

## UEFA financial fair play: the curse of regulation

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### Abstract

This paper applies simple game theory in order to analyze the UEFA Financial Fair Play (FFP) policy, which was fully implemented in the 2013/14 season. By involving budget constraints put on clubs, FFP may lead to unintended or even adverse effects as indicated by some of the obtained results. In particular, the analysis shows that due to being in the situation of a Prisoner's Dilemma, the clubs have a strong incentive to bypass the new regulations, what results in additional costs both for clubs to hide and UEFA to detect deviant behavior. As these costs might deter small clubs from trying to cheat, this consequently must have negative consequences on the level of competitive balance within a league. However, a positive outcome of FFP might be that clubs become more independent from benefactors or sugar daddies.

**Keywords:** sports economics; game theory; budget constraints; benefactor owners

**JEL classification:** L83, D01, C72

**Table of contents:** 1. Introduction; - 2. Literature review; - 2.1. The over-investment in European club football; - 2.2. The Financial Fair Play Concept in literature; - 3. The game models; - 4. Financial fair play effects – cloned teams; - 4.1. Playing by the rules; - 4.2. Financial acrobatics; - 5. Financial fair play effects – un-cloned teams; - 6. Conclusion and suggestions for further research.

## **1. Introduction**

Fair play is a frequently articulated and important value in sport. The term, however, appears to be ambiguous or even fuzzy. Beside many other paraphrases the crucial aspect of fair play is based on the idea of equal opportunities (Lenk and Gunter, 1989). From a perspective of financial opportunities, European club football nowadays is far away from fulfilling this criterion. In the rat race (Akerlof, 1976) for sporting success on both national and European level the access for clubs to external financial resources is not at all evenly allocated. This would, however, be important for a fair competition due to the interdependency between economic performance/potential and success on the pitch, which has been mentioned in various studies (Frick, 2004; Ziebs, 2004). By using a simple linear regression model, Szymanski (2003) earlier showed a correlation between (sporting) success and the clubs' expenses for player wages both in North-American and European professional sport leagues.

This fact helps explaining the currently bad financial situation of many clubs and gives reason for the motivation of UEFA to try regulating Financial Fair Play (FFP). The urgent need for a regulation becomes obvious by looking at UEFA's Club licensing benchmarking report financial year 2011 (UEFA, 2013): Despite rising revenues the top-flight European clubs reported record aggregate net losses of over € 1.7 billion for 2011. The annual reviews by Deloitte show that the situation in the major leagues in England, Germany, Spain and Italy is actually even more dramatic (Deloitte, 2013).

In addition to annually rising net losses of European clubs, investors (or companies) expanded their influence on the football business. While these clubs can venture operating way down in the red each year, many others cannot. Given the current sums paid for hiring talent or sponsoring deals, the term "financial doping" seems to be more

topical than ever. Indeed, Schubert and Könecke (2014) identify a number of structural similarities between medical and financial doping.

Consequently, this trend has effects on the level of competitive balance (CB), as this, above all, depends on the distribution of the player qualities (Késenne, 2000). Although there are studies that did not reveal any significant changes of CB across leagues, particularly recent ones detected a decline in CB in some leagues (Pawlowski, Breuer and Hovemann, 2010). A detailed overview of the uncertainty of outcome/competitive balance phenomena is provided by Késenne (2007).

Given these undesirable developments, UEFA saw an urgent need for action and in September 2009 its Executive Committee approved the Financial Fair Play (FFP) concept (UEFA, 2012b). UEFA's efforts to introduce more discipline and rationality in club football finances must be assessed positively. UEFA is also zealous to have an active exchange of views with economists and other academics on this topic (European Commission, 2012).

The novel approach of this paper is a game theory perspective on FFP. We focus on potential outcomes of FFP concerning club spending and aim to analyze whether there are structural obstacles in this regulatory policy, which may prevent to effectively achieve the ambitious goal to regulate fair play. In particular, we identify conceivable loopholes within the concept and show the clubs' incentives to exploit these deficits due to being in the situation of a Prisoner's Dilemma. Eventually, we demonstrate under which circumstances this regulatory framework may lead to unintended effects, such as invisible club indebtedness and a decline of CB on national level.

## **2. Literature review**

### **2.1. The over-investment in European club football**

The idea of a corporate financial regulation in European Football is not new. Already in 2002 the members of G-14 (back then a grouping of the most prominent football clubs in Europe) proposed a maximum limit for salary costs (a different one compared to the salary cap existing in North-American major leagues). Késenne (2003), however, identified its assumed negative impact on the CB in a league and in fact the plan has never been put into practice. In 2006, Lago, Simmons and Szymanski (2006) mention tighter regulation from UEFA as a possible means to combat financial instability, even though they consider such measures credible only if strong legal backing is provided. An important remark by the authors is the possibility of contagion in European football: This is the idea that due to a sophisticated web of interrelations “the crisis in one club or group of clubs threatens to damage the financial stability of other clubs” (Lago, Simmons and Szymanski, 2006, 3). Also more recent studies confirm the necessity of regulative measures. The consulting firm A.T. Kearney came up with startling figures: If the leagues in Italy, Spain and England were running as ordinary companies they would face bankruptcy within two years (A.T. Kearney, 2010). Yet already the title of the study “Is European football too popular to fail?” indicates that such a scenario is rather unlikely. Kuper and Szymanski (2009) addressed the high survival rate in the football business. Storm and Nielsen (2012) seize the idea of immortality of professional football clubs in Europe and trace it back to so-called soft budget constraints within clubs operate.<sup>1</sup> Following the economic theories of the Hungarian economist János Kornai, the

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<sup>1</sup> The fact that clubs do not operate within a hard budget constraint has already been mentioned by Franck (2010).

authors compare large professional clubs in Europe to loss-making companies in socialist economies that are bailed out by public or private creditors – a phenomenon known as ‘too-big-to-fail’.

