaluation method. Therefore, the simplest and most comprehensible ranking approach was chosen: the first rank received the maximum of 17 points, with each following rank score being reduced by one point, such that rank 18 finally received a score of zero point. These scores were then multiplied with the respective KPIs' importance factors (x1 for low priority; x3 for medium priority; x5 for high priority). An illustrative example is given in

Table 9, which is described in detail in the following.

(own illustration)

| Bundesliga performance (micro-cycle) | | | | | | | |
|--------------------------------------|--|-------------------------------|---|-----------------|---|--|--|
| Importance factor. | | High priority | | | | | |
| FCs | Importance factor multiplied by Score | Score according to rank | Rank (in descending order) according to TP ₁ | See right | Points (P) accrued in the current Bundesliga season | | |
| Football Club | Weighted score | Score | Rank | TP ₁ | P _{2018/19} | | |
| FC Bayem München | 85. 0 | 17 | 1 | 78 | 78 | | |
| Borussia Dortmund | 80.0 | 16 | 2 | 76 | 76 | | |
| RB Leipzig | 75.0 | 15 | 3 | 66 | 66 | | |
| Bayer 04 Leverkusen | 70.0 | 14 | 4 | 58 | 58 | | |
| Borussia Mönchengladbach | 65.0 | 13 | 5 | 55 | 55 | | |
| VfL Wolfsburg | 65.0 | 13 | 5 | 55 | 55 | | |
| Eintracht Frankfurt | 55.0 | 11 | 7 | 54 | 54 | | |
| SV Werder Bremen | 50.0 | 10 | 8 | 53 | 53 | | |
| TSG 1899 Hoffenheim | 45.0 | 9 | 9 | 51 | 51 | | |
| Fortuna Düsseldorf | 40.0 | 8 | 10 | 44 | 44 | | |
| Hertha BSC | 35.0 | 7 | 11 | 43 | 43 | | |
| 1. FSV Mainz 05 | 35.0 | 7 | 11 | 43 | 43 | | |
| SC Freiburg | 25.0 | 5 | 13 | 36 | 36 | | |
| FC Schalke 04 | 20.0 | 4 | 14 | 33 | 33 | | |
| FC Augsburg | 15.0 | 3 | 15 | 32 | 32 | | |
| VfB Stuttgart | 10.0 | 2 | 16 | 28 | 28 | | |
| Hannover 96 | 5.0 | 1 | 17 | 21 | 21 | | |
| FCN | 0.0 | 0 | 18 | 19 | 19 | | |

The data for each KPI was gathered in a dedicated Microsoft Excel sheet, such as the one above. It depicts the sheet for the KPI *Bundesliga performance (micro-cycle)* (TP₁), which is part of the *Team performance* sub-dimension in the *Sporting Success* dimension. The number of points obtained in the Bundesliga season 2017/18 is transformed into a ranking (Rank). As this is a KPI with descending order, FC Bayern München is on top of the ranking with the highest value of 84 and receives the maximum score of 17 points. FC Schalke 04 is the following FC in the ranking. All further scores are derived in the same manner. The last step of the KPI scoring process is to derive the weighted score by multiplying the score with the importance factor, in this case three (high priority). The weighted score is then transmitted to the overall *Sporting Success* evaluation. This procedure was conducted for every single KPI, displayed in Table 1 to Table 4 on the previous pages.

In order to derive the final FoMa Q-Score, the dimensional scores for *Sporting Success*, *Financial Performance*, *Fan Welfare Maximization* and *Leadership & Governance* had to be brought together in a way that implies their different weights. Again, under the maxim of not overcomplicating the evaluation process, a comprehensible model was chosen. The final FoMa Q-Score for each FC was determined by the following formula, incorporating the relation of achieved points and total reachable points per dimension as well as the dimensions' weights:

| Formula | $FoMa \ Q - Score_{FC} = \sum \left(\frac{Dimension \ score_{i,FC}}{Dimension \ score_{i,max}}\right) \times Dimension \ weight_i$ |
|----------|--|
| Notation | FCValue for respective FCiSS, FP, FWM, LG |

Due to the incorporation of the dimension weights, the FoMa Q-Score itself should not be read as percentage of total points available. It merely can be interpreted as percentage of weighted points (sum of multiplying all dimensional weights with their total reachable points) achieved. However, this would cause confusion because, by contrast, the sub-dimensions, which don't contain any weights, can indeed be read in the above-mentioned way. That is the reason why the FoMa Q-Score will be given in absolute and the (sub-) dimension scores in relative terms. This also implies that for the sub-dimensions no weights have been allocated, but the quantity of KPIs and their importance factors determine the relevance of each sub-dimension.

The calculation for the specific example of Borussia Dortmund's final FoMa Q-Score is demonstrated in Figure 8. Adding up all KPI scores of the *Sporting Success* dimension, RB Leipzig reaches 388 points. In total, 765 points are reachable in this dimension, which makes RB Leipzig's score a fraction of ca. 51%. This fraction is then multiplied with the dimension's weight within the overall FMEF, namely 40%. Thus, in the *Sporting Success* dimension, RB Leipzig receives a final score of 0.203. The same procedure is subsequently executed for the following three dimensions. Ultimately, the sum of the four weighted dimension scores yields a FoMa Q-Score of 0.486 for RB Leipzig, which can now be conveniently compared with the other FCs' scores.

| BVB | Sporting Success | Financial Performance | Fan Welfare Maximization | Leadership & Governance |
|-------------------------------------|---|---|--|---|
| Weight | • 40% | - 25% | = 17,5% | • 17,5% |
| # of KPIs | • 21 | • 16 | = 22 | • 7 |
| Max. Score | • 765 | • 578 | - 782 | • 221 |
| KPI Score | KPI ₁ KPI ₂₁ 80pt 15pt | KPI ₁ KPI ₁₆ 80pt 16pt | KPI ₁ KPI ₂₁ 80pt Opt | KPI ₁ KPI ₇ 45t 51pt |
| Score per Dimension | SS 556.0pt | FP 445.0pt | FWM 519.0pt | |
| Weighted Scores per Dimension | (556/765) x 40% | + (445/578) x 25% | + (519/782) x 17,5% | + (194/221) x 17,5% |
| FoMa Q-Score | | =0.7 | /53 | |

Figure 8: Illustrative Example of a FoMa Q-Score Calculation (own illustration)

3.5.2 Methodological Adjustments for the Purpose of Comparability

Due to the difference in the league composition compared to the German Bundesliga (20 clubs in the Ligue 1 versus 18 in the Bundesliga), the interval of points granted to French FCs had to be adjusted from 0 to19 points. These points were then weighted depending on the criterion's importance in the same way as for the German Bundesliga. Since the FoMa Q-score ranks each FC relatively to the remaining league constituents, the latter adjustment should not prevent one from comparing Ligue 1's and Bundesliga's different club categories (i.e. *Champions League* players, *Europa League* players, *Midfield* players and *Relegation* clubs). However, the approach implies a limitation when it comes to compare both leagues, as the score per (sub)-dimension varies slightly for a same rank between the Bundesliga and the French Ligue 1, which is shown in the following:

Let us denote $S_{G,i,k}$ the score for an FC, named *i*, participating in the German Bundesliga *G*, for a given KPI *k*, and $SD_{G,i}$ the score obtained by the given FC *i* along a given sub-dimension; moreover, we denote w_k the weight of the given KPI within the sub-dimension. By hypothesis, we have $w_k \in \{1; 3; 5\}$, depending on the KPI's importance. The same rationale applies to the French Ligue 1. Denoting N_G the number of participants in the Bundesliga and N_F the number of participants in the Ligue 1, we then obtain that:

$$SD_{G,i} = \sum_{k=1}^{n} w_k * S_{G,i,k}$$

for a given German FC, with $S_{G,i,k} = N_G - rank_{G,i,k}$ by construction and

$$SD_{F,j} = \sum_{k=1}^{n} w_k * S_{F,j,k}$$

for a given French FC, $S_{F,i,k} = N_G - rank_{F,i,k}$ by construction.

The sub-score along the corresponding sub-dimension is calculated on a relative basis; thus, denoting $SD_{G,i}$ % the sub-score of German FC *i* along a sub-dimension, we have:

$$SD_{G,i}\% = \frac{\sum_{k=1}^{n} w_k * S_{G,i,k}}{\max\{S_{G,i,k}\}_{\substack{i \in [1;18] \\ k \in [1;n]\}}} * \sum_{k=1}^{n} w_k}$$

for a given German FC, and

$$SD_{F,j}\% = \frac{\sum_{k=1}^{n} w_k * S_{F,j,k}}{\max\{S_{F,j,k}\}_{\substack{j \in [1;20]\\k \in [1;n]}\}} * \sum_{k=1}^{n} w_k}$$

for a given French FC. We note that: $\max\{S_{G,i,k}\}_{\substack{i \in [1;18]\\k \in [1;n]}} = N_G - 1 = 17$, with N_G be-

ing the number of FCs in the Bundesliga and $\max\{S_{F,j,k}\}_{\substack{\{j \in [\![1;20]\!]\}\\k \in [\![1;n]\!]}} = N_F - 1 = 19$ with N_F

being the number of FCs in the Ligue 1.

We here consider the same range of FCs, i.e. the FCs considered in our proof belong to the overlapping 18 possibilities between the Ligue 1 and the Bundesliga. For 2 FCs, one participating in the Bundesliga, and the other one participating in the Ligue 1, which are supposed to have the same rank *r* for all KPIs within the sub-dimension, the sub-score along the sub-dimension differs between those by:

$$SD_{G,i}\% - SD_{F,j}\%$$

$$= \frac{\sum_{k=1}^{n} w_{k} * S_{G,i,k}}{\max\{S_{G,i,k}\}_{\substack{\{i \in [1;18]\}\\k \in [1;n]\}}} * \sum_{k=1}^{n} w_{k}} - \frac{\sum_{k=1}^{n} w_{k} * S_{F,i,k}}{\max\{S_{F,i,k}\}_{\substack{\{i \in [1;20]\}\\k \in [1;n]\}}} * \sum_{k=1}^{n} w_{k}}}$$
$$= \frac{\sum_{k=1}^{n} w_{k} * S_{G,i,k}}{(N_{G}-1) * \sum_{k=1}^{n} w_{k}} - \frac{\sum_{k=1}^{n} w_{k} * S_{F,i,k}}{(N_{F}-1) * \sum_{k=1}^{n} w_{k}}}$$

Simplifying the above expression, we obtain

$$SD_{G,i}\% - SD_{F,j}\% = \frac{(N_F - 1) * (N_G - rank_{G,i}) - (N_G - 1) * (N_F - rank_{F,j})}{(N_F - 1) * (N_{GF} - 1)}$$
$$SD_{G,i}\% - SD_{F,j}\% = \frac{(N_F - 1) * (N_G - rank_{G,i}) - (N_G - 1) * (N_F - rank_{G,i})}{(N_F - 1) * (N_{GF} - 1)}$$

as we supposed the 2 FCs to have the same rank.

We then obtain

$$SD_{G,i}\% - SD_{F,i}\% < 0 \ if \ rank_{G,i} \ge 2$$

which implies that German FCs appear slightly undervalued compared to French ones. Moreover, looking at the first partial derivative function $\frac{d(SD_{G,i}\%-SD_{F,j}\%)}{drank_{G,i}}$, we obtain that

$$\frac{d(SD_{G,i}\%-SD_{F,j}\%)}{drank_{G,i}} < 0 \text{ for all ranks considered.}$$

This by the way indicates that the comparison error enlarges with the FCs rank, i.e. the lower the FC is ranked, the larger the comparison error is. This will be considered in our results analysis.

3.5.3 Composition of the Bundesliga Members in the 2018/19 Season

The main part of this study has considered the Bundesliga members of the 2018/19 season. The Bundesliga's importance in the European football landscape has already been discussed at the beginning of this study. Furthermore, it has to be mentioned with regard to the final interpretation that the Bundesliga clubs strongly vary along several characteristics. Table 10 gives an overview of the variety of legal forms, years spent in the league, revenues of the previous season, and types of FCs according to KAWOHL ET AL. (2016, pp. 18–19). In total the legal forms of GmbH & Co. KGaA and GmbH (five FCs respectively) are the most common one in the Bundesliga, followed by AG and e.V. (four FCs respectively). Compared to the previous edition, one GmbH & Co. KGaA, namely 1. FC Köln, was replaced by one AG-FC: Fortuna Düsseldorf. The league membership is widely distributed, with the FC Bayern München participating in its 54th Bundesliga Championship in a row, and RB Leipzig, which joined the Bundesliga for the first time in the 2016/17 season. In terms of revenue, FC Bayern München was once again top of the class in the 2017/18 season, accumulating €648 million and thereby exceeding Fortuna Düsseldorf by a factor of 16. Lastly, FCs' characteristics diverge in terms of their objectives and backgrounds. All of the mentioned differences should be kept in mind when interpreting the final results in the following chapter. This allows for correctly putting the outcomes in perspective and reduces the risk of misinterpretation.

| Football Club (FC) | Legal Form | League Mem- bership [in years] | Revenue 2017/18 [in €m] | Type of FC |
|--------------------------|-----------------|--------------------------------------|-------------------------------|---------------------------|
| 1. FSV Mainz 05 | e.V. | 10 | 114.1 | Training Club |
| Bayer 04 Leverkusen | GmbH | 40 | 203.8 | International Player |
| Borussia Dortmund | GmbH & Co. KGaA | 43 | 536.0 | International Player |
| Borussia Mönchengladbach | GmbH | 11 | 178.0 | National Traditional Club |
| Eintracht Frankfurt | AG | 7 | 116.3 | National Traditional Club |
| FC Augsburg | GmbH & Co. KGaA | 8 | 91.0 | Training Club |
| FC Bayern München | AG | 54 | 648.1 | International Player |
| FCN | e.V. | 1 | 44.4 | National Traditional Club |
| FC Schalke 04 | e.V. | 28 | 350.4 | International Player |
| Fortuna Düsseldorf | AG | 1 | 39.8 | Training Club |
| Hannover 96 | GmbH & Co. KGaA | 2 | 82.0 | Training Club |
| Hertha BSC | GmbH & Co. KGaA | 6 | 104.9 | National Traditional Club |
| RB Leipzig | GmbH | 3 | 217.0 | Project Club |
| SC Freiburg | e.V. | 3 | 100.3 | Training Club |
| SV Werder Bremen | GmbH & Co. KGaA | 38 | 114.7 | National Traditional Club |
| TSG 1899 Hoffenheim | GmbH | 11 | 161.8 | Project Club |
| VfB Stuttgart | AG | 2 | 102.8 | National Traditional Club |
| VfL Wolfsburg | GmbH | 22 | 200.0 | Project Club |

Table 10: Overview of Bundesliga Clubs 2018/19 (own illustration based on FC webpages (2018); TRANSFERMARKT (2019); KAWOHL ET AL. (2016))

3.5.4 Composition of the Ligue 1 Members in the 2018/19 Season

During the season 2018/19, the Ligue 1 constituents appear comparable to their Bundesliga peers to some extent. On the one hand, Paris Saint-Germain dominates its league peers regarding the team's sportive results and also outperforms them in terms of revenues generated during the season; all in all this makes the Paris Saint-Germain comparable to the German FC Bayern München. The Parisian FC achieved total revenues of €557 million in the season 2017/18, giving it a substantial margin compared to the Olympique Lyonnais, ranked second in this field, with €164 million. This is also more than 60 times the revenues generated by Nîmes Olympique.