This perceived security ex ante leads to overinvestment. For the authors, the new regulations of UEFA are an attempt to harden budget constraints (Storm and Nielsen, 2012, 183).

In a game-theoretic approach Solberg and Haugen (2010) demonstrated why European clubs tend to overinvest in talent and face financial problems despite high revenues. The authors argue that the goal of win-maximization results in a lack of correlation between revenues and costs. This eventually leads to a more aggressive strategy when competing for talented players. Some authors see the escalation of expenses due to structures within national leagues (Dietl, Franck and Lang, 2008) as well as to the competition format on European level (Franck, 2010). Haugen and Solberg (2010) in particular identify the Champions League as the cause of these negative developments. According to them, the competition’s financial attractiveness due to the enormous pay-off “may lead to extremely unhealthy financial outcomes” (p. 565). The subsequent section provides a brief overview of UEFA’s FFP concept and its attempt to better the situation by further regulation.

### **2.2. The Financial Fair Play Concept in literature**

The UEFA Club Licensing and Financial Fair Play Regulations (UEFA, 2012b) represent the enhanced version of the former UEFA Club Licensing Regulations. The new document includes an improvement to the former club-licensing criteria as well as new requirements in the FFP concept (club-monitoring).

It is important to note that only those clubs that qualify for UEFA club competitions on

sporting merit are subject of the monitoring process. Different to the club-licensing, the club-monitoring is conducted by UEFA itself – that is by the so-called UEFA Club Financial Control Body (CFCB), composed of qualified experts in the financial and legal fields.<sup>2</sup> Scholarly literature on this new regulatory policy is still manageable even more than three years after its publication. Müller, Lammert and Hovemann (2012) analyze the concept and UEFA's motivation to act and provide a sound theoretical justification of the new regulatory measures from a financial and ethical perspective.

Schubert and Könecke (2014) draw comparisons between FFP and the World Anti-Doping Code and in this context define the term “financial doping”. Galli (2010) summarizes the amended club-licensing regulations and the new club-monitoring rules: While the former is only practical for diagnostic analyses of economic imbalances, the latter moreover aims at curing these. Madden (2012) and Drut and Raballand (2012) analyze possible effects of the FFP regulation on a sports league. The former concludes that the disappearance of money injections as a consequence of the FFP implementation will result in negative welfare consequences for fans, owners and players as long as the elasticity of talent supply is sufficient. The latter shape a professional sports league with win-maximizing clubs and predict that without the ability to run deficits clubs will sign weaker players and sporting performance will decrease. Franck and Lang (2013) by contrast attest FFP a welfare-enhancing function under certain condition: Given that more than half of European top division clubs reported net losses and therefore do not seem to be risk averse, the authors argue that in an uncertain economic environment (e.g. through a higher

Champions League prize) the FFP regulations are welfare-enhancing.

Beside economic aspects Financial Fair Play is also considered from a legal perspective. Peeters and Szymanski (2012, 28) note “that the break-even rule could be construed as a means to raising profitability and therefore an anti-competitive vertical restraint under EU competition law.” Long (2012) illustrates examples how FFP may have inhibiting effects on competition between clubs, players and even sponsors.

A survey among European football fans indicated that there is a strong support for the objectives of the concept while it is not believed that UEFA will apply the rules strictly (Hovemann and Lammert, 2011). Other authors comment on the new regulations from a billing and accounting perspective and compare them to the national licensing requirements in Germany (Dehesselles, 2011; Küting and Strauß, 2011a, 2011b). Geey (2011) mainly focuses on identifying criteria in the FFP concept which clubs could use to their advantage.

The core element of the club-monitoring is the break-even requirement: Once the rule takes effect, the relevant expenses<sup>3</sup> of a club are no longer allowed to exceed its relevant income<sup>4</sup>. In the first monitoring period 2013-14 the two previous seasons 2012-13 and 2011-12 are assessed. From the license season 2014-15 onwards always the three previous seasons are covered. Article 61 of the concept states acceptable deviations of € 5 million to the break-even rule (UEFA, 2012b). Yet the deviation can exceed € 5 million up to € 45

<sup>3</sup> The basic relevant expenses are: cost of sales; employee benefits expenses; other operating expenses; player transfer amortization or expense; finance costs UEFA (2012b, 76–82).

<sup>4</sup> The basic relevant income criteria are: revenue (gate receipts, broadcasting rights, sponsorship and advertising, commercial activities, other operating income); player transfer profit or income; finance income, excess proceeds on disposal of tangible fixed assets UEFA (2012b, 73–76).

<sup>2</sup> The CFCB members are elected by the UEFA Executive Committee for four years.

million in the license seasons 2013-14 and 2014-15 and up to € 30 million for the license seasons 2015/16, 2016/17 and 2017/18, if the deficit is covered by contributions from equity participants or related parties. This accepted deviation will be further reduced thereafter.

Vöpel (2011) regards the break-even requirement as an effective means to enhance financial stability. However, a mere limitation of the deficit would on the other hand not lead to a restoration of CB, yet even violate it on national level. Furthermore, the author even questions the legitimacy of the whole concept, as in the past empirically neither insolvency as a consequence of financial instability nor monopolization due to unbalanced competition have been a serious problem. Sass (2012) predicts negative consequences on the long-term competitive balance due to FFP.

Right in Article 2 at the beginning of the new concept UEFA mentions a number of objectives. The six main ideas of FFP are

- a) “to improve the economic and financial capability of the clubs, increasing their transparency and credibility;
- b) to place the necessary importance on the protection of creditors by ensuring that clubs settle their liabilities with players, social/tax authorities and other clubs punctually;
- c) to introduce more discipline and rationality in club football finances;
- d) to encourage clubs to operate on the basis of their own revenues;
- e) to encourage responsible spending for the long-term benefit of football;
- f) to protect the long-term viability and sustainability of European club football” (UEFA, 2012b, 2).

With regard to the financial aspect, these objectives aim at the protection against a continuing over-indebtedness in European club football as a consequence of the rat race

for sporting success. Although it is not explicitly mentioned, the intended goals must also refer to the aspect of CB (Vöpel, 2011).

This must be regarded as a very important one, as the long-term viability and sustainability of European club football can only be achieved by securing a level of CB that does not endanger the suspense between clubs and leagues.

Summing up, the state-of-the-art literature review represents a mixed picture concerning the efficacy of FFP. Our paper tries to extend the research on estimated effects of this regulatory intervention and is the first to apply a game theory approach on potential outcomes of FFP concerning club spending. By demonstrating which circumstances may lead to unintended effects, we hope to improve the efficacy of UEFA’s policy.

### **3. The game models**

In the following sections, we will show by game theory how the FFP regulations will put clubs into a difficult situation concerning their decision to invest into talent in order to gain competitive advantage.

The incentive to invest into talent increases due to FFP, which on the other side may prevent competitors from doing so. This may result in overinvestments. To illustrate this, a convenient set-up for our approach appears to be applying the model setting introduced by Haugen and Solberg (2010), by which the authors discuss the overinvestment in European football. In our setting at hand, we add a slight simplification and solely focus on the profit maximization case. Further details about this aspect are mentioned below. The following assumptions provide the basis of our model:

- 1) Two sports teams are engaged in an upcoming match against each other.
- 2) The teams, named  $T_1$  and  $T_2$ , have made a player buying decision. That is, they have decided to buy a new player, but not the price/quality.

- 3) The two teams are assumed to be perfect clones, so they are equally good. Hence, the probability of a victory for any team before the talent acquisition is  $\frac{1}{2}$ <sup>5</sup>.
- 4) Both teams can choose from the same two-dimensional strategy space ( $E_p$ ,  $C_p$ ).  $E_p$  means buying an expensive player, while  $C_p$  means buying a cheap player. Buying an expensive player while the other team buys a cheap player leads to a probability advantage/increase of  $\varepsilon > 0$  of winning the match.
- 5) We assume that the two team's 'buying markets' are non-connected. That is, the prices of the players ( $c_E$ ,  $c_C$ ) are exogenously given and not affected by the upcoming game.<sup>6</sup>  $c_E > c_C$  denote prices for the expensive and cheap players respectively.
- 6) The playing strength (quality) and price of each of the expensive players and each of the cheap players are identical. That is, they are cloned in pairs.
- 7) Each team must decide on which player to buy without knowledge about the other team's choice. That is, a simultaneous game.
- 8) The team winning the single decisive match receives a pay-off of  $R$  (common for both teams), the losing team receives a pay-off of zero.
- 9) Teams are assumed profit maximizers, maximizing the expected pay-off.
- 10) All information above, 1) – 9), is common knowledge (e.g. available for both players) and there is no more information available for any player.

<sup>5</sup> The draw-option is ruled out in these games, as a decisive match must be decided.

<sup>6</sup> This is a technical but highly necessary assumption in order to rule out possible auction effects between the teams.

That is, a game of complete information.

In the following, some of the assumptions will be further outlined. Haugen and Solberg (2010, 558) define a single decisive match as “a single match between two teams with significant economic consequences”, which is characteristic for many matches in European football today (e.g. qualifying for or progressing from group stage in CL; reaching the quarter/semi finales; winning the final). Those matches must be won in order to progress in a tournament, what makes it logical to restrict the analysis to a one-shot two-player game. Therefore, it must be stated that our model does not illustrate European competition in total but rather a general repetitive situation which frequently occurs.

It should also be stated that  $\varepsilon$  always has some natural constraints and cannot be chosen freely. The reason is that our model assumes cloned teams, meaning that without any talent change, both teams have a probability of winning the match of 0.5. Now, when each team buys a single player this means that they still have to use the 10 remaining players. Consequently, this implies that  $\varepsilon$  is a somewhat small number (potentially increasing the win probability of a team around 5% at most).

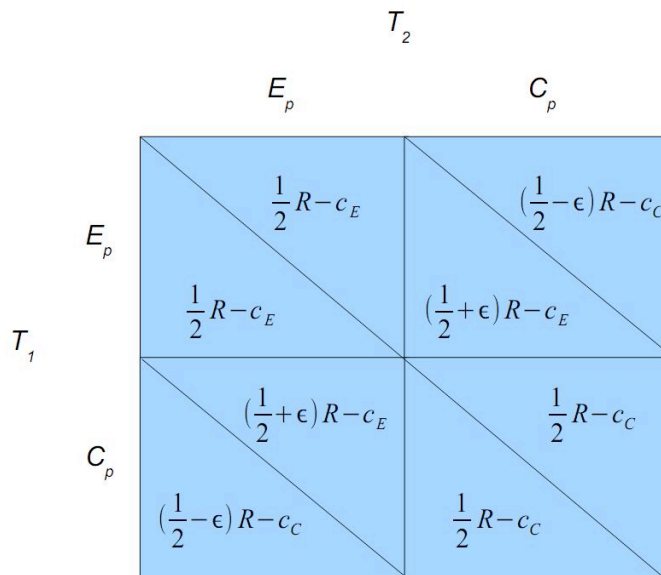
Due to the afore-mentioned correlation between economic and sporting success we solely focus on profit maximizing agents. The distinction between profit and win maximization is a topic well covered in sport economic literature (Késenne, 1996; Fort and Quirk, 2004; Gratton and Solberg, 2007). It refers to the objective of a football club and thus affects its strategy on the transfer market. In this paper, win maximizing agents are deliberately left out (a simplification to the original assumption of Haugen and Solberg (2010) since we believe that it would cast little new light on our conclusions. The reason is because our arguments need monetary objectives and introducing a win maximizing