On the other hand, no FC may be equivalently described as German *Project Clubs*. For instance, even if the RC Strasbourg experienced a ramp-up from the fifth league (CFA2) to the French Elite One within only 6 years, resembling in that sense RB Leipzig, the French FC has already had a long term track record within the French Ligue 1 and one of the strongest fan bases among all French professional FCs (see chapter 4.2); in addition, contrary to RB Leipzig, which played at European level for the third consecutive time in only three seasons

in 2018/19, RC Strasbourg's main goal has been to avoid relegation in the Ligue 2 (RC STRAS-BOURG ALSACE 2017).

As in the Bundesliga, French FCs' characteristics diverge in terms of their objectives. All of the mentioned differences should be kept in mind when interpreting the final results in the following chapter. This again allows for correctly putting the outcomes in perspective and reduces the risk of misinterpretation.

| Football Club (FC) | Legal Form | League Membership [in years] | Revenue 2017/18 [in €m] | Type of FC |
|------------------------|------------|------------------------------------|-------------------------------|---------------------------|
| Amiens SC | SASP | 2 | 29.3 | Training Club |
| AS Monaco | SA | 6 | 123.6 | International Player |
| AS Saint-Étienne | SASP | 15 | 63.4 | National Traditional Club |
| EA Guingamp | SA | 6 | 35.1 | Training Club |
| FC Nantes | SASP | 6 | 46.5 | National Traditional Club |
| FC Rennes | SASP | 25 | 54.0 | National Traditional Club |
| FC Toulouse | SASP | 16 | 37.6 | National Traditional Club |
| FCO Dijon | SA | 3 | 33.1 | Training Club |
| Girondins Bordeaux | SASP | 27 | 67.9 | National Traditional Club |
| Montpellier HSC | SASP | 10 | 43.3 | National Traditional Club |
| Nîmes Olympique | SA | 1 | 9.3 | Training Club |
| OGC Nice | SASP | 17 | 79.1 | National Traditional Club |
| Olympique de Marseille | SASP | 23 | 143.0 | International Player |
| Olympique Lyonnais | SA | 30 | 164.2 | International Player |
| OSC Lille | SA | 19 | 53.9 | National Traditional Club |
| Paris Saint-Germain | SASP | 45 | 557.3 | International Player |
| RC Strasbourg | SAS | 2 | 38.7 | Training Club |
| SCO Angers | SA | 4 | 31.6 | Training Club |
| SM Caen | SASP | 5 | 36.6 | Training Club |
| St. Reims | SASP | 1 | 15.4 | Training Club |

Table 11:Overview of Ligue 1 Clubs 2018/19

(own illustration based on FC webpages (2018); Transfermarkt (2018); Kawohl et al. (2016))

4 Results of and Implications Based on the FoMa-Scoring Model

4.1 Results of the FoMa-Scoring Model: the Bundesliga's FoMa Q-Scores

The final results, the FoMa Q-Scores, were derived according to the procedure described in Chapter 3.5. It is now possible to rank the FCs according to their FoMa Q-Scores and to visualize the FCs' performance in the (sub-)dimensions. Table 12 and Table 13 contain the relevant information¹¹. For the purposes of enhanced readability and simplified interpretation the FCs are grouped into four classes and the levels of their scores are indicated by different coloring.

¹¹ Due to space considerations the results are shown up to sub-dimension level only. The results for each KPI are available and can be requested at the corresponding author's address.
| | | Sporting Success (SS) | | | | Financial Performance (FP) | | | | Fan Welfare Maximization (FWM) | | | | Leadership & Governance (LG) | | | | | |
|----|------------------|--------------------------|----------------|------------------|---------------|----------------------------|---------------|------------------|---------------|--------------------------------|-------------|------------------|---------------|------------------------------|---------------|------------------|--------------|-------------|-------------|
| | Rank | Football Club | FoMa- Score | Total 765 pts | TP 357 pts | PCC 221 pts | PD 187 pts | Total 578 pts | GP 289 pts | B 136 pts | 153 pts | Total 782 pts | MA 476 pts | C 204 pts | SR 102 pts | Total 221 pts | BQ 85 pts | G 85 pts | T 51 pts |
| 1 | Champions | Borussia Dortmund | 0,753 | 73% | 63% | 80% | 82% | 77% | 72% | 90% | 75% | 66% | 73% | 63% | 44% | 88% | 72% | 96% | 100% |
| 2 | League | FC Bayern München | 0,718 | 66% | 63% | 61% | 77% | 71% | 66% | 57% | 92% | 79% | 80% | 82% | 71% | 79% | 82% | 87% | 59% |
| 3 | | Eintracht Frankfurt | 0,644 | 58% | 65% | 66% | 36% | 64% | 64% | 74% | 56% | 66% | 64% | 76% | 55% | 77% | 58% | 93% | 82% |
| 4 | | Borussia Mönchengladbach | 0,638 | 61% | 61% | 59% | 65% | 59% | 49% | 73% | 65% | 64% | 64% | 66% | 59% | 77% | 74% | 66% | 100% |
| 5 | Europa League | FC Schalke 04 | 0,591 | 41% | 31% | 42% | 60% | 64% | 59% | 60% | 76% | 73% | 80% | 71% | 42% | 79% | 85% | 61% | 100% |
| 6 | | SV Werder Bremen | 0,564 | 55% | 59% | 42% | 64% | 52% | 53% | 47% | 53% | 64% | 60% | 61% | 87% | 59% | 47% | 60% | 76% |
| 7 | | RB Leipzig | 0,561 | 67% | 71% | 84% | 39% | 60% | 69% | 39% | 61% | 32% | 33% | 39% | 17% | 50% | 75% | 55% | 0% |
| 8 | | Bayer 04 Leverkusen | 0,526 | 53% | 56% | 62% | 38% | 58% | 50% | 62% | 68% | 54% | 51% | 51% | 73% | 42% | 33% | 41% | 59% |
| 9 | | VfL Wolfsburg | 0,519 | 61% | 57% | 57% | 74% | 49% | 40% | 35% | 79% | 51% | 40% | 55% | 92% | 36% | 27% | 20% | 76% |
| 10 | | Hertha BSC | 0,512 | 56% | 50% | 51% | 72% | 49% | 54% | 28% | 61% | 37% | 32% | 31% | 75% | 57% | 54% | 49% | 76% |
| 11 | Midfield | SC Freiburg | 0,499 | 54% | 59% | 45% | 55% | 42% | 45% | 57% | 24% | 49% | 58% | 33% | 39% | 52% | 72% | 29% | 59% |
| 12 | | TSG 1899 Hoffenheim | 0,491 | 57% | 52% | 71% | 51% | 48% | 55% | 44% | 38% | 35% | 42% | 24% | 25% | 46% | 54% | 52% | 24% |
| 13 | | 1. FSV Mainz 05 | 0,461 | 53% | 54% | 59% | 45% | 52% | 66% | 23% | 53% | 36% | 25% | 42% | 73% | 31% | 36% | 29% | 24% |
| 14 | | FC Augsburg | 0,408 | 33% | 39% | 41% | 12% | 50% | 52% | 49% | 46% | 37% | 45% | 29% | 16% | 51% | 31% | 66% | 59% |
| 15 | _ | VfB Stuttgart | 0,352 | 28% | 19% | 20% | 56% | 26% | 26% | 40% | 16% | 58% | 57% | 65% | 46% | 41% | 58% | 31% | 29% |
| 16 | Pelegation | FCN | 0,327 | 24% | 23% | 31% | 19% | 36% | 32% | 60% | 24% | 37% | 37% | 40% | 29% | 43% | 38% | 39% | 59% |
| 17 | Relegation | Fortuna Düsseldorf | 0,303 | 32% | 41% | 30% | 14% | 28% | 24% | 32% | 31% | 35% | 38% | 30% | 32% | 25% | 19% | 33% | 24% |
| 18 | | Hannover 96 | 0,281 | 22% | 17% | 19% | 34% | 29% | 28% | 35% | 25% | 32% | 28% | 43% | 31% | 37% | 27% | 55% | 24% |
| | | | | | | | | | | | | | | | | | | | |

Table 12: FoMa Q-Scores for the Bundesliga (2018/19)¹²

Legend: Highest value

Lowest value

¹² Abbreviations from the table: **TP** = Team Performance; **PCC** = Player / Coach Characteristics; **PD** = Player Development; **GP** = Growth / Profitability; **B** = Branding; **I** = Internationalization; **MA** = Membership / Attendance; **C** = Communication; **SR** = Social Responsibility; **BQ** = Board Quality; **G** = Governance; **T** = Transparency

| | FoMa Q-Score 2018 | | | | Sporting Success (SS) | | | Financial Performance (FP) | | | | Fan Welfare Maximization (FWM) | | | | Leadership & Governance (LG) | | | | |
|-----------------|--------------------------|----------------|------------------|---------------|-----------------------|---------------|------------------|----------------------------|--------------|--------------|------------------|--------------------------------|--------------|---------------|------------------|------------------------------|-------------|-------------|--|--|
| Rank | Football Club | FoMa- Score | Total 765 pts | TP 357 pts | PCC 221 pts | PD 187 pts | Total 578 pts | GP 289 pts | B 136 pts | l 153 pts | Total 782 pts | MA 476 pts | C 204 pts | SR 102 pts | Total 221 pts | BQ 85 pts | G 85 pts | T 51 pts | | |
| 1 Champior | s 💮 FC Bayern München | 0.734 | 68% | 81% | 43% | 72% | 74% | 72% | 64% | 88% | 79% | 78% | 82% | 77% | 80% | 82% | 89% | 59% | | |
| 2 League | Borussia Dortmund | 0.698 | 66% | 76% | 55% | 59% | 70% | 64% | 72% | 81% | 58% | 68% | 63% | 5% | 90% | 75% | 99% | 100% | | |
| 3 | FC Schalke 04 | 0.643 | 57% | 63% | 54% | 48% | 68% | 70% | 46% | 82% | 69% | 74% | 73% | 40% | 72% | 69% | 58% | 100% | | |
| 4 | Eintracht Frankfurt | 0.608 | 63% | 72% | 51% | 59% | 47% | 44% | 44% | 56% | 60% | 57% | 73% | 46% | 77% | 52% | 95% | 88% | | |
| 5 Europa | Borussia Mönchengladbach | 0.589 | 53% | 49% | 75% | 34% | 64% | 65% | 71% | 56% | 62% | 65% | 58% | 57% | 62% | 76% | 62% | 35% | | |
| 6 League | Bayer 04 Leverkusen | 0.548 | 64% | 62% | 72% | 56% | 53% | 54% | 40% | 63% | 52% | 48% | 50% | 71% | 40% | 34% | 34% | 59% | | |
| 7 | SV Werder Bremen | 0.528 | 46% | 40% | 41% | 63% | 59% | 50% | 85% | 53% | 58% | 54% | 55% | 87% | 55% | 40% | 56% | 76% | | |
| 8 | VfB Stuttgart | 0.517 | 54% | 53% | 43% | 67% | 53% | 73% | 61% | 9% | 58% | 59% | 65% | 41% | 39% | 48% | 33% | 35% | | |
| 9 | Hertha BSC | 0.492 | 56% | 39% | 65% | 75% | 41% | 34% | 48% | 47% | 38% | 32% | 30% | 83% | 58% | 47% | 58% | 76% | | |
| 10 | VfL Wolfsburg | 0.492 | 49% | 42% | 45% | 66% | 56% | 49% | 46% | 76% | 53% | 37% | 67% | 95% | 38% | 32% | 20% | 76% | | |
| 11 | 1. FC Köln | 0.488 | 42% | 29% | 59% | 49% | 43% | 31% | 82% | 31% | 55% | 63% | 41% | 44% | 66% | 65% | 53% | 88% | | |
| 12 Midfield | RB Leipzig | 0.486 | 51% | 45% | 67% | 43% | 61% | 75% | 23% | 69% | 26% | 27% | 30% | 17% | 48% | 73% | 52% | 0% | | |
| 13 | TSG 1899 Hoffenheim | 0.476 | 57% | 50% | 66% | 61% | 41% | 37% | 33% | 55% | 36% | 38% | 32% | 31% | 47% | 62% | 45% | 24% | | |
| 14 | SC Freiburg | 0.422 | 45% | 45% | 44% | 45% | 35% | 30% | 62% | 22% | 40% | 45% | 29% | 38% | 49% | 66% | 26% | 59% | | |
| 15 | 1. FSV Mainz 05 | 0.397 | 46% | 42% | 52% | 46% | 48% | 47% | 54% | 42% | 31% | 28% | 24% | 60% | 23% | 20% | 26% | 24% | | |
| 16 | FC Augsburg | 0.388 | 38% | 38% | 48% | 27% | 42% | 47% | 32% | 42% | 31% | 40% | 15% | 23% | 43% | 38% | 39% | 59% | | |
| 17 Relegatio | Hamburger SV | 0.343 | 21% | 12% | 33% | 24% | 33% | 30% | 24% | 46% | 59% | 58% | 58% | 67% | 42% | 22% | 72% | 24% | | |
| 18 | Hannover 96 | 0.278 | 24% | 26% | 34% | 9% | 26% | 31% | 23% | 22% | 36% | 32% | 54% | 21% | 30% | 34% | 29% | 24% | | |
| | | | | | | | | | | | | | | | | | | | | |