alternative will prove no relevant added insight. Furthermore, as we see it, even a profit-maximizer could run with negative profits over time. Indeed, in many business situations agents (deliberately) run with negative profits over substantial time periods, what may be referred to as investment, price wars or simply waiting for the market. Under this assumption, even in the profit maximization case of our model, possible negative profits would not be a problem. However, the assumption of profit-maximization is relaxed by our model being constructed as a one-shot game, where the incentive for both profit- and win-maximization is more or less the same.

It would, however, become more relevant in a dynamic/repeated game, as a club would then have to decide if money gained in previous rounds is reinvested into the team (potentially the strategy of a utility-maximizer) or rather retained as a profit for the owner (profit-maximization case). Assumptions 1) - 10) above can be summarized through the normal form game of figure 1. It is easily shown (Haugen and Solberg 2010, 553) that two possible (pure strategy) unique Nash Equilibria (NE) exist. These two equilibria can be summarized through the inequalities<sup>7</sup>:

$$\varepsilon R > c_E - c_C \text{ or } \varepsilon R < c_E - c_C \quad (1)$$

If the left inequality in (1) holds, the Prisoner's Dilemma (PD) NE ( $E_p, E_p$ ) emerges while the other possibility produces the ( $C_p, C_p$ ) NE.



**Figure 1.** Original normal form game

<sup>7</sup> The  $\varepsilon R = c_E - c_C$  option is ruled out being too practically improbable.



#### 4. Financial fair play effects – cloned teams

In the following sections, we adopt this model and introduce the FFP regulations. First, we analyze the effects of FFP when the clubs adhere to the rules. In section 4.2, we extend the model and directly incorporate clubs' options to avoid FFP regulations, thus resulting in interesting game effects.

##### 4.1. Playing by the rules

Given the debate and the effective introduction of the FFP concept, it is possible to apply the above given modeling scheme through some simplifications. The FFP concept introduces capital (liquidity) constraints for individual clubs stating that clubs must break-even within a certain given time period.

Competitions with budget constraints are addressed in a number of papers within general contest literature, often with differing results. Che and Gale (1998), for instance, study caps on political lobbying and demonstrate that in a static all-pay auction this could paradoxically lead to higher aggregate expenditures. In a continuation of this model Kaplan and Wettstein (2006), however, show that non-rigid (not fully enforced) caps can actually lead to reduced spending.

Surely, our simplified non-temporal game does not cope with the finer temporal gaming effects of a system as FFP. However, the introduction of a capital constraint must mean that at least for some clubs it should be binding. Hence, the effect should (in practice) be that clubs choose to avoid buying expensive players and alternatively choose to buy less expensive ones.

A practical translation into the game-setting at hand could then be that the expensive players (the  $E_p$ -option) are ruled out by a binding constraint at some point in time. Ruling out

the cheap player (the  $C_p$ -option) seems unreasonable – effectively killing the market for football players in our assumed model.

However, in the game setting at hand, ruling out the  $E_p$ -option also will rule out the game itself.<sup>8</sup> As a consequence, and in accordance with common sense, there must be other players to choose from and given a reasonable complete market, another possible player is available to buy while not violating the FFP budget constraint. Let us name this buying option  $M_p$  with corresponding cost  $c_M$ . Accordingly, this player, cheaper than  $E_p$  but more expensive than  $C_p$  (ie.  $c_E > c_M > c_C$ ), must also produce less probability increase of winning the match by say  $\hat{\varepsilon} < \varepsilon$ .

That is, the original game model in figure 1 can be easily reformulated simply by substituting  $c_E$  with  $c_M$ ,  $E_p$  with  $M_p$  and  $\varepsilon$  with  $\hat{\varepsilon}$ . The analysis of the game is unchanged. The  $(M_p, M_p)$  NE is still a PD as

$$2\left(\frac{1}{2}R - c_M\right) < 2\left(\frac{1}{2}R - c_C\right) \quad (2)$$

So, the clubs still overspend. The PD structure is still unresolved, but the actual overspending is dampened as  $c_M < c_E$ . This result as well as further considerations, of course, underlies the assumption that the left inequality in (1) holds ( $\varepsilon R > c_E - c_C$ ). Given the tremendous pay-offs to clubs from the Champions League (or when promoted from second to first national league) in reality it is implied that in our model R likewise is very high.

To some extent, reducing overspending is what UEFA wants. However, this would mean that expensive players lose bargaining

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<sup>8</sup> A team which has made a buying decision with only one player to choose from will obviously buy this player.



power (cf. Madden, 2012) and their salaries decrease ( $c_E$  become  $c_M$ ). While this might hold for most  $E_p$ , it is logic that the best players remain expensive and therefore there still is an incentive to buy them, as  $\hat{\varepsilon} < \varepsilon$ . The option that  $E_p$  leave the European leagues could be imaginable for the future but does not appear realistic today with the gap to other leagues still being very big. Although the PD situation is unresolved, at least, UEFA may be able to achieve a decrease in the tendency to overspend.

#### **4.2. Financial acrobatics**

Surely, UEFA does not expect the above predicted reality to come easy. Professional football clubs nowadays are marked by increasingly more complex company structures. Due to oftentimes tricky interconnections between several subsidiaries and the sophisticated outsourcing of liabilities, UEFA faces a difficult challenge in assessing the documents of 236 licensees from different European countries with different accounting systems. The monitoring costs can therefore be assumed to be remarkably high. However, UEFA confirms the feasibility of controlling the clubs:

There are layers of control at the National Associations and at UEFA. All financial figures and necessary supporting documents are submitted to both through an on line reporting system. UEFA already monitors the financial results of 600+ clubs each year. In addition there will be various external expertise used for verification of local documents and support (Preuss, 2012a).

That is, UEFA seems to anticipate that clubs may try to avoid the FFP rules due to their situation of being in a PD. Nasser el-Khelaifi, the chairman of Qatari-owned club Paris Saint-Germain, already signalled creativity instead of financial rigidity: “We'll follow the rules. Mr Platini said we'll need to be creative. We have a few ideas” (cited through Perrin,

2012). However, the FFP concept in its current form seems to offer a number of shortcomings which clubs could use to their advantage. This is to be expected due to the PD still given which means that the dominant strategy for a club is to bypass the regulation as long as the transparency is not detecting their behaviour and leads to punishment. The existence of potential loopholes to bypass the FFP regulations is even recognised by UEFA and its general secretary Gianni Infantino:

It's not the perfect document, we are aware of that [...] It is the first time we have done something like this. We are learning as we go along but we are very confident that if we find something that needs to be addressed, we will correct it (cited through Veysey, 2011).

Besides, the former British FA president Lord David Triesman noted that the FFP concept cannot possibly work in its current form (Preuss, 2012b). According to him, several measures have to be taken to make it work, most importantly credible balance sheets. Geey (2011) identifies two loopholes: The first is to be found in Annex XI, according to which a club whose break-even deficit exceeds the acceptable deviation will not be sanctioned as long as it (a) “reports a positive trend in the annual break-even results” and (b) “[i]t proves that the aggregate break-even deficit is only due to the annual break-even deficit of the reporting period ending in 2012 [...] to contracts with players undertaken prior to 1 June 2010” (UEFA, 2012b, 87). This provides to clubs the temporary benefit of postponing sanctions for the first two years of the new rules. Second, Geey (2011) mentions the explanations concerning relevant income in Annex X: “For the purpose of the break-even result, the licensee must determine the fair value of any related party transaction(s)” (UEFA, 2012b, 75). The provisions clearly aim at avoiding disproportional self-sponsoring deals – that is when entities belonging or related to owners (may it be

persons or companies) of clubs are involved. However, the term “related party” leaves much space for interpretation. Therefore, as Geey (2011) notices, “issues over how revenue can be correctly valued may become a particularly thorny issue.” Further aspects in the FFP concept resulting in a softening of the absolute requirement to break-even are identified by Müller, Lammert and Hovemann (2012).

Besides, there are many other possibilities in which ways clubs could try to improve the figures of relevant income and expenses. The amortisation of money for player transfers is already common but could be conducted more extensively. This way, a club could split the amount to be paid over several years and thus reduce the annual costs of the club. Probable are also side agreements concerning players’ wages for example, which may be partly paid by benefactors and therefore do not appear in the official club accounts. While there appears to be no limit to imagination in these regards, third-party ownership of players is another way to reduce expenditure in a club’s books. Forbidden in England since the Carlos Tevez affair in 2007, it is a frequent practice in South America and across many European countries (e.g. Spain and Portugal) (KPMG, 2013). Basically, a club could acquire playing talent paying only a small amount, with the balance funded by a third party. Thus, this amount would not be listed in a club’s books.<sup>9</sup> UEFA seems to have acknowledged this threat: In December 2012 its Executive Committee argued for a prohibition of third-party ownership as a matter of principle and highlighted its inclination to enforce it in its own competitions in case FIFA should not

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<sup>9</sup> In 2011 the transfer of Roberto Jiménez from Benfica Lisbon to Real Zaragoza for € 8.6 million aroused attention, since Zaragoza had applied to the courts to go into voluntary administration with estimated debts of € 110 million. As it turned out, Zaragoza paid only € 86.000 with the balance of more than € 8.5 million paid for by an unnamed company that will retain the player’s economic rights (Scott, 2011).

support a general change of policy (UEFA, 2012a).

Furthermore, there are also exception provisions of UEFA itself. Annex I declares that the “status and situation of football within the territory of the UEFA member association will be taken into account when granting an exception” (UEFA, 2012b, 45). The key factors include, for instance, its market potential and its support from national, regional and local authorities. Manchester City’s highly controversial commercial agreement with Etihad Airways seems to be well-suited to benefit from this policy. The deal contains the construction of the Etihad Campus – a giant project adjacent to the stadium, including a youth academy, a sports science centre as well as office space and retail outlets (Slater, 2011). Needless to say that a project of this kind boosts the local area in economic terms and will therefore be highly appreciated by regional and local authorities and thus, following the last quote, raises the status and situation of football within the territory.

Another provision can be found in Annex X, which permits a club to include any profits from non-football operations in its calculation, as long as the operations are: (a) “based at, or in close proximity to, a club’s stadium and training facilities, such as a hotel, restaurant, conference centre, business premises (for rental), health-care centre, other sports teams”; and (b) “clearly using the name/brand of a club as part of their operations” (UEFA, 2012b, 76). For the mentioned Manchester City’s Etihad deal this would mean that the club could exclude the expenses for the project, while its profits could be declared as relevant income.<sup>10</sup>

In case UEFA would reveal attempts on evasion, a sanctioning system must

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<sup>10</sup> The authors want to thank an excellent blog (<http://swissramble.blogspot.com/>) for fruitful stimuli in this regard.

successfully be implemented. The current list of disciplinary measures ranges from warnings up to disqualifications from competitions and the withdrawal of titles (UEFA, 2014). This is important as in order to break through the PD, transparency must be secured followed by sanctions that are greater than the expected benefit of deviant behaviour (Dixit and Nalebuff, 1991). Furthermore, especially in the initial phase it seems important to punish those clubs that breach FFP, as such signalling effects might help to establish credibility and reputation as well as prevent deviant behaviour in the future. Moreover, we know from Games Theory that not only punishment must be provided but also transparency.