Table 13: FoMa Q-Scores for Bundesliga (2017/18)¹³

Legend: Highest value

Lowest value

¹³ Abbreviations from the table: **TP** = Team Performance; **PCC** = Player / Coach Characteristics; **PD** = Player Development; **GP** = Growth / Profitability; **B** = Branding ; **I** = Internationalization; **MA** = Membership / Attendance; **C** = Communication; **SR** = Social Responsibility; **BQ** = Board Quality; **G** = Governance; **T** = Transparency

As described above, the FoMa Q-Score is independent of any scale units and can only be compared among the FCs. Therefore, the FoMa Q-Score is provided in absolute terms. The values of the (sub-)dimensions, on the contrary, indicate how many points a certain FC was able to achieve in relation to the total points available. Consequently, it is more intuitive to report these figures in relative terms. To enhance the readability of the table, all values are visually represented by colors. Each column's highest value is indicated by deep green, whereas its lowest value is filled with deep red. The closer the values in between approximate the highest value (lowest value), the more the filling turns into green (red). A yellow filling stands for a value which is in the middle of the highest and lowest values. Thus, it is very easy to discover interesting outliers and patterns which are worth discussing. Additionally, the FCs are grouped into 4 categories, which match the classical outcome of a Bundesliga season. Generally speaking, FCs can either reach the UEFA Champions League, the UEFA Europa League, a place in the midfield or are relegated to the 2nd Bundesliga. Consequently, the 4 categories are Champions League, Europa League, Midfield and Relegation. The group allocation for the management quality doesn't match the actual distribution but is rather oriented on larger gaps between FCs' FoMa Q-Scores, which also become evident by the columns' color distribution.

On the one hand, in 2018/19, rank improvements come mainly from RB Leipzig. Indeed, RB Leipzig achieves the largest ranking advancement (+5 places) compared to 2017/18, namely through its *Sporting Success* dimension gaining in strength. Other significant rank improvements come from SC Freiburg (+3 places), FC Augsburg (+2 places), 1. FSV Mainz 05 (+2 places), thanks to a stronger *Financial Performance* and the increasing strength in the *Leader & Governance* dimension. On the other hand, VfB Stuttgart experiences the largest score decline (i.e. -.166), which is also reflected in the FC's ranking regression; this deterioration results from VfB Stuttgart's decline in the *Sporting Success* sub-dimensions *Team Performance* (TP) and *Player and Coach Characteristics* (PCC), accompanied by a weakening of its *Financial Performance*. The VfB Stuttgart actually ranked at place 16 of the German championship at the end of the season and lost its play-off confrontation against Union Berlin; the former was by the way relegated to the Bundesliga 2 (Sueddeutsche.de, 2019).

Regarding the season 2018/19, the overall FoMa Q-Score distribution appears very similar to the previous season. 50% of the German elite FCs achieve a score equal or higher than .515, a slight improvement compared to the previous edition. All in all, the Management Quality within the Bundesliga does not show any significant change (see Figure 9). However, a broad variety of interpretations may still be undertaken.



Figure 9: Overall score dispersion among Bundesliga football clubs in 2018 and 2019

Champions League players remain Borussia Dortmund and FC Bayern München, as in the season 2017/2018. Borussia Dortmund FC ranks this year at the top of the Bundesliga thanks to *Sporting Success* improvements, especially in the sub-dimension *Players and Coach Characteristics* (PCC), while the FC Bayern München experiences a slight decline within the *Financial Performance* dimension, which negatively impacts its overall Score (-.016). Overall, Champions League players are characterized by a strong balance between the four dimensions with scores ranging above 63% in almost each of these. Moreover, Borussia Dortmund shows an improving focus on CSR, with a 41ppt-improvement within the sub-dimension¹⁴.

¹⁴ The CSR-performance, i.e. (SR₁), is established on the basis of the imug-study: Nachhaltigkeit im Profifußball: Offensivspektakel oder Abwehrschlacht? Ein Blick auf die 1. Bundesliga [Sustainability in professional football: Offensive spectacle or defensive battle? Spotlight on the German Bundesliga]. Hannover, Germany, which was adjusted to reflect the ongoing CSR-practices developments, on the basis of the CSR-reporting sub-dimension within the RIC-model (i.e. Reporting, Investors Relations, Capital Markets), developed at the Chair of Accounting and Auditing at the HHL Leipzig Graduate School of Management.

This year, the Europa League category is composed of five FCs, i.e. one less than in 2017/18. Two FCs, namely the VfB Stuttgart (-7 places) and Bayer 04 Leverkusen (-2 places) quit the group while RB Leipzig (+4 places) joins the Europa League players. Overall, the FCs encompassed within the category show slightly improving FoMa Q-Scores (+.028 on average), even though the gap with the Midfield group slightly reduced this year. Looking at specific FCs, we observe that RB Leipzig has closed the gap with Europa League participants in terms of *Sporting Success* and *Financial Performance*, but still needs to encourage the development of a fan culture to strengthen the *Fan Welfare Maximization* dimension. Moreover, and identical to the last season, RB Leipzig still lacks transparency, as it once again ranks last among Bundesliga participants.

Thereafter, the Midfield group consists of seven FCs from Bayer 04 Leverkusen ranked 8 to FC Augsburg ranked 14. Compared to the Europa League players, Midfield participants show scores ranging between 10ppt to 15ppt lower in almost all scoring sub-dimensions except in terms of *Sporting Success*. However, Midfield participants show the strongest score improvements, for instance in terms of *Fan Welfare Maximization*, which in this case mostly resulted from the replacement of RB Leipzig, promoted to the Europa League group, with Bayer 04 Leverkusen.

Last but not least, the Relegation group encompasses four FCs this year, two more than in the previous edition. It consists of the two newly promoted clubs FC Nürnberg and Fortuna Düsseldorf, ranking respectively at places 16 and 17, as well as VfB Stuttgart and Hannover 96. The group shows low scores, in line with the previous edition. VfB Stuttgart experiences the largest decline among Bundesliga participants (i.e. -7 places), driven by lower scores within the *Sporting Success* and *Financial Performance* dimensions. This results from a seasonal team underperformance in the Bundesliga, leading the FC to be relegated to the second division in the season 2019/20. Nevertheless, slight improvements are observable in the FC's *Leadership & Governance* score (+2ppt), which result from changes such as the creation of a separated AG ("Aktiengesellschaft") entity for its professional football activities in June 2017 (StN.de 2017), which is fully reflected within the present edition. Newly promoted Fortuna Düsseldorf has established itself within the German elite division at place 10 of the championship; we thus expect improvements in terms of *Financial Performance* in the coming season.

Hannover 96 already ranked last in the previous edition and could not demonstrate any significant improvement. The FC will by the way participate in the Bundesliga 2 during the coming season, together with the FC Nürnberg and VfB Stuttgart.

4.2 Results of the FoMa-Scoring Model: the Ligue 1's FoMa Q-Scores

Compared to the previous edition, major elements stand out from the present ranking. In fact, the French elite league shows dramatic rank changes at the FC level. On the one hand, RC Strasbourg, which was promoted one season ago, gains 10 places within the present ranking and is now encompassed among Europa league participants. The FC's strong development appears in line with its recent history. Indeed, RC Strasbourg benefits from a large and increasing fan base (+20% compared to 2017/18) and reaches the top of the Ligue 1 within the sub-category Match Attendance, as in the previous edition. This results from the club's strong regional involvement and the successive promotions the club achieved between the seasons 2011/12 and 2017/18, from France's fifth division (CFA2) to the access to the Ligue 1. Moreover, RC Strasbourg's Financial Performance shows significant improvements compared to the previous season, stemming from its establishment among Ligue 1 participants. In fact, the FC historically suffered from financial troubles that strongly impacted it in the season 2010/11, and eventually even led to its liquidation in 2011 (L'ALSACE, 2011). The latter situation forced the club to implement changes regarding its management practices and governance structures, from which it currently benefits, as it ranks 3rd in the dimension *Leadership & Governance*, behind the Olympique Lyonnais and SM Caen. As a consequence of its strong fan base and strengthening Financial Performance, RC Strasbourg's Sporting Success dimension shows great improvements, as the latter will participate in the Europa League in the incoming season, after its victory in the final of the French Coupe de la Ligue against EA Guingamp (L'Equipe, 2019).

With a symmetric movement within the Ligue 1, the AS Monaco ranks 11 places lower than in the previous year, directly stemming from a significant decline in the FC's sporting performance. Indeed, the club finished the season at the 17th place of the Championship,

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while it ranked 2nd in the season 2017/18. In the present ranking, AS Monaco establishes itself at place 16, with major decreases in the sporting and financial dimensions. Moreover, the club still ranks last in terms of *Fan Welfare Maximization*, with an ever declining fan base.

The newly promoted St. Reims and Nîmes Olympique appear within the relegation group in terms of FoMa Q-Scores, despite overall scores ranging around .400. In fact, although both finished the season in the first half among all Ligue 1 participants at places 8 and 9 respectively, they still need to strengthen *Leadership & Governance* and *Financial Performance* dimensions to stay competitive in the long-run. However, one may reasonably expect improvements to come in the latter dimensions as a consequence of their establishment within the French elite league.



Figure 10: Overall score dispersion among Ligue 1 football clubs in 2018

Compared to the previous edition, the Ligue 1 FoMa Q-Score distribution is characterized by major evolutions: on the one hand, the ten FCs in the second half of the ranking show very similar scores, ranging between .398 and .472, while these ranged between .311 and .483 previously. This reflects a greater homogeneity of second-tier Ligue 1 FCs compared to the previous season. On the other hand, looking at the first half of the ranking, 50% of the Ligue 1 participants reach a FoMa Q-Score above .472 vs. .483 in 2017/18, while 25% of these achieve a score higher than .538 versus .573 in the previous year. Here again, this tends to show a higher concentration of top tier Ligue 1 FCs compared to 2017/18.

Similarly to the Bundesliga, the Ligue 1 is divided into four club categories based on the scores FCs achieved in each of the four dimensions. The first one, i.e. the Champions League

group, is composed of the Olympique Lyonnais and the Paris Saint Germain, exactly as in 2017/18. The group formed by these two FCs is characterized by a strong and homogeneous performance in three dimensions: *Sporting Success, Financial Performance* and *Fan Welfare*. However, regarding the *Leadership & Governance* dimension, a significant difference exists between the listed Olympique Lyonnais and privately held Paris Saint-Germain, with a clear advantage for the former club, namely in terms of transparency. Despite a slight score decrease (-.012), Olympique Lyonnais achieves once again the highest FoMa Qscore (.716) and thus reaches the top of the present ranking. As mentioned above, the Olympique Lyonnais shows a much higher performance in the *Leadership & Governance* dimension, while Paris Saint-Germain dominates its league peers in the 3 other dimensions. In fact, in contrast to the remaining privately-held clubs, Olympique Lyonnais needs to comply with the regulatory requirements imposed by the French AMF ("Authorité des Marchés Financiers") to public companies, for instance in terms of information disclosures. The club thus gains 100% of the available points in terms of transparency versus 11% for Paris Saint-Germain, which was already observable in the last ranking.

Next, the Europa League group consists of two football clubs: the RC Strasbourg and Olympique Marseille, two FCs less than in the previous season. The two clubs appear quite heterogeneous within their *Sporting Success* and *Leadership & Governance* dimensions. Indeed, RC Strasbourg still shows overall sporting results corresponding to Midfield players but enters the European League group thanks to its strong fan base, its increasingly popular brand, and strong governance practices. Overall, Europa League members lag behind Champions League players mainly due to the dimensions *Sporting Success* and *Financial Performance*.

As in the previous season, ten FCs compose the Midfield. These are characterized by a wide diversity of profiles. Indeed, 56ppt separate SM Caen, the strongest football club in terms of *Leadership & Governance*, from OSC Lille, ranked last, even though the gap appears smaller than in the season 2017/18 (56 versus 73ppt). Regarding the *Financial Performance* scores, the Midfield appears once again heterogeneous, with OSC Lille showing almost comparable scores with Europa League players, whereas SM Caen appears in line with Relegation group members. Contrary to the previous edition, Midfield players appear

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slightly weaker along the *Fan Welfare* dimension. This is mainly due to changes within the group composition, as the RC Strasbourg, which appeared as an outlier within the Group last year, quits the group this season.

Montpellier HSC achieved recurring satisfying sporting results (e.g. 6th place in the championship), which have enabled the FC to strengthen its branding as well as its degree of internationalization. As a result, the FC achieves the largest progression within the Midfield, ranking 5 places higher than in 2017/18. The same trend is observable for OSC Lille, which benefits from its strong *Sporting Success* (e.g. its 2nd place within the French championship); this drives the FC's rank progression from place 12 in 2017/18 to place 7 this year.