Therefore, UEFA also has to try closing the loopholes to prevent non-compliance. Consequently, if clubs attempt to fool the FFP regulations, some costs must be considered, both through creative book-keeping as well as the expected costs of being revealed. Surely, these costs, let us name them  $\gamma$ , can be manipulated by the clubs. For instance, more resources spent on financial acrobatics may reduce the risk of being exposed, and hence the expected cost of exposure.

Anyway, if this option is applied in our game, we need to reformulate somewhat. Now, as opposed to the previous model, both clubs can choose the triplet  $(E_p, M_p, C_p)$ . This means that the 2 by 2 strategy game of figure 1 needs to be enhanced into a 3 by 3 strategy game. Figure 2 sums up the reformulation.

		$T_2$		
		$E_p$	$M_p$	$C_p$
$T_1$	$E_p$	$\frac{1}{2}R - c_E - \gamma$	$(\frac{1}{2} - [\epsilon - \hat{\epsilon}])R - c_M$	$(\frac{1}{2} - \epsilon)R - c_C$
	$M_p$	$\frac{1}{2}R - c_E - \gamma$	$(\frac{1}{2} + [\epsilon - \hat{\epsilon}])R - c_E - \gamma$	$(\frac{1}{2} + \epsilon)R - c_E - \gamma$
	$C_p$	$(\frac{1}{2} + [\epsilon - \hat{\epsilon}])R - c_E - \gamma$	$\frac{1}{2}R - c_M$	$(\frac{1}{2} - \hat{\epsilon})R - c_C$
		$(\frac{1}{2} - [\epsilon - \hat{\epsilon}])R - c_M$	$\frac{1}{2}R - c_M$	$(\frac{1}{2} + \hat{\epsilon})R - c_M$
		$(\frac{1}{2} + \epsilon)R - c_E - \gamma$	$(\frac{1}{2} + \hat{\epsilon})R - c_M$	$\frac{1}{2}R - c_C$
		$(\frac{1}{2} - \epsilon)R - c_C$	$(\frac{1}{2} - \hat{\epsilon})R - c_C$	$\frac{1}{2}R - c_C$

**Figure 2.** UEFA financial acrobatics game

Figure 2 is in principle self-explanatory. The diagonal elements should be straightforward: The two (cloned) teams buy the same cloned player and achieve the same pair-wise pay-offs only differentiated by the different costs associated with the strategic choices  $E_p$ ,  $M_p$  or  $C_p$ . Note that the  $E_p$ -strategy leads to an inclusion of the extra cost  $\gamma$  in order to ‘bypass’ the UEFA FFP system. Furthermore, the term  $\varepsilon - \hat{\varepsilon}$  needs to be included in order to cope for the situation where one club buys the expensive player  $E_p$  while the other buys the intermediate cost player  $M_p$ . In such situations, the net winning probability increase logically must equal this difference  $(\varepsilon - \hat{\varepsilon})$ . Apart from these points, the content of figure 2 is a simple generalisation of the model in figure 1.

We choose to simplify the analysis of the game in figure 2 by simply checking necessary conditions for the strategy combination  $(E_p, E_p)$  being a NE. Then, it is sufficient to check the best replies for  $T_1$  given  $T_2$ 's choice of  $E_p$  and vice versa. This approach returns two inequalities that need to be satisfied to secure an  $(E_p, E_p)$  NE. These inequalities are:

$$\frac{1}{2}R - c_E - \gamma > \left(\frac{1}{2} - (\varepsilon - \hat{\varepsilon})\right)R - c_M \quad (3)$$

and

$$\frac{1}{2}R - c_E - \gamma > \left(\frac{1}{2} - \varepsilon\right)R - c_C \quad (4)$$

Inequalities (3) and (4) can be combined into the singular inequality:

$$\frac{1}{2}R - c_E - \gamma > \text{Max}\left\{\left(\frac{1}{2} - (\varepsilon - \hat{\varepsilon})\right)R - c_M, \left(\frac{1}{2} - \varepsilon\right)R - c_C\right\} \quad (5)$$

Now, let us check the two elements in the maximisation in inequality (5) by investigating the following inequality:

$$\left(\frac{1}{2} - (\varepsilon - \hat{\varepsilon})\right)R - c_M > \left(\frac{1}{2} - \varepsilon\right)R - c_C \quad (6)$$

Some algebra:

$$\Rightarrow \frac{1}{2}R - \varepsilon R + \hat{\varepsilon}R - c_M > \frac{1}{2}R - \varepsilon R - c_C \quad (7)$$

A closer examination of inequality (7) reveals interesting information. If we return to the

discussion on substitution, it is easily observed that this inequality represents what is needed to reach the  $(M_p, M_p)$  NE in the game where the clubs adapt to the financial constraint by adding the new  $M_p$  player option.

It is assumed here that this inequality must be satisfied. As a consequence, given our assumptions, we can conclude that (7) must be satisfied.<sup>11</sup> The consequence is of course that the somewhat complex inequality (5) can be simplified to:<sup>12</sup>

$$\frac{1}{2}R - c_E - \gamma > \left(\frac{1}{2} - (\varepsilon - \hat{\varepsilon})\right)R - c_M \quad (8)$$

which simplifies to:

$$(\varepsilon - \hat{\varepsilon})R > c_E + \gamma - c_M \quad (9)$$

Accordingly, we can conclude that if (9) is satisfied, the strategy combination  $(E_p, E_p)$  is a Nash Equilibrium of the game in figure 2.

Now, our main conclusion can be formulated. If inequality (9) holds, the cloned clubs will end up buying expensive ( $E_p$ ) players in equilibrium. This NE is a PD, and an even worse one than the original situation, as long as  $\gamma > 0$ . Hence, the risk of a worsened situation after the introduction of the FFP concept is theoretically demonstrated. Obviously, we cannot provide evidence for our findings, yet the assumptions appear to be in line with logic and reason. Whether practice will prove this, remains to see and very much depends on the ability to control potential loopholes by UEFA.

<sup>11</sup> The point here is simple. When the new financial constraint is introduced, our model assumptions lead to the NE  $(M_p, M_p)$  by definition. We assume that the clubs pick a player which is attainable exactly within the forced constraint. Hence, the given inequality must hold in order to establish this NE.

<sup>12</sup> Inequality (9) is, by the way, easy to interpret, as the left hand side denotes (expected) marginal revenue (moving up to the expensive player) while the right hand side denotes marginal costs for a similar transition.

Unfortunately, the situation is even worse, as the introduction and the operation of the FFP concept as well as the necessary control panels will produce both initial as well as operational costs, adding to inefficiency. Consequently, UEFA may face a situation – after introducing such a system – where many clubs behave as before the FFP concept has been in stage: They are still forced to overspend up to the limit they can afford. What may be saved by player salaries will be spent for financial acrobatics. However, the overspending will not become visible as the official books will not show it.

We expect that FFP regulations will be promoted as success as the clubs will have to follow the rules. However, invisible the overindebtedness of clubs will not be solved – a situation similar to the fight against doping after implementation of a testing system.

### **5. Financial fair play effects – un-cloned teams**

To move towards greater model realism, the case of non-cloned or unequal clubs seems a sensible next step. If we analyze two different clubs, say one high performance club competing against a low performance club, the analytic approach can be continued along similar lines as in Haugen and Solberg (2010). Then, a new parameter  $\alpha$  can be introduced to cope with performance differences between the clubs. In this setting, higher performance should logically lead to higher financial strength and thus lowering relatively the individual club  $\gamma$ 's. Hence, we can easily model different possibilities for the clubs to avoid the FFP regulations for instance by introducing  $\bar{\alpha}_1 \ll \bar{\alpha}_2$ . This situation follows that of Haugen and Solberg (2010, 553) by assuming that  $T_1$  is the better club. Given such assumptions, it is straightforward, though algebraically cumbersome, to show for instance existence of  $(E_p, C_p)$ -equilibria. In such situations, the rich clubs will keep on overspending more

than before. The poor clubs will however (typically if  $\gamma_1$  is sufficiently smaller than  $\gamma_2$ ) be hit efficiently by the FFP system, due to the higher probability to be revealed and will become in the end less competitive.<sup>13</sup>

Additionally, if they decide to also spend  $\gamma_2$  or will be punished by UEFA this will end in less competitiveness too. Consequently, a somewhat double negative situation can be demonstrated: the richer clubs get richer and still overspend (as long as they compete with other rich clubs), while efficient budget constraints hit the poor clubs which cannot afford extra costs. Bearing in mind the above mentioned correlation between economic potential and sporting success, this might lead to significant negative consequences for the level of CB. Due to this regulatory policy it will therefore become more difficult for poor clubs to reach the top.

As the above paragraph should indicate, we leave out the formal analysis in this case, to keep the article at a reasonable (readable) mathematical level.

### **6. Conclusion and suggestions for further research**

A game-theory approach illustrated the mechanisms how clubs might behave after the implementation of the FFP concept. It has been shown under which parameters and circumstances UEFA may not be able to effectively achieve the ambitious goal to regulate fair play. With regards to the envisaged goals of regulating the escalation of expenses and securing a desirable level of CB it must be stated that the concept is effective in neither of them. We tried to demonstrate that the policy is favourable for big clubs

<sup>13</sup> However, when thinking the process one step further one could potentially argue that at a certain point in the future, for some top/rich clubs there is no need any more to cheat as expensive players could be bought anyway, while at the same time (successful) cheating is not possible any longer for small clubs. Consequently, the risk of overspending would then emanate from middle ranked clubs who aspire getting to the top.

while the opportunity of advancement for poor or small upcoming clubs is reduced. The risk of conviction might deter smaller clubs with lesser financial capabilities from trying to bypass the regulations. This at least keeps them away from running into debts.

While the presence of UEFA is already implicitly taken into account (e.g. pay-off, punishment), in future research it might yield interesting results to include UEFA as an actual third player with the primary purpose to enforce FFP and thus punish clubs for misbehaviour. Furthermore, it would be interesting to look at other game formulations, capturing different but interesting buying games; perhaps especially where sequential moves are incorporated. Moreover, as FFP is a dynamic issue, in future research a dynamic approach (for dynamic effects of constrained contestants in general, see, for example, Grossmann, 2011) could be adopted, taking into account the specific peculiarities of UEFA's concept. Speculatively, this could reveal that the gap between poor clubs and clubs with higher revenues widens with each round, while for the winner club the extra costs  $\gamma$  continuously diminish due to the reduced need to bypass (and thus the lowered risk of conviction). On the other hand the dominant strategy remains attractive to big clubs since they are in a PD with the other big clubs. As long as loopholes exist, they will, therefore, be inclined to exploit them to gain competitive advantage.