Last but not least, six clubs constitute the relegation group, two more compared to the previous edition. These are characterized by lower scores in all dimensions but *Fan Welfare* compared to Midfield players. EA Guingamp finished the season at the last place within the Ligue 1 and is thus relegated to the second division. The FC namely shows declining scores in terms of *Team Performance* and *Players and Coach Characteristics*, which drive EA Guingamp's regression within the FoMa Q-Score ranking at place 16. Moreover, AS Monaco experiences this year the largest score decline (-.184), ranking 11 places lower than in the previous season. This is directly driven by the FC's decline in *Sporting Success*, as it finished the season at place 17 within the Ligue 1 versus 2nd in 2017/18. Despite their respective 8th and 9th place in the championship table at the end of the season, St. Reims and Nîmes Olympique, which were promoted at the beginning of the season, only rank at places 17 and 20 in the present evaluation. Their establishment within the French elite FCs should nevertheless enable them to improve their *Financial* strength and *Leadership & Governance* practices in the coming seasons.

| | FoMa Q-Score 2019 | | | | Sporting Success (SS) | | | Financial Performance (FP) | | | | Fan Welfare Maximization (FWM) | | | | Leadership & Governance (LG) | | | | |
|----|-------------------|-----------|------------------------|----------------|-----------------------|---------------|----------------|----------------------------|------------------|---------------|-------------|--------------------------------|------------------|---------------|--------------|------------------------------|------------------|--------------|-------------|-------------|
| | Rank | | Football Club | Total score | Total 855 pts | TP 399 pts | PCC 247 pts | PD 209 pts | Total 570 pts | GP 323 pts | B 76 pts | 171 pts | Total 741 pts | MA 494 pts | C 228 pts | SR 19 pts | Total 247 pts | BQ 95 pts | G 95 pts | T 57 pts |
| 1 | Champions | OL | Olympique Lyonnais | 0.716 | 61% | 58% | 79% | 46% | 81% | 83% | 76% | 78% | 67% | 68% | 66% | 68% | 87% | 79% | 88% | 100% |
| 2 | League | | Paris Saint-Germain | 0.711 | 68% | 63% | 68% | 76% | 85% | 83% | 78% | 91% | 73% | 76% | 74% | 5% | 57% | 73% | 71% | 11% |
| 3 | Europa | 6 | RC Strasbourg | 0.581 | 46% | 50% | 47% | 37% | 63% | 65% | 71% | 55% | 66% | 80% | 38% | 42% | 71% | 57% | 71% | 95% |
| 4 | League | Ŵ | Olympique de Marseille | 0.579 | 55% | 53% | 60% | 53% | 65% | 55% | 76% | 78% | 66% | 64% | 75% | 11% | 47% | 13% | 71% | 63% |
| 5 | 1 | <u>.</u> | OGC Nice | 0.540 | 53% | 50% | 65% | 47% | 54% | 58% | 45% | 50% | 45% | 42% | 53% | 16% | 64% | 31% | 80% | 95% |
| 6 | _ | Ô | AS Saint-Étienne | 0.537 | 57% | 68% | 55% | 38% | 45% | 51% | 59% | 29% | 50% | 49% | 56% | 0% | 62% | 55% | 100% | 11% |
| 7 | - | 3 | OSC Lille | 0.532 | 60% | 56% | 83% | 42% | 62% | 58% | 79% | 62% | 55% | 54% | 58% | 47% | 23% | 19% | 34% | 11% |
| 8 | - | | FC Rennes | 0.519 | 52% | 55% | 55% | 41% | 49% | 50% | 59% | 44% | 56% | 59% | 54% | 26% | 51% | 25% | 71% | 63% |
| 9 | - | - | FC Nantes | 0.491 | 51% | 47% | 55% | 53% | 52% | 45% | 74% | 57% | 47% | 36% | 71% | 32% | 43% | 54% | 20% | 63% |
| 10 | Midfield | ** | SCO Angers | 0.477 | 52% | 47% | 40% | 73% | 44% | 46% | 32% | 44% | 40% | 40% | 40% | 53% | 52% | 63% | 35% | 63% |
| 11 | | 0 | Montpellier HSC | 0.468 | 53% | 54% | 62% | 38% | 48% | 46% | 62% | 44% | 36% | 35% | 36% | 58% | 43% | 44% | 20% | 79% |
| 12 | | 3 | SM Caen | 0.465 | 36% | 29% | 32% | 56% | 36% | 33% | 41% | 40% | 52% | 55% | 43% | 79% | 79% | 67% | 80% | 95% |
| 13 | - | V | Girondins Bordeaux | 0.453 | 45% | 36% | 54% | 54% | 51% | 40% | 63% | 68% | 34% | 32% | 38% | 21% | 48% | 17% | 71% | 63% |
| 14 | | | FC Toulouse | 0.447 | 49% | 34% | 51% | 76% | 45% | 34% | 58% | 58% | 32% | 30% | 31% | 84% | 48% | 47% | 39% | 63% |
| 15 | | | EA Guingamp | 0.435 | 41% | 37% | 22% | 71% | 35% | 39% | 61% | 15% | 56% | 60% | 45% | 100% | 48% | 51% | 36% | 63% |
| 16 | - | Ť | AS Monaco | 0.431 | 45% | 37% | 43% | 61% | 59% | 61% | 7% | 78% | 19% | 4% | 48% | 63% | 40% | 21% | 37% | 79% |
| 17 | | | Nîmes Olympique | 0.425 | 47% | 39% | 55% | 52% | 34% | 28% | 43% | 40% | 53% | 60% | 41% | 37% | 34% | 32% | 20% | 63% |
| 18 | Relegation | | Amiens SC | 0.425 | 32% | 42% | 30% | 16% | 45% | 44% | 49% | 44% | 55% | 58% | 47% | 79% | 50% | 63% | 20% | 79% |
| 19 | | Ŵ | FCO Dijon | 0.409 | 37% | 41% | 25% | 45% | 42% | 45% | 46% | 36% | 47% | 50% | 37% | 100% | 40% | 47% | 20% | 63% |
| 20 | | ۲ | St. Reims | 0.399 | 42% | 42% | 48% | 34% | 39% | 34% | 49% | 44% | 37% | 37% | 33% | 89% | 39% | 44% | 20% | 63% |
| L | .egend: | Hig | nest value | | | | | | | | | | | | | | | | | |

Table 14: FoMa Q-Scores for the Ligue 1 (2018/19)¹⁵

¹⁵ Abbreviations from the table: TP = Team Performance; PCC = Player / Coach Characteristics; PD = Player Development; GP = Growth / Profitability; B = Branding; I = Internationalization; MA = Membership / Attendance; C = Communication; SR = Social Responsibility; BQ = Board Quality; G = Governance; T = Transparency

| | FoMa Q-Score 2018 | | | | | Sporting Success (SS) | | | | Financial Performance (FP) | | | | Fan Welfare Maximization (FWM) | | | | Leadership & Governance (LG) | | | | |
|----|-------------------|-------------|------------------------|----------------|------------------|-----------------------|----------------|---------------|------------------|----------------------------|-------------|-------------|------------------|--------------------------------|--------------|--------------|------------------|------------------------------|-------------|-------------|--|--|
| | Rank | | Football Club | FoMa- Score | Total 855 pts | TP 399 pts | PCC 247 pts | PD 209 pts | Total 570 pts | GP 323 pts | B 76 pts | 171 pts | Total 741 pts | MA 494 pts | C 228 pts | SR 19 pts | Total 247 pts | BQ 95 pts | G 95 pts | T 57 pts | | |
| 1 | Champions | | Olympique Lyonnais | 0.728 | 68% | 55% | 82% | 76% | 82% | 88% | 84% | 72% | 63% | 59% | 76% | 5% | 81% | 61% | 88% | 100% | | |
| 2 | League | 🥘 F | Paris Saint-Germain | 0.708 | 68% | 62% | 64% | 83% | 94% | 93% | 88% | 97% | 71% | 72% | 74% | 16% | 45% | 41% | 71% | 11% | | |
| 3 | | 👷 c | DGC Nice | 0.642 | 61% | 49% | 77% | 62% | 71% | 67% | 66% | 81% | 53% | 48% | 62% | 84% | 74% | 56% | 80% | 95% | | |
| 4 | Europa | 🔬 c | Olympique de Marseille | 0.633 | 62% | 55% | 69% | 66% | 76% | 74% | 87% | 77% | 63% | 60% | 72% | 21% | 49% | 22% | 71% | 58% | | |
| 5 | League | - (| AS Monaco | 0.615 | 69% | 62% | 79% | 69% | 84% | 82% | 80% | 87% | 36% | 24% | 57% | 89% | 39% | 18% | 37% | 79% | | |
| 6 | - | () 4 | AS Saint-Étienne | 0.558 | 47% | 54% | 45% | 33% | 58% | 64% | 82% | 37% | 52% | 56% | 48% | 0% | 77% | 94% | 100% | 11% | | |
| 7 | | . | Girondins Bordeaux | 0.538 | 52% | 50% | 61% | 44% | 66% | 65% | 57% | 74% | 41% | 39% | 46% | 11% | 54% | 22% | 83% | 58% | | |
| 8 | _ | Q s | SM Caen | 0.519 | 39% | 41% | 38% | 36% | 41% | 37% | 42% | 49% | 58% | 63% | 46% | 84% | 91% | 99% | 80% | 95% | | |
| 9 | _ | F | FC Rennes | 0.493 | 51% | 50% | 58% | 44% | 48% | 50% | 54% | 41% | 51% | 54% | 46% | 42% | 47% | 16% | 71% | 58% | | |
| 10 | _ | i i i | FC Nantes | 0.489 | 52% | 54% | 61% | 36% | 51% | 47% | 53% | 57% | 47% | 39% | 65% | 32% | 42% | 54% | 20% | 58% | | |
| 11 | Midfield | BEAG E | EA Guingamp | 0.478 | 53% | 64% | 47% | 39% | 28% | 32% | 38% | 16% | 57% | 61% | 49% | 74% | 54% | 71% | 36% | 58% | | |
| 12 | Widneid | 🦁 c | DSC Lille | 0.477 | 45% | 28% | 50% | 72% | 66% | 64% | 57% | 73% | 57% | 57% | 55% | 63% | 18% | 9% | 32% | 11% | | |
| 13 | | 🤞 ғ | RC Strasbourg | 0.455 | 40% | 46% | 34% | 38% | 25% | 15% | 43% | 36% | 68% | 79% | 48% | 26% | 64% | 38% | 71% | 95% | | |
| 14 | | 💮 s | SCO Angers | 0.437 | 49% | 48% | 38% | 64% | 35% | 34% | 43% | 32% | 41% | 41% | 39% | 74% | 46% | 52% | 34% | 58% | | |
| 15 | _ | SP F | FC Metz | 0.422 | 31% | 27% | 28% | 43% | 42% | 38% | 47% | 46% | 47% | 45% | 52% | 53% | 63% | 32% | 85% | 79% | | |
| 16 | | Ø • | Montpellier HSC | 0.406 | 51% | 46% | 61% | 46% | 34% | 39% | 36% | 26% | 32% | 31% | 28% | 95% | 36% | 25% | 20% | 79% | | |
| 17 | | - 🦥 | Amiens SC | 0.387 | 41% | 48% | 29% | 41% | 26% | 15% | 24% | 47% | 46% | 53% | 31% | 37% | 46% | 53% | 20% | 79% | | |
| 18 | Delemeticu | 🕐 ғ | FC Toulouse | 0.384 | 31% | 22% | 42% | 36% | 45% | 53% | 36% | 35% | 37% | 30% | 52% | 47% | 46% | 45% | 39% | 58% | | |
| 19 | Relegation | 🦁 ғ | FCO Dijon | 0.371 | 40% | 46% | 43% | 26% | 31% | 32% | 49% | 22% | 40% | 47% | 26% | 58% | 34% | 35% | 20% | 58% | | |
| 20 | D | т 🌍 | Troyes | 0.311 | 36% | 38% | 22% | 47% | 20% | 12% | 24% | 33% | 35% | 39% | 29% | 0% | 32% | 28% | 20% | 58% | | |

Table 15: FoMa Q-Scores for the Ligue 1 (2017/18)¹⁶

¹⁶ Abbreviations from the table: TP = Team Performance; PCC = Player / Coach Characteristics; PD = Player Development; GP = Growth / Profitability; B = Branding; I = Internationalization; MA = Membership / Attendance; C = Communication; SR = Social Responsibility; BQ = Board Quality; G = Governance; T = Transparency

4.3 A Comparison Between the Bundesliga and Ligue 1

4.3.1 A Comparison of the Leagues' Structures

Overall, the Bundesliga and Ligue 1 show quite different patterns in terms of FoMa Qscore distribution, especially in view of the significant differences in the French Ligue 1 in 2018/19 compared to the previous edition. Indeed, compared to the German Bundesliga, the Ligue 1 is characterized by a larger volatility at an individual FC-level, which may be illustrated by the considerable performance evolutions of FCs like AS Monaco (-10 places) or RC Strasbourg (+10 places).

On the one hand, the FCs ranking in the first half in terms of FoMa Q-Scores within the Bundesliga tend to enlarge the gap with their French peers, as both the median and score associated to the 75%-percentile range higher for the Bundesliga compared to the Ligue 1, at respectively .515 versus .492 and .586 versus .538. Nevertheless, the opposite trend may be observed regarding the second half of the ranking with overall higher FoMa Q-Scores for second tier Ligue 1 participants compared to their German peers.

The Bundesliga and Ligue 1 Champions League groups appear homogeneous, with clubs dominating their respective leagues in all four dimensions. Borussia Dortmund appears as Olympique Lyonnais' German equivalent, as their scores range at very similar levels along all dimensions. They show high scores compared to their respective competitors along the *Leadership & Governance* dimension, which is a consequence of the regulatory framework imposed on public firms both FCs have to comply with. Paris Saint-Germain, which is comparable to the FC Bayern München in terms of *Sporting Success*, shows nevertheless weaker *Leadership & Governance* practices compared to its German counterpart.

Next, five German clubs, from Eintracht Frankfurt to RB Leipzig, compose the Europa League players versus only two clubs, namely RC Strasbourg and the Olympique Marseille, in France, which makes a cross country comparison difficult.

Thereafter, Midfield constituents (7 clubs in Germany, 10 in France) show in both cases a greater diversity of FC profiles. Compared to the previous edition, the French and German Midfields show progress in the *Sporting* and *Financial Performance* dimensions and stability

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in the *Leadership & Governance* dimension. Nevertheless, although German Midfield players have tended to improve their *Fan Welfare* through improvements in their *Social Responsibility* practices, but also through stronger communication and to a lesser extend through slight increases in terms of *Membership and Attendance*, Ligue 1 Midfielders slightly regressed in terms of *Fan Welfare*, which is partly a consequence of the change in the group composition, with for instance RC Strasbourg quitting the group this year.

Last but not least, both German and French relegation groups are composed of teams showing lower scores along the different dimensions. They usually achieve the lowest revenue levels and do not benefit from large revenue growth due to a deficit in sportive results. Moreover, these clubs usually show lower branding performance compared to other groups. Within the *Leadership & Governance* dimension, French relegation group members appear slightly more transparent than German ones.



4.3.2 A Comparison of Overall Scores Between Leagues

Figure 11: Overall score dispersion among Bundesliga and Ligue 1 football clubs in 2019

Figure 11 shows the overall FoMa Q-Score dispersion among Bundesliga and Ligue 1 FCs during the season 2018/19. Bundesliga FCs appear more dispersed than there French peers, with a score interval length of .472 versus .318 in the Ligue 1. This basically suggests the presence of a greater heterogeneity in the German league compared to the French one, especially regarding the second half of the ranking.

Moreover, the Bundesliga shows a higher median score compared to the Ligue 1 (.515 versus .473), despite a slight structural negative scoring distortion for German FCs, which

indicates that Bundesliga FCs ranking in the first half tend to outperform Ligue 1 ones, although the latter benefit from a structural bonus in the methodology employed. In fact, the FoMa Q-score measures FCs' performances along each dimension relatively to their peers within a given league, and allocates a percentage score ranging from 0 to 100%. Due to the difference in the league composition between France and Germany, the FoMa Q-score for a given rank appears slightly higher in France compared to Germany (see chapter 3.5.2).

Thus, two statements may emerge from the above figure. On the one hand, French FCs appear more compact than German ones overall, which might favour the French league's long term attractiveness. This is supported by the fact that the second half of ranking shows greater homogeneity in France, with higher scores on average, suggesting that the rivalry for second-tier FCs becomes more and more significant in France. On the other hand, as in the previous edition, German FCs established in the first half of the ranking still tend to outperform their French peers.



4.3.3 A Comparison of the *Sporting Success* Dimension Between Leagues

Figure 12: Sporting Success score dispersion among Bundesliga and Ligue 1 football clubs in 2019

Compared to the previous edition, the German Bundesliga still tends to be more widely dispersed around the median with a score interval of .510 versus .354 in France. French FCs belonging to the lowest quartile again appear more homogeneous than their German peers. At an individual level, Paris Saint-Germain, which ranks at the top among Ligue 1 participants, tends to slightly underperform its German peer Borussia Dortmund, since the latter benefits from an averagely younger squad (25.2 versus 26.0 years old) and longer

remaining contract durations for both Top 5 players and coaching team members. Now, looking at the (sub)-dimensions composing the Sporting Success score, Paris Saint-Germain shows very similar features to FC Bayern München in terms of Team Performance with scores of .677 and .660 respectively. Here, AS Saint Etienne surprisingly outperforms FCs such as Paris Saint-Germain or Olympique Lyonnais, stemming from the FC's strong and continous efficiency performance. Similarly, RB Leipzig dominates the Team Performance sub-dimension in the German elite league through stronger micro and meso performance efficiency. The second sub-dimension *Players and Coach Characteristics* is led by the OSC Lille, which distinguishes itself through a young squad (mean age: 24.3 years old) associated with a strong contribution of new players and strong coach ability, which enabled the FC to rank at place 2 at the end of the Championship. Last but not least, Borussia Dortmund appears as the most successful Player Development FC among the Franco-German elite leagues, followed by FC Bayern München. Both outperform their peers through the performance of their youth academy. At the opposite end, FC Augsburg, Amiens, and Fortuna Düsseldorf show the lowest scores in the sub-dimension this year. These clubs need to develop a focus on home grown player development through a strong youth academy.



4.3.4 A Comparison of the *Financial Performance* Dimension between Leagues

Figure 13: Financial Performance score dispersion among Bundesliga and Ligue 1 football clubs in 2019

As for the *Sporting Success*, and similar to the season 2017/18, the median *Financial Performance* score appears higher for Bundesliga participants than in the Ligue 1, ranging

at .506 versus .485. The score distribution has stayed fixed in Germany while FCs have become more homogeneous in the Ligue 1. In fact, the score interval has reduced from .735 to .511 in France, with an improvement of the median score of +.020 point. The progression of the median and average Financial Performance scores in France has been driven by a higher degree of internationalization and a stronger branding sub-dimension. At the FC level, although the gap with Olympique Lyonnais appears significantly lower this year, Paris Saint-Germain achieves a score of .847 and still dominates Franco-German FCs. In fact, since 2012, the Qatar Investment Authority owns 100% of the FCs' shares and has since pursued a significant development strategy, with the acquisition of superstar football players such as Neymar, Cavani, or more recently the Italian goalkeeper Buffon, and significantly supported the club's internationalization (PARISTEAM, 2018). The club's sportive success, illustrated by the five Ligue 1, four Coupe de France and five Coupe de la Ligue trophies won in the last six seasons, has also significantly developed the FC's brand visibility on an international scale. This year however, Borussia Dortmund surpasses the PSG in the sub-dimension branding. Regarding growth and profitability, although German FCs used to show greater homogeneity than Ligue 1 participants in the previous season, the latter has however significantly reduced, as second-tier Ligue 1 participants have demonstrated strong progress in terms of growth and profitability.



4.3.5 A Comparison of the Fan Welfare Dimension Between Leagues

Figure 14: Fan Welfare score dispersion among Bundesliga and Ligue 1 football clubs in 2019

The German Bundesliga appears once again as the best-attended football league worldwide with an average number of 43,879 spectators per game during the season 2017/18, i.e. 8% more compared to 2016/17 (DFL, 2019). This is almost twice the average number of spectators present during the season 2017/18 for Ligue 1 games, as 23,019 spectators were present in the French stadiums, an increase of 15% compared to 2016/17 (DNCG, 2019). Thus, the Bundesliga still largely outperforms the Ligue 1 along the sub-dimensions *Membership & Attendance* and *Communication*. However, a comparison between both leagues has to be conducted cautiously. In fact, regarding *Social Responsibility*, the data for Ligue 1 FCs appears still too sporadic to enable comparability among league participants, which led us to take the criterion *Social Responsibility* out of the French FoMa Q-Score; thus, we focused here on FCs' *Financial Integrity*, measured as the amount of fines paid to professional football governing bodies.

Contrary to the overall trend, the Ligue 1 has become more heterogeneous along the *Fan Welfare Maximization* dimension as the score interval between the Paris Saint-Germain, ranked first, and AS Monaco ranked last, ranges at 54ppts versus 39ppts last year. However, despite a more widespread score distribution, Ligue 1 participants demonstrate improvements in terms *Membership and Attendance*, as the median score reaches .519 this year versus .502 previously; this is in line with the overall development of match day attendance observed at league level (+15%) compared to the season 2017/18 (DNCG, 2019).



4.3.6 A Comparison of the *Leadership & Governance* Dimension Between Leagues

Figure 15: Leadership & Governance score dispersion among Bundesliga and Ligue 1 football clubs in 2019

Last but not least, the overall similar score distribution observed between both leagues along the Leadership & Governance dimension masks significant differences between the Bundesliga and Ligue 1 along the three sub-dimensions encompassed here, namely: *Board* Quality, Governance, and Transparency. Such as for the Fan Welfare scores, results have to be considered and interpreted very cautiously. In fact, significant structural differences exist between the German and French corporate governance systems, which make a direct comparison between the Bundesliga and the Ligue 1 difficult. Indeed, the German corporate governance system is mainly characterized by a dual-board system, comprising a management board in charge of "managing and directing the business of the corporation" (Du PLESSIS 2004), as well as a supervisory board, which is for instance in charge of the nominations and compensation of the management board (GOVERNMENT COMMISSION, 2013). In France, however, no equivalent obligation exists, and companies operating in the legal form of "Sociétés Anonymes" (SA) are given the choice between a dual-board system and a one-tier board (LEGIFRANCE 2018). Regarding FCs' legal forms, all French Ligue 1 participants have adopted corporation statutes and have either founded SAs (Sociétés Anonymes) or SASPs (Sociétés Anonymes Sportives Professionnelles), which possess very similar features¹⁷. Moreover, as mentioned previously, one FC, namely the Olympique

¹⁷ The AS Monaco, which operates under the S.A. legal form, is however subject to the Monegasque legal system

Lyonnais, has been listed on the French stock exchange since 2007 (OL, 2007). Actually, among Ligue 1 participants, only five FCs have opted for a dual board system.

Looking at the German Bundesliga, even if a majority of FCs are already corporations, a broader spectrum of legal forms still exists (see chapter 2.3.5.). In fact, four FCs, namely the 1. FSV Mainz 05, FC Schalke 04, SC Freiburg, and promoted FC Nürnberg still operate in the form of German associations (e.V.s). Regarding the other fifteen FCs, three corporation legal forms are present: the GmbH, the GmbH & Co. KGaA, and the AG.

Apart from the listed Olympique Lyonnais, no FC releases its annual report individually in the French Ligue 1. Rather, the DNCG (Direction National de Contrôle et de Gestion) publishes each year the individual financial statements of all Ligue 1 and Ligue FCs, which comprise a profit & loss statement and a balance sheet (DNCG, 2018). Since French FCs need to prepare and communicate the financial information to the DNCG, which eventually publishes it, French FCs outperform their German peers when it comes to the financial information transparency. Nevertheless, out of the seven types of public disclosures under scrutiny, Ligue 1 FCs release on average two of them, while Bundesliga ones release on average four of them. As an example, Borussia Dortmund and FC Schalke 04, which appear as the most transparent German FCs, released all the seven documents under scrutiny, whereas the Olympique Lyonnais, which ranks at the top among Ligue 1 participants with regard to transparency, only provided five out of the seven public disclosures we looked at.

4.4 Implications Based on the FoMa-Scoring Model

By allowing discussions such as the ones in the previous chapter, the FoMa-Scoring Model can prove highly useful for stakeholders from the football environment. Within FCs, an interesting utilization could be the application of the FoMa-Scoring Model for benchmarking purposes, both within a league, but also across football leagues, i.e. here between the Bundesliga and the Ligue 1. Football managers can quite conveniently compare their FC's performance in specific (sub-)dimensions with that of their main competitors. When transformed into concrete actions, the learnings can provide substantial advantages with regards to an FC's competitiveness. In addition, the FMEF's insights could be transformed into an internal controlling system, allowing managers to be evaluated with a more reliable foundation. Do's and don'ts for the implementation phase can be derived from VfB Stuttgart's attempt in 2003 to install such a management tool (further described in Chapter 2.3 on page 12). For non-FC stakeholders the **FoMa Q-Score opens up new opportunities** to receive more detailed information about an FC: For example, it would be **appropriate for sponsors to consider the FoMa Q-Score within the scope of a due diligence**. It may provide insights as to the strengths and weaknesses of an FC, which then can be compared with the company's objectives and capabilities. In addition, the **DFL licensing procedure** should also be mentioned as a practical application opportunity. It is one of the goals of this procedure to foster managerial and financial structures (DFL, 2016, p. 3). A refined version of the FoMa Q-Score could serve as an indicator for the existing structures of FCs and give insightful inspiration for areas which require particular attention in the near future. Thanks to the present edition, which considers both the French and German leagues, the DFB and LFP may use the holistic approach proposed as a strategic management tool, to identify their own strengths and weaknesses, as well as those of their nearest competitors at a European level.

As the present study corresponds to the FoMa Q-Score's third edition, which comprehensively evaluates the relevant dimensions of managing FCs and extends it both longitudinally and cross-sectionally, it still remains explorative. Therefore, several limitations should be mentioned in order to correctly interpret the results and derive potential next steps. First of all, the measured KPIs of the four dimensions haven't been tested with regards to their explanatory power. Some measured KPIs are likely relevant for all FCs, whereas others only concern a certain group of FCs. This one size fits all approach presumably favors larger FCs to a certain degree, as some KPIs contain absolute, instead of relative, values. Secondly, the scoring model doesn't follow a scientific best-practice procedure due to the reason that such a procedure doesn't exist yet. The aim was to design the evaluation as intuitively as possible in order to enable deeper discussions about the content, which in this case is related to dimensions, sub-dimensions, and KPI definitions. Especially the weights of sub-dimensions (based on the quantity of measured KPIs) and individual KPIs (low, medium, high priority) were derived subjectively. Thirdly, the access to relevant data was exclusively restricted to publicly available sources. As the setups of most FCs allow them to control the disclosure of information, it was a challenge to establish a common level playing field. However, in order to prevent the results from being distorted due to a lack of transparency, it was a necessary hurdle to overcome. The KPIs and their underlying data were selected and analyzed to the best of the authors' knowledge. Nevertheless, it seems likely that full access to the FCs' financial results, governance mechanisms, and partnering structures would have at least slightly changed the outcome. Fourthly, the difference in the leagues' structures between the Ligue 1 and the Bundesliga required a slight methodological modification regarding the scoring model used for the French league, which makes full comparability at FC-level difficult; this is also reinforced by the absence of sufficient data for the French Ligue 1, which led us to delete five KPIs from the framework of analysis. However, comparison at league and FC-group levels may be achieved effectively.