Hence, contrary to the opinion of Müller, Lammert and Hovemann (2012), we have shown that FFP does not limit the possibilities of financial doping, yet even might enhance it for clubs with higher revenues. In any case, it is assumed that the new regulations result in higher costs for accounting (by exploiting loopholes) and therefore less money will be available for investment in talent.

Although this idea is discounted by UEFA's general secretary Gianni Infantino (cited through Veysey, 2011), the whole situation

could eventually strengthen the top clubs' desire of a European super league without any financial restrictions imposed by UEFA. In 2009 Real Madrid's president Florentino Pérez took up this idea that seemed to have been slumbering since the dissolution of the G-14 grouping in 2008. The Spaniard argued in favour of such in order to guarantee "that the best always play the best – something that does not happen in the Champions League" (n.a., 2009). The threat of a transnational league beyond UEFA's sphere of influence first appeared in 1998 following negotiations with the Italian media organisation Media Partners (Holt, 2009), which promised the clubs involved much higher pay-offs than the UEFA Champions League. In what appeared to be an immediate reaction, UEFA put into practice some modifications to the format of the Champions League which led to an increase in revenues to the clubs and thus made participation financially more lucrative. With the establishment of the European Club Association (ECA) in 2008, as part of a settled dispute between G-14 on the one hand and FIFA and UEFA on the other, the idea of a breakaway league faded from spotlight. It still exists though as the leading professional clubs remain a weighty actor in the football business (Parrish, 2011). The decline of CB after the implementation of the FFP concept might not be the only aspect strengthening the wish of a Super League. If it really comes to exclusions of big clubs not respecting the FFP criteria from UEFA competitions, others fearing the same fate might be inclined to favour another competition format outside UEFA.

From the perspective of an institutional economic model of behaviour, the relationship between UEFA and the European football clubs could be described as a principal-agent relationship (Jensen and Meckling, 1976). UEFA as the principal commissions the task to adhere to the FFP regulations to the clubs (agents). As UEFA is



the only “seller” of the relevant product (Champions League, Europa League) on the market, it is a monopolistic relationship with the clubs having no alternative to cooperate with UEFA. The agency-problem is based on two conditions: First, the two parties have, in principle, the same interests. This can be seen by the fact that the European Club Association (ECA) “stated publicly on numerous occasions that they support the initiative and that indeed the initiative is needed” (Preuss, 2012a). The clubs intend to fulfil the task to maintain rewards. UEFA, however, wants to maximize its own welfare and prestige (objectives of FFP), which does not need to be the objective of the clubs who equally want to do so (more financial resources; sporting success). Second, there is a special case of asymmetric information (Groenewegen, Spithoven and Van den Berg, 2010), since the principal has less knowledge than the agent about the agent’s financial actions. When both conditions hold, this gives rise to opportunistic behaviour, which in this case is enforced by the competition between the clubs being in a PD. In theory, rivalry between the agents should reduce the level of opportunism because of their fear of exclusion in case they are convicted. This, however, does not only require conviction, but especially severe penalisation afterwards. As clubs become subject of UEFA’s club-monitoring once they qualify for competitions on European level, the agency problem faced here is moral hazard. The incentive of the clubs is to have more financial resources for hiring talent than their competitors (rat race). The Nash Equilibrium which puts them into a PD even worsens the situation. Therefore, it can be assumed that (at least the rich) clubs will only pretend to adhere to the new regulations. As this is not in the interest of UEFA, it implemented the new rules and will monitor the clubs’ abidance to them, which in the end will add costs to the clubs besides their intention to still maximise their spending for talent.

Admittedly, the FFP concept is to be seen as a “long term governance project” (Preuss, 2012a). Thus, initial problems are inevitable and should not be overestimated. However, we have shown the potential threat coming from the FFP concept as it stands at the moment. Taken together, UEFA’s efforts must in principle be assessed as a first step in the right direction, as initially the power of sugar daddies and the “total dependency culture” (Preuss, 2012a) will be reduced. Furthermore, at least smaller or poorer clubs will be prevented from overspending and player salaries will decrease – even though this also decreases the potential to play in UEFA’s tournaments. Also the fact that the players unions (FIFPro), leagues (EPFL), clubs (ECA), National Associations (NA) as well as the European Commission have universally approved FFP (UEFA, 2009) is a sign of UEFA’s success in bringing in line all stakeholders involved and the risk we see in the project may be not this sensitive. The replacement of the UEFA Club Financial Control Panel (CFCP) by the more powerful UEFA Club Financial Control Body (CFCB) in July 2012 can also be regarded as a proof of UEFA’s efforts to constantly trying to amend the policy: While the former panel could only refer cases to UEFA’s Organs for Administration of Justice, the new body is empowered with the ability to independently impose disciplinary measures. Along with this change came the clear formulation of possible disciplinary measures.

The structural problem of financial doping resembles that of traditional doping (use of performance enhancing drugs). Our results also allow deriving some practical implications for UEFA: The PD situation creates incentives to bypass regulations. This situation can only be solved by full transparency of all financial transactions followed by sanctions greater than the expected benefits for deviant behaviour. Sensible steps might be to control the market



of expensive players as well as reduce pay-offs (R) while trying to raise costs for bypassing the regulations ( $\gamma$ ). A long-term solution might also be to try extending the market for talented players, as one reason for the exorbitant prices paid for some players is the scarcity of talent supply.

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#### ERRATA CORRIGE

Page 34. The reference (Lenk and Gunter, 1989), should read: (Lenk and Pilz, 1989).

Page 49. The reference: “Lenk, H. and Gunter, A., 1989, *Das Prinzip Fairneß*. Zürich: Edition Interform.”, should read: “Lenk, H. and Pilz, G.A., 1989, *Das Prinzip Fairneß*. Zürich: Edition Interform.”