The limitations discussed above suggest the need for more thorough examinations. Although this study is a first step towards closing the gap of management quality research in the football arena, additional investigations are needed.

5 Conclusion

As the European football industry has been going through a phase characterized by a high level of commercialization, the challenges for and requirements of an FC's management have increased considerably. The German Bundesliga and French Ligue 1 compete at the European level for the 4th place within the member association UEFA ranking (UEFA, 2019). The rivalry between both leagues has become more and more visible in recent years, since the gap separating them in terms of UEFA coefficients has been reduced continously. Moreover, as parts of the five major European leagues, both are strongly affected by the development and changes affecting the field of professional football. For example, recordbreaking Ligue 1-diffusion rights contracts were signed in the course of 2018 for almost € 1.2 billion per annum; the latter will be effective from 2021 onwards (L'EQUIPE, 2018). So far, the topic of management quality in the football industry has received little consideration (ZÜLCH & PALME, 2017). This study builds on the FoMa Q-Score's previous edition and

extends it both longitudinally and cross-sectionally. Five steps were taken to derive the final result, which respectively placed FC Bayern München and Borussia Dortmund at the top of the Bundesliga and Olympique Lyonnais and Paris Saint-Germain in the French Ligue 1.

Firstly, a broad literature review was conducted to learn as much as possible from general management theory. It was argued that since most of the Bundesliga and Ligue 1 members can nowadays be considered as medium or large enterprises, a lot of these insights can also be applied to FCs. To structure the literature analysis, KAPLAN AND NORTON'S **Balanced Scorecard** was applied. It categorizes management tasks into four broad perspectives: *Financial, Customer, Internal-Business-Process,* and *Learning & Growth*. The relationship of these perspectives and management quality seems intuitive: the more a company excels in each of the perspectives, the better it is thought to be managed. After all, management quality is evaluated with respect to the achievement of objectives in the four perspectives. For each of them, key drivers and correlations have been identified and discussed.

Secondly, based on the traditional literature analysis, the particularities of FCs were analyzed. It is rather apparent that FCs only function like traditional companies to a certain degree. Therefore, correctly determining the dimensions driving the success of FCs was the key to a reliable framework of management quality in the Bundesliga. A thorough analysis of academic sports literature as well as recent industry reports yielded the following four relevant dimensions: *Sporting Success, Financial Performance, Fan Welfare Maximization* and *Leadership & Governance*. After having scrutinized each of the dimensions, three subdimensions were determined per dimension. The sub-dimensions are supposed to cover the most important areas and simultaneously overlap as little as possible.

Thirdly, the theoretical foundation from steps one and two were presented to industry experts. The aim of this study is to be of high practical relevance. For this reason, ten semistructured interviews with industry experts have been conducted. Interview partners were high-level stakeholders from FCs (FC Bayern München, Borussia Dortmund, Eintracht Frankfurt, Hamburger SV, RB Leipzig), media (11 Freunde, FINANCE) and further external

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stakeholders (Lagardère Sports Germany, Puma). The framework was perceived very positively by the interview partners and their feedback subsequently incorporated in the refinement of the Football Management Evaluation Framework (FMEF).

The intermediate result after the first three steps was the FMEF depicted in Figure 7 on page 34. The FMEF defines the weights of the four dimensions: *Sporting Success* = 40%, *Financial Performance* = 25%, *Fan Welfare Maximization* = 17.5%, and *Leadership & Governance* = 17.5%. In addition, the relevant sub-dimensions are mentioned.

Fourthly, for each of the sub-dimensions a set of KPIs was identified. To finally arrive at a management quality ranking of the Bundesliga members, it was necessary to fill the FMEF with measurable, objective KPIs. This working paper has taken a purely external point of view, which made the creation of a level playing field a major challenge. Due to the inconsistencies with regards to public disclosure of information among the FCs, several sources such as annual reports had to be excluded from the analysis. Instead, publicly available data for all FCs were collected in several Microsoft Excel files. The KPIs were clearly defined and documented in order to guarantee full transparency concerning the results.

Fifthly, a scoring model was set up, allowing FCs to be compared against each other. It was the authors' goal to first enable discussions about the content of the FoMa Q-Score, which consists of the (sub-)dimensions and the measured KPIs. Clearly, the scoring model is an important part of the final ranking. However, deeper, more technically advanced investigations are going to be necessary to derive the most reliable and scientifically robust procedure. For this study, the maximum of 17 points (respectively 19 points) was distributed to the first place of a KPI evaluation for Bundesliga (respectively Ligue 1) participants. With each lower place, one point was deducted. The total points gathered for all KPIs of a certain dimension were set in relation to the total points available. This fraction was then multiplied with the weight of that particular dimension. After the same procedure all dimensional values were derived and then summed up. The ultimate outcome is considered the **Football Management (FoMa) Q-Score** of a certain FC.

The final result of this working paper is depicted in Tables 12-14 on pages 63 and 68. The winner of the 2018/19 FoMa Q-Score ranking is for the first time **Borussia Dortmund (FoMa**

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Q-Score of 0.753), followed by FC Bayern München (0.718) in the Bundesliga, and Olympique Lyonnais (FoMa Q-Score of 0.716) followed by Paris Saint-Germain (0.711) in the Ligue 1. These FCs play in their respective leagues' Champions League group in terms of management quality. The other FCs are categorized in Europa League, Midfield, and Relegation.

Further refining this framework through additional scientific and practical investigations could develop the FoMa Q-Score into a reliable industry benchmark in the near future. Various practical stakeholders are expected to benefit from the insights. Overall, this study strives to be the nucleus for a sophisticated management quality evaluation framework, which helps to improve management quality in the football environment.

6 Appendix

6.1 Expert Interview Partners

| Name | Company | Position | Stakeholder type |
|--------------------------------|-----------------------------|---------------------------------------|---------------------|
| Dreesen, Jan-Christian | FC Bayern München | Executive Vice Chairman | FC |
| Frankenbach, Oliver | Eintracht Frankfurt | Executive Board member | FC |
| Gantenberg, Lars | Lagardère Sports Germany | Senior Director Digital Sales | Marketer |
| Hedtstück, Michael | FINANCE | Chief Editor (Online, TV) | Media |
| Hesse, Ulrich | 11 Freunde | Editor | Media |
| Manz, Ewald | Odgers Berndtson | Partner | HR-Consultant |
| Scholz, Florian | RB Leipzig | Head of Media & Communication | FC |
| Steden, Dr. Robin-Christian | Borussia Dortmund | Head of Investors Relations | FC |
| Wettstein, Frank | Hamburger SV | Executive Vice Chairman | FC |
| Wolter, Ulrich | RB Leipzig | Executive Board member | FC |
| Wolz, Dominic | Puma | Head of Sports Marketing Teamsport | Sponsor |

6.2 Calculation of Measured KPIs for the German Bundesliga

6.2.1 Sporting Success

| | KPI calculations – Sporting Success (SS) – 1/3 | | | | | | | | | | | |
|-------------------------|--|---|---|--|--|--|--|--|--|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | | | | | | | |
| | TP ₁ | Bundesliga performance (micro-cy- cle) | $TP_1 = P$ | P Points accrued in the Bundesliga [2018/19] | | | | | | | | |
| | TP ₂ | Bundesliga performance efficiency (micro-cycle) | $TP_2 = \frac{P}{B}$ | P Points accrued in the Bundesliga [2018/19] B Professional squad budget [2018/19; in €m] | | | | | | | | |
| te (TP) | TP₃ | Bundesliga performance (meso-cycle) | $TP_3 = \sum_{i=1}^3 (w_i \times P_i)$ | $\begin{array}{llllllllllllllllllllllllllllllllllll$ | | | | | | | | |
| erformanc | TP ₄ | Bundesliga performance efficiency (meso-cycle) | $TP_4 = \sum_{i=1}^3 (w_i \times \frac{P_i}{MV_i})$ | Pi MViPoints accrued in Bundesliga season iMVi wiMarket value of squad at the beginning of season i [in €m]Wi iYearly weights: with $w_1 = 1/2$ and $w_2 = w_3 = 1/4$ 2018/19, 2017/18, 2016/17 | | | | | | | | |
| Team P | TP₅ | DFB-Pokal performance (macro-cy- cle) | $TP_5 = \sum_{i=1}^5 (w_i \times M_i)$ | $ \begin{array}{ll} M_i & \mbox{Matches won in DFB-Pokal season i} \\ w_i & \mbox{Yearly weights: with } w_1 = 1/2 \mbox{ and } w_2 = w_3 = w_4 = w_5 = 1/8 \\ \mbox{i} & 2018/19, \ 2017/18, \ 2016/17, \ 2015/16, \ 2014/15 \\ \end{array} $ | | | | | | | | |
| | TP ₆ | International performance (macro-cy- cle) | $TP_6 = \sum_{i=1}^5 \left(\frac{1}{5} \times U_i\right)$ | U _i UEFA club coefficient season i i 2018/19, 2017/18, 2016/17, 2015/16, 2014/15 | | | | | | | | |
| | TP ₇ | Title performance (macro-cycle) | $TP_7 = \sum_{i=1}^5 (w_i \times T_i)$ | $ \begin{array}{ll} T_i & \mbox{Titles won in season i} \\ w_i & \mbox{Yearly weights: with } w_1 = 1/2 \mbox{ and } w_2 = w_3 = w_4 = w_5 = 1/8 \\ i & \mbox{2018/19, 2017/18, 2016/17, 2015/16, 2014/15} \end{array} $ | | | | | | | | |

| | KPI calculations – Sporting Success (SS) – 2/3 | | | | | | | | | | |
|--------------------|--|---|---|--|--|--|--|--|--|--|--|
| Sub-di- mension | ID | Name | Formula | Notation | | | | | | | |
| Q | PCC ₁ | Player performance | $PCC_1 = R_s$ | R _s Average Who Scored rating of total squad | | | | | | | |
| tics (PC | PCC ₂ | Players' mean age | $PCC_2 = A$ | A Mean age of the squad [2018/19] | | | | | | | |
| cteristic | PCC ₃ | New players' performance contribu- tions | $PCC_3 = \sum_{i=1}^{3} \frac{1}{3} \times (R_s - R_i)$ | Rs Average rating of total squad excl. top-3 new players Ri Rating of top-3 new player i i 1, 2, 3 | | | | | | | |
| Chara | PCC ₄ | Top players' contract lengths | $PCC_4 = \sum_{i=1}^5 \frac{1}{5} \times C_i$ | C _i Remaining contract duration of top-5 player i [in days] i 1, 2, 3, 4, 5 | | | | | | | |
| Coach | PCC₅ | Head coach job security | $PCC_5 = \sum_{i=1}^{n} \frac{1}{n} \times D_i$ | D Days on the job head coach i i 1, 2, 3,, n | | | | | | | |
| ayer / Co | PCC ₆ | Head coach quality | $PCC_6 = \frac{P}{M}$ | PPoints accrued by head coach in his careerMMatches as head coach | | | | | | | |
| Bla | PCC ₇ | Coaching team contract length | $PCC_7 = \sum_{i=1}^n \frac{1}{n} \times C_i$ | C _i Remaining duration of coaching team member i's contract [in days] i 1, 2, 3,, n | | | | | | | |

| | KPI calculations – Sporting Success (SS) – 3/3 | | | | | | | | | | |
|--------------------|--|--|--|--|--|--|--|--|--|--|--|
| Sub-di- mension | ID | Name | Formula | Notation | | | | | | | |
| | PD ₁ | Homegrown players | $PD_1 = \frac{PL_H}{PL}$ | PLHomegrown playersPLTotal number of players in the squad | | | | | | | |
| | PD ₂ | Appearances of homegrown players | $PD_2 = \frac{M_H}{PL_H}$ | M _H Bundesliga matches played by homegrown players for FCPL _H Homegrown players | | | | | | | |
| t (PD) | PD ₃ | Development of former homegrown players | $PD_3 = \sum_{i=1}^{10} \frac{1}{10} \times MV_i$ | MViCurrent market value homegrown player i (active for another FC) [in €m]i1, 2, 3,, 10 | | | | | | | |
| velopmen | PD ₄ | Internal development of non-home- grown players | $PD_4 = \sum_{i=1}^{5} \frac{1}{5} \left(\left(\frac{MV_i}{MV_{0i}} \right)^{\frac{1}{y}} - 1 \right)$ | MVi Current market value non-homegrown player i [in €m] MVoi Initial market value non-homegrown player i [in €m] i 1, 2, 3, 4, 5 y Years as part of the FC | | | | | | | |
| yer De | PD₅ | Youth academy performance (micro- cycle) | $PD_5 = \sum_{i=1}^{3} \frac{1}{3} \times LP_i$ | LP _i League position of youth team i i U23, U19, U17 | | | | | | | |
| Pla | PD ₆ | Youth academy performance (macro- cycle) | $PD_6 = \sum_{i=1}^5 w_i \times T_i$ | T_i Titles won in season i w_i Yearly weights: with $w_1 = 1/2$ and $w_2 = w_3 = w_4 = w_5 = 1/8$ i2018/19, 2017/18, 2016/17, 2015/16, 2014/15 | | | | | | | |
| | PD ₇ | National youth team members | $PD_7 = \sum_{i=1}^3 \frac{1}{3} \times \frac{PL_{Ni}}{PL_i}$ | $ \begin{array}{ll} PL_{N} & Players \text{ from youth team i active for a national team} \\ PL_{i} & Total players in youth team i \\ i & U23, U19, U17 \end{array} $ | | | | | | | |

6.2.2 Financial Performance

| | KPI calculations – Financial Performance (FP) – 1/2 | | | | | | | | | | | |
|-------------------------|---|------------------------------|-------------------------------|--|--|--|--|--|--|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | | | | | | | |
| | GP ₁ | Revenue | $GP_1 = R$ | R Total revenue [2017/18; in €m] | | | | | | | | |
| GP) | GP ₂ | Costs for professional staff | $GP_2 = \frac{B}{R}$ | BProfessional squad budget [2018/19; in €m]RTotal revenue [2017/18; in €m] | | | | | | | | |
| bility (| GP₃ | Wage efficiency | $GP_3 = \frac{MV}{B}$ | MVMarket value of squad [2018/19; in €m]BProfessional squad budget [2018/19; in €m] | | | | | | | | |
| rofita | GP ₄ | Jersey sponsor | $GP_4 = R_{JS}$ | R _{JS} Revenue from jersey sponsoring [2018/19; in €m] | | | | | | | | |
| wth / P | GP₅ | Buying price mark-up | $GP_5 = \frac{TF_B - MV}{MV}$ | TF _B Transfer fee paid for new players [2018/19; in €m]MVMarket value of players at point of transfer [in €m] | | | | | | | | |
| Grow | GP ₆ | Selling price mark-up | $GP_6 = \frac{TF_S - MV}{MV}$ | TFsTransfer fee received for selling players [2018/19; in €m]MVMarket value of players at point of transfer [in €m] | | | | | | | | |
| | GP ₇ | VIP Stadium boxes | $GP_7 = \frac{VB}{SC}$ | VBVIP boxes in the stadium [2018/19]SCStadium capacity [2018/19; in k] | | | | | | | | |

| | KPI calculations – Financial Performance (FP) – 2/2 | | | | | | | | | | |
|--------------------|---|--------------------------------|--|---|--|--|--|--|--|--|--|
| Sub-di- mension | ID | Name | Formula | Notation | | | | | | | |
| | B ₁ | Brand attitude | $B_1 = BAT$ | BAT Brand attitude according to TU Braunschweig [2018] | | | | | | | |
| ng (B) | B ₂ | Brand awareness | $B_2 = BA$ | BA Brand awareness according to TU Braunschweig [2018; in %] | | | | | | | |
| Brandi | B ₃ | Brand index development | $B_3 = \frac{BI_1 - BI_0}{BI_0}$ | BI0Brand index according to TU Braunschweig [2017]BI1Brand index according to TU Braunschweig [2018] | | | | | | | |
| | B ₄ | Brand score | $B_4 = HO$ | HO Brand score according to HORIZONT [2017] | | | | | | | |
| | I ₁ | International sponsors | $I_1 = \frac{SP_{Int}}{SP}$ | SPInternational sponsors in first three sponsoring levelsSPTotal sponsors in first three sponsoring levels | | | | | | | |
| lization (I) | I ₂ | Physical presence | $I_2 = \sum_{i=1}^n TR_{ij} \times W_{TRij}$ | TR _{ij} Travel abroad j in season i W _{TRij} Weight of travel abroad j in season i [x1; x3; x5] i 2016/17, 2017/18, 2018/19 j 1, 2, 3,, n | | | | | | | |
| ationa | l ₃ | International webpage visitors | $I_3 = (1 - V_{GER})$ | V _{GER} Fraction of German visitors on domain i [in %] | | | | | | | |
| Interna | I ₄ | Webpage languages | $I_4 = L$ | L Available languages (incl. German) on the official FC webpage | | | | | | | |
| | I ₅ | International players | $I_5 = \frac{PL_{Int}}{PL}$ | PL International players in the professional squad [2018/19]PLTotal players in the professional squad [2018/19] | | | | | | | |

| | KPI calculations – Fan Welfare Maximization (FWM) – 1/2 | | | | | | | | | | | |
|-------------------------|---|---------------------------|---|------------------------------------|--|--|--|--|--|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | | Notation | | | | | | | |
| | MA ₁ | Fan base | $MA_1 = F$ | F | Total fans [in k] | | | | | | | |
| | MA ₂ | Member base | $MA_2 = MB$ | MB | Club members [in k] | | | | | | | |
| | MA ₃ | Member conversion | $MA_3 = \frac{MB}{F}$ | MB F | Club members [in k] Total fans [in k] | | | | | | | |
| NA) | MA ₄ | Member base growth | $MA_4 = \frac{MB_1 - MB_0}{MB_0}$ | MB ₀ MB ₁ | Club members [in k] Club members [in k] | | | | | | | |
| ince (1 | MA ₅ | Stadium utilization | $MA_5 = SU$ | SU | Stadium utilization [2018/19; in %] | | | | | | | |
| ttenda | MA ₆ | Minimum match attendance | $MA_6 = \frac{MA_{Low}}{SC}$ | MA _{Low} SC | Lowest match attendance [2018/19; in k] Stadium capacity [2018/19; in k] | | | | | | | |
| hip / A | MA ₇ | Stadium standing capacity | $MA_7 = \frac{SC_{St}}{SC}$ | SC _{St} SC | Stadium standing capacity [2018/19; in k] Stadium capacity [2018/19; in k] | | | | | | | |
| nbers | MA ₈ | TV spectators | $MA_8 = TV$ | τv | Average number of TV spectators per match [2018/19; in m] | | | | | | | |
| Mer | MA ₉ | Membership fee | $MA_9 = C_{MB}$ | С _{мв} | Yearly costs for club membership [2018/19; in €] | | | | | | | |
| | MA ₁₀ | Season ticket price | $MA_{10} = \sum_{i=1}^{3} \frac{1}{3} \times C_{STi}$ | C _{STi} i | Costs for season ticket i [in €] Standing place, Seating place (cheapest), Seating place (most expensive) | | | | | | | |
| | MA ₁₁ | Day ticket price | $MA_{11} = \sum_{i=1}^{3} \frac{1}{3} \times C_{DTi}$ | C _{DTi} i | Costs for day ticket i [in €] Standing place, Seating place (cheapest), Seating place (most expensive) | | | | | | | |
| | MA ₁₂ | Jersey price | $MA_{12} = C_J$ | CJ | Costs for jersey [in €] | | | | | | | |

6.2.3 Fan Welfare Maximization

| | KPI calculations – Fan Welfare Maximization (FWM) – 2/2 | | | | | | | | | | | |
|--------------------------|---|----------------------------|--|---|---|--|--|--|--|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | | Notation | | | | | | | |
| | C ₁ | Webpage visits | $C_1 = \sum_{i=1}^n w_i * V_i$ | /i Average wi % of tota .de, first | visitors on domain i [in m] I visits on domain i [in m] foreign domain, second foreign domain | | | | | | | |
| | C ₂ | Webpage conversion | $C_2 = \frac{\sum_{i=1}^n w_i * V_i}{F}$ | /i Average Total fan .de, first | visitors on domain i [in m] s foreign domain, second foreign domain | | | | | | | |
| on (C) | C ₃ | Webpage growth | $C_3 = \left(\frac{\sum_{i=1}^n V_{1i}}{\sum_{i=1}^n V_{0i}}\right)^{\frac{1}{3}} - 1$ | / _{0i} Total visi / _{1i} Total visi de, first | tors on domain i [month 0, in m] tors on domain i [month 1, in m] foreign domain, second foreign domain | | | | | | | |
| Inicatio | C ₄ | Webpage visit duration | $C_4 = \frac{1}{n} * \sum_{i=1}^n V D_i$ | /D _i Visit dura .de, first | ation on Global domain [in min] foreign domain, second foreign domain,, n foreign domain | | | | | | | |
| ommu | C ₅ | Facebook fan base | $C_5 = FF$ | FF Faceboo | k fans [in m] | | | | | | | |
| U U | C ₆ | Facebook conversion | $C_6 = \frac{FF}{F}$ | FF Faceboo Total fan | k fans [in m] s [in k] | | | | | | | |
| | C ₇ | Facebook fan base growth | $C_7 = (\frac{FF_1}{FF_0})^{\frac{1}{6}} - 1$ | FF ₀ Faceboo FF ₁ Faceboo | k fans [month 0, in m] k fans [month 1, in m] | | | | | | | |
| | C ₈ | Facebook engagement | $C_8 = FE$ | E Average | daily Facebook engagement [in %] | | | | | | | |
| al Re- sibility R) | SR₁ | Sustainability performance | $SR_1 = SP$ | SP Sustaina | bility performance according to imug | | | | | | | |
| Socia spons (S) | SR ₂ | Fines | $SR_2 = FI$ | FI Fines by | official governing bodies [2017/18; in €k] | | | | | | | |

| 6.2.4 | Leadership & | Governance |
|-------|--------------|------------|
|-------|--------------|------------|

| KPI calculations – Leadership & Governance (LG) – 1/2 | | | | | |
|---|-----------------|------------------------------|--------------------------|------------------------------------|--|
| Sub-di- men- sion | ID | Name | Formula | | Notation |
| Board Quality (BQ) | BQ ₁ | Management score | $BQ_1 = MS + ME_i$ | MS ME i | Management score according to HORIZONT [2018] Availability of a dedicated management education program Yes, No |
| | BQ ₂ | Independent board members | $BQ_2 = \frac{BM_I}{BM}$ | BM _I BM | Independent supervisory board members Total supervisory board members |
| | BQ₃ | Number of board members | $BQ_3 = BM_S + BM_E$ | BM _S BM _E | Total supervisory board members Total executive board members |
| Governance (G) | G1 | Corporate governance quality | $G_1 = CGR$ | CGR | CG ranking according to JUSCHUS ET AL. (2017a) |
| | G ₂ | Legal form | $G_2 = LF$ | LF | Legal form order |
| | G ₃ | Institutional shareholders | $G_3 = \frac{S_I}{S}$ | S _I S | Shares held by non-controlling institutional shareholders Total shares |

| KPI calculations – Leadership & Governance (LG) – 2/2 | | | | | |
|---|----|-------------------|---|---|---|
| Sub- dimen- sion | ID | Name | Formula | | Notation |
| Transparency (T) | т | Public disclosure | $T = \sum (AR_i + O_i + EB_i + CV_{EBi} + SB_i + CV_{SBi} + ST$ | AR _i Oi EBi CV _{EBi} SBi CV _{SBi} ST _i i | Public disclosure of the annual report Public disclosure of a high-level organigram Public disclosure of the executive board members Public disclosure of the executive board members' CVs Public disclosure of the supervisory board members Public disclosure of the supervisory board members' CVs Public disclosure of the Statutes Disclosed, Not disclosed |

6.3 Calculation of Measured KPIs for the French Ligue 1

6.3.1 Sporting Success

| KPI calculations – Sporting Success (SS) – 1/3 | | | | |
|--|-----------------|---|---|--|
| Sub-di- men- sion | ID | Name | Formula | Notation |
| Team Performance (TP) | TP ₁ | Ligue 1 performance (micro-cycle) | $TP_1 = P$ | P Points accrued in the Ligue 1 [2018/19] |
| | TP ₂ | Ligue 1 performance efficiency (mi- cro-cycle) | $TP_2 = \frac{P}{B}$ | P Points accrued in the Ligue 1 [2018/19]^{Fehler! Textmarke nicht definiert.} B Professional squad budget [2018/19; in €m] |
| | TP₃ | Ligue 1 performance (meso-cycle) | $TP_3 = \sum_{i=1}^3 (w_i \times P_i)$ | PiPoints accrued in Ligue 1 season i w_i Yearly weights: with $w_1 = 1/2$ and $w_2 = w_3 = 1/4$ i2018/19, 2017/18, 2016/17 |
| | TP ₄ | Ligue 1 performance efficiency (meso-cycle) | $TP_4 = \sum_{i=1}^3 (w_i \times \frac{P_i}{MV_i})$ | PiPoints accrued in Ligue 1 season i MV_i Market value of squad at the beginning of season i [in €m] w_i Yearly weights: with $w_1 = 1/2$ and $w_2 = w_3 = 1/4$ i2018/19, 2017/18, 2016/17 |
| | TP₅ | Coupe de France performance (ma- cro-cycle) | $TP_5 = \sum_{i=1}^5 (w_i \times M_i)$ | |
| | TP ₆ | International performance (macro-cy- cle) | $TP_6 = \sum_{i=1}^5 \left(\frac{1}{5} \times U_i\right)$ | U _i UEFA club coefficient season i i 2018/19, 2017/18, 2016/17, 2015/16, 2014/15 |
| | TP ₇ | Title performance (macro-cycle) | $TP_7 = \sum_{i=1}^5 (w_i \times T_i)$ | $ \begin{array}{ll} T_i & \mbox{Titles won in season i} \\ w_i & \mbox{Yearly weights: with } w_1 = 1/2 \mbox{ and } w_2 = w_3 = w_4 = w_5 = 1/8 \\ i & \mbox{2018/19, 2017/18, 2016/17, 2015/16, 2014/15} \end{array} $ |

| KPI calculations – Sporting Success (SS) – 2/3 | | | | |
|--|------------------|---|---|--|
| Sub-di- men- sion | ID | Name | Formula | Notation |
| Player / Coach Characteristics (PCC) | PCC ₁ | Player performance | $PCC_1 = R_s$ | R _s Average WhoScored rating of total squad |
| | PCC ₂ | Players' mean age | $PCC_2 = A$ | A Mean age of the squad [2018/19] |
| | PCC ₃ | New players' performance contribu- tions | $PCC_{3} = \sum_{i=1}^{3} \frac{1}{3} \times (R_{s} - R_{i})$ | Rs Average rating of total squad excl. top-3 new players Ri Rating of top-3 new player i i 1, 2, 3 |
| | PCC ₄ | Top players' contract lengths | $PCC_4 = \sum_{i=1}^5 \frac{1}{5} \times C_i$ | C _i Remaining contract duration of top-5 player i [in days] i 1, 2, 3, 4, 5 |
| | PCC ₅ | Head coach job security | $PCC_5 = \sum_{i=1}^{n} \frac{1}{n} \times D_i$ | D Days on the job head coach i i 1, 2, 3,, n |
| | PCC ₆ | Head coach quality | $PCC_6 = \frac{P}{M}$ | PPoints accrued by head coach in his careerMMatches as head coach |
| | PCC ₇ | Coaching team contract length | $PCC_7 = \sum_{i=1}^n \frac{1}{n} \times C_i$ | C _i Remaining duration of coaching team member i's contract [in days] i, 2, 3,, n |
| KPI calculations – Sporting Success (SS) – 3/3 | | | | | |
|--|-----------------|--|--|---|--|
| Sub-di- mension | ID | Name | Formula | Notation | |
| | PD₁ | Homegrown players | $PD_1 = \frac{PL_H}{PL}$ | PL _H Homegrown players PL Total number of players in the squad | |
| | PD ₂ | Appearances of homegrown players | $PD_2 = \frac{M_H}{PL_H}$ | M _H Ligue 1 matches played by homegrown players for FCPL _H Homegrown players | |
| t (PD) | PD ₃ | Development of former homegrown players | $PD_3 = \sum_{i=1}^{10} \frac{1}{10} \times MV_i$ | MV_i Current market value homegrown player i (active for another FC) [in €m] i 1, 2, 3,, 10 | |
| velopmen | PD ₄ | Internal development of non-home- grown players | $PD_4 = \sum_{i=1}^{5} \frac{1}{5} \left(\left(\frac{MV_i}{MV_{0i}} \right)^{\frac{1}{y}} - 1 \right)$ | $\begin{array}{lll} MV_i & Current\ market\ value\ non-homegrown\ player\ i\ [in\ {\mbox{emm}]} \\ MV_{0i} & Initial\ market\ value\ non-homegrown\ player\ i\ [in\ {\mbox{emm}]} \\ i & 1,\ 2,\ 3,\ 4,\ 5 \\ y & Years\ as\ part\ of\ the\ FC \end{array}$ | |
| yer De | PD₅ | Youth academy performance (micro- cycle) | $PD_5 = \sum_{i=1}^{3} \frac{1}{3} \times LP_i$ | LP _i League position of youth team i i U23, U19, U17 | |
| Play | PD ₆ | Youth academy performance (macro- cycle) | $PD_6 = \sum_{i=1}^5 w_i \times T_i$ | $ \begin{array}{ll} T_i & \mbox{Titles won in season i} \\ w_i & \mbox{Yearly weights: with } w_1 = 1/2 \mbox{ and } w_2 = w_3 = w_4 = w_5 = 1/8 \\ i & \mbox{2018/19, 2017/18, 2016/17, 2015/16, 2014/15} \end{array} $ | |
| | PD ₇ | National youth team members | $PD_7 = \sum_{i=1}^{3} \frac{1}{3} \times \frac{PL_{Ni}}{PL_i}$ | PLNPlayers from youth team i active for a national teamPLiTotal players in youth team iiU23, U19, U17 | |

| 6.3.2 Financial P | Performance |
|-------------------|-------------|
|-------------------|-------------|

| KPI calculations – Financial Performance (FP) – 1/2 | | | | | | |
|---|-----------------|------------------------------|-------------------------------|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | |
| | GP ₁ | Revenue | $GP_1 = R$ | R Total revenue [2017/18; in €m] | | |
| GP) | GP ₂ | Costs for professional staff | $GP_2 = \frac{B}{R}$ | BProfessional squad budget [2018/19; in €m]RTotal revenue [2017/18; in €m] | | |
| bility (| GP₃ | Wage efficiency | $GP_3 = \frac{MV}{B}$ | MVMarket value of squad [2018/19; in €m]BProfessional squad budget [2018/19; in €m] | | |
| rofita | GP4 | Jersey sponsor | $GP_4 = R_{JS}$ | R _{JS} Revenue from jersey sponsoring [2018/19; in €m] | | |
| wth / P | GP₅ | Buying price mark-up | $GP_5 = \frac{TF_B - MV}{MV}$ | TF_B Transfer fee paid for new players [2018/19; in €m] MV Market value of players at point of transfer [in €m] | | |
| Grov | GP ₆ | Selling price mark-up | $GP_6 = \frac{TF_S - MV}{MV}$ | TFsTransfer fee received for selling players [2018/19; in €m]MVMarket value of players at point of transfer [in €m] | | |
| | GP ₇ | VIP Stadium boxes | $GP_7 = \frac{VB}{SC}$ | VBVIP boxes in the stadium [2018/19]SCStadium capacity [2018/19; in k] | | |

| KPI calculations – Financial Performance (FP) – 2/2 | | | | | |
|---|----------------|--------------------------------|--|---|---|
| Sub-di- mension | ID | Name | Formula | Notation | |
| nd- (B) | B ₁ | Brand attitude | $B_1 = BAT$ | BAT | Level of sympathy according to Cloudfront.net completed by own estima- tions based on the number of fans |
| Bra ing | B ₃ | Brand index development | $B_3 = \frac{BI_1 - BI_0}{BI_0}$ | BI ₀ BI ₁ | Brand index according to sponsoring revenues [2017] Brand index according to sponsoring revenues [2018] |
| | I ₁ | International sponsors | $I_1 = \frac{SP_{Int}}{SP}$ | SP _{Int} SP | International sponsors in first three sponsoring levels Total sponsors in first three sponsoring levels |
| ization (I) | I ₂ | Physical presence | $I_2 = \sum_{i=1}^n TR_{ij} \times W_{TRij}$ | TR _{ij} W _{TRij} i j | Travel abroad j in season i Weight of travel abroad j in season i [x1; x3; x5] 2015/16, 2016/17, 2017/18 1, 2, 3,, n |
| ationa | I ₃ | International webpage visitors | $I_3 = (1 - V_{FRA})$ | V _{FRA} | Fraction of French visitors on domain i [in %] |
| nterné | I ₄ | Webpage languages | $I_4 = L$ | L | Available languages (incl. French) on the official FC webpage |
| | I ₅ | International players | $I_5 = \frac{PL_{Int}}{PL}$ | PL _{Int} PL | International players in the professional squad [2018/19] Total players in the professional squad [2018/19] |

| | KPI calculations – Fan Welfare Maximization (FWM) – 1/2 | | | | | |
|-------------------------|---|---------------------------|--|------------------------------------|--|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | |
| | MA ₁ | Fan base | $MA_1 = F$ | F | Total fans [in k] | |
| | MA ₂ | Member base | $MA_2 = MB$ | MB | Club members [in k] | |
| rship / Attendance (MA) | MA ₃ | Member conversion | $MA_3 = \frac{MB}{F}$ | MB F | Club members [in k] Total fans [in k] | |
| | MA ₄ | Member base growth | $MA_4 = \frac{MB_1 - MB_0}{MB_0}$ | MB ₀ MB ₁ | Club members [in k] Club members [in k] | |
| | MA ₅ | Stadium utilization | $MA_5 = SU$ | SU | Stadium utilization [2018/19; in %] | |
| | MA ₆ | Minimum match attendance | $MA_6 = \frac{MA_{Low}}{SC}$ | MA _{Low} SC | Lowest match attendance [2018/19; in k] Stadium capacity [2018/19; in k] | |
| | MA ₇ | Stadium standing capacity | $MA_7 = \frac{SC_{St}}{SC}$ | SC _{St} SC | Stadium standing capacity [2017/18; in k] Stadium capacity [2018/19; in k] | |
| Aembe | MA ₈ | TV spectators | $MA_8 = TV$ | τv | Average number of TV spectators per match [2018/19; in m] | |
| 2 | MA ₉ | Membership fee | $MA_9 = C_{MB}$ | С _{мв} | Yearly costs for club membership [2018/19; in €] | |
| | MA ₁₀ | Season ticket price | $MA_{10} = \sum_{i=1}^{3} \frac{1}{k} \times C_{STij}$ | С _{sтij} i k | Costs for season ticket i for club j [in €] Standing place, Seating place (cheapest), Seating place (most expensive) 3 if standing places are available at FC j, and 2 otherwise | |
| | MA ₁₂ | Jersey price | $MA_{12} = C_J$ | CJ | Costs for jersey [in €] | |

6.3.3 Fan Welfare Maximization

| | KPI calculations – Fan Welfare Maximization (FWM) – 2/2 | | | | | | |
|-------------------------|---|--------------------------|---|--|--|--|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | | |
| | C ₁ | Webpage visits | $C_1 = \sum_{i=1}^n w_i * V_i$ | Vi Average visitors on domain i [in m] wi % of total visits on domain i [in m] i .fr, first foreign domain, second foreign domain | | | |
| | C ₂ | Webpage conversion | $C_2 = \frac{\sum_{i=1}^n w_i * V_i}{F}$ | Vi Average visitors on domain i [in m] F Total fans i .fr, first foreign domain, second foreign domain | | | |
| ation (C) | C ₃ | Webpage growth | $C_3 = (\frac{\sum_{i=1}^n V_{1i}}{\sum_{i=1}^n V_{0i}})^{\frac{1}{3}} - 1$ | V _{0i} Total visitors on domain i [month 0, in m] V _{1i} Total visitors on domain i [month 1, in m] i .fr, first foreign domain, second foreign domain | | | |
| | C ₄ | Webpage visit duration | $C_4 = \frac{1}{n} * \sum_{i=1}^{n} VD_i$ | VDi Visit duration on Global domain [in min] i .fr, first foreign domain, second foreign domain,, n foreign domain | | | |
| munic | C ₅ | Facebook fan base | $C_5 = FF$ | FF Facebook fans [in m] | | | |
| Com | C ₆ | Facebook conversion | $C_6 = \frac{FF}{F}$ | FF Facebook fans [in m] F Total fans [in k] | | | |
| | C ₇ | Facebook fan base growth | $C_7 = (\frac{FF_1}{FF_0})^{\frac{1}{6}} - 1$ | FF0Facebook fans [month 0, in m]FF1Facebook fans [month 1, in m] | | | |
| | C ₈ | Facebook engagement | $C_8 = FE$ | FE Average daily Facebook engagement [in %] | | | |
| | SR ₂ | Fines | $SR_2 = FI$ | FI Fines by official governing bodies [2017/18; in €k] | | | |

| 6.3.4 | Leadershi | р& | Governance |
|-------|-----------|----|------------|
|-------|-----------|----|------------|

| KPI calculations – Leadership & Governance (LG) – 1/2 | | | | | | |
|---|-----------------|------------------------------|--------------------------|------------------------|---|--|
| Sub-di- men- sion | ID | Name | Formula | Notation | | |
| uality | BQ ₁ | Management score | $BQ_1 = TEN + ME + CPL$ | TEN ME CPL | Tenure of C-level Management (0- to 19-point scale) Availability of a dedicated management education program (0 vs. 5 points) Cumulated profit or Loss over the last 3 seasons (0- to 19-point scale) | |
| ard Qı (BQ) | BQ ₂ | Independent board members | $BQ_2 = \frac{BM_I}{BM}$ | BM _I BM | Independent supervisory board members Total supervisory board members | |
| Bo | BQ₃ | Number of board members | $BQ_3 = BM_S + BM_E$ | BMs BM _E | Total supervisory board members Total executive board members | |
| nce | G ₁ | Corporate governance quality | $G_1 = GR_I + GR_S$ | GRı GRs | Dummy variable equaling 1 if a supervisory board is present, 0 otherwise Dummy variable equaling 1 if an institutional owner owns a majority of shares, 0 otherwise | |
| vernar (G) | G ₂ | Legal form | $G_2 = LF$ | LF | Legal form order | |
| ő | G ₃ | Institutional shareholders | $G_3 = \frac{S_I}{S}$ | Si S | Shares held by non-controlling institutional shareholders Total shares | |

| KPI calculations – Leadership & Governance (LG) – 2/2 | | | | | |
|---|----|-------------------|---|---|---|
| Sub- dimen- sion | ID | Name | Formula | | Notation |
| Transparency (T) | т | Public disclosure | $T = \sum (AR_i + O_i + EB_i + CV_{EBi} + SB_i + CV_{SBi} + ST$ | AR _i Oi EBi CV _{EBi} SBi CV _{SBi} ST _i i | Public disclosure of the annual report Public disclosure of a high-level organigram Public disclosure of the executive board members Public disclosure of the executive board members' CVs Public disclosure of the supervisory board members Public disclosure of the supervisory board members' CVs Public disclosure of the Statutes Disclosed, Not disclosed |

6.4 Scores Distribution for the German Bundesliga



6.4.1 Sporting Success Scores Distribution





6.4.2 Financial Performance Scores Distribution

Figure 17: Financial Performance score dispersion among Bundesliga football clubs in 2018 and 19



6.4.3 Fan Welfare Maximization Scores Distribution

Figure 18: Fan Welfare score dispersion among Bundesliga football clubs in 2018 and 19



6.4.4 Leadership & Governance Scores Distribution

Figure 19: Leadership & Governance score dispersion among Bundesliga football clubs in 2018 and 19

6.5 Scores Distribution for the French Ligue 1



6.5.1 Sporting Success Scores Distribution

Figure 20: Sporting Success score dispersion among Ligue 1 football clubs in 2018 and 19



6.5.2 Financial Performance Scores Distribution

Figure 21: Financial Performance score dispersion among Ligue 1 football clubs in 2018 and 19



6.5.3 Fan Welfare Maximization Scores Distribution

Figure 22: Fan Welfare Maximization score dispersion among Ligue 1 football clubs in 2018 and 19



6.5.4 Leadership & Governance Scores Distribution

Figure 23: Leadership & Governance score dispersion among Ligue 1 football clubs in 2018 and 19

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