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DOES FINANCIAL FAIR PLAY MATTER?

THE REAL EFFECTS OF UEFA REGULATION FOR EUROPEAN FOOTBALL CLUBS[1]

Ariela Caglio♥, Sébastien Laffitte♦, Donato Masciandaro♣ and Gianmarco Ottaviano♠

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Abstract

We provide the first detailed quantitative assessment of the effects of the Financial Fair Play Regulation (FFPR) introduced by the Union of European Football Associations (UEFA) on the income statements and balance sheets of European football clubs. While other studies exist documenting the financial challenges of the European football industry, to the best of our knowledge none has yet analyzed the implications of the FFPR. Our analysis relies on two two sources of information, one we assembled using information from Amadeus (Bureau van Dijk) and the other collected by the UEFA for the specific purpose of implementing the FFPR. Drawing on Amadeus data and regression outputs provided by the UEFA, we consistently find that the introduction of the FFPR has been followed by a significant improvement in the clubs' income statements, which is consistent with the new accounting rules having 'real effects' on the clubs' management. However, this positive development has yet to be paralleled also in the club's balance sheets (notably in terms of debt) and cash flow statements, which may call for the FFPR to be further extended in that direction.

JEL Codes: L5, L8
Keywords: Financial fair play, UEFA, European football clubs, Financial sustainability, Break even requirement (BER)

[1] We thank Mark Kassis, Sefton Perry and Andrea Traverso for agreeing to run our codes on the UEFA dataset. The views expressed here are those of the authors and do not represent in any manner the UEFA.
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1. Introduction

In 2009, the Union of European Football Associations (UEFA) launched a set of regulations known as Financial Fair Play, which was intended to introduce financial discipline and responsibility into the decision-making processes and strategies of European football clubs, and to protect the long-term viability of the European football industry. This major regulatory intervention was finally approved in 2010 and the first assessment of football clubs was carried out in 2011. At the time when the Financial Fair Play Regulation (FFPR) was first discussed, football was a largely unprofitable business: fifty per cent of clubs were losing money and combined yearly net losses of all European top-divisions went from €0.6 billion in 2007 to more than €1.5 billion in 2010.[2] As Michel Platini – who was then the UEFA's President – put it, 'living within your means' is the basis of accounting but it had not been the basis of football for years.[3]

Ten years since its launch, despite a heated public debate, hard evidence about the actual consequences of the FFPR for the viability of the European football industry is still quite scant. The aim of the present paper is to make progress on this front by providing the first detailed quantitative assessment of the effects of the FFPR on the income statements and balance sheets of European football clubs. Other studies exist that have documented the financial issues within the European football industry (e.g., Buraimo et al., 2006; Frick et al., 2006; Lago et al. 2006; Barajas et al., 2010; Franck, 2010) but, to the best of our knowledge, no previous contribution has analyzed the FFPR setting.

Our focus is on the so-called Break-Even Requirements (BER), which are the cornerstone of the FFPR architecture. In essence, the idea is that clubs must balance the income from and the expenses for the operations of their professional teams involved in the UEFA tournaments, with some tolerance only for temporary deviations of limited size. In other words, clubs wanting to participate to the UEFA tournaments must operate as self-sustaining businesses. This allows us to approach the analysis of the impact of the FFPR as a quasi-experimental laboratory study to test what in accounting is called the 'real effects hypothesis'. According to this hypothesis, accounting measurement and disclosure rules can have significant effects on the real decisions of managers: how accounting systems measure and disclose a firm's transactions changes those very same transactions. As a result, similarly to other changes in the economic environment, a change in the accounting regime can lead to a new industry equilibrium. We investigate whether this has indeed happened in the European football industry.

[2] UEFA issues a yearly Benchmarking report about the financial situation of nearly 700 first division clubs in 55 member associations.

[3] See, for example: hiips://uk.reuters.com/article/uk -soccer-uefa-finances/platinis-financial-reforms-approved-by-uefa-idUKTRE58E2PP20090915.

Analyzing the implications of a modification in the accounting measurement and disclosure rules faces many challenges. On the one hand, changes in disclosure and supervisory standards and regulations are rare and sometimes of small importance. On the other hand, causality may run in both directions as regulators and policy makers often react to a crisis by adopting new legislation so that it is difficult to distinguish whether regulations directly affect stability or simply are associated with stability because they are adopted in the aftermath of a crisis (Granja, 2018). The FFPR case provides us with a rare setting in which we can successfully tackle these challenges.

By examining the introduction of the BER for European football clubs, we specifically investigate the outcomes of a change in the accounting *measurement* rules, that is, a change in "which economic transactions are measured, which are not measured, how they are measured and aggregated" (Kanodia and Sapra, 2016: 624). In this respect, we are targeting the real effects and economic consequences of introducing the BER as a new accounting measure that must be carried out according to well-defined measurement rules so that it becomes verifiable and contractible. Viewed in this way, the BER has the potential to shape football managers' decisions and to redefine their preferences and incentives towards financial sustainability.

In doing so, we exploit an original dataset assembled using information from Amadeus (Bureau van Dijk) covering 150 clubs playing in the top five European Leagues (those of England, France, Germany, Italy and Spain) from 2005 to 2015. Compared with other studies, in addition to these publicly available data, we have the unique opportunity to benefit from reclassified UEFA proprietary data from 2008 to 2017. This has a number of advantages. Our analyses more accurately reflect the BER calculation. The use of publicly available databases, which are not particularly rich in detailed data about football clubs (being these mainly private companies), would require relatively stronger assumption about what to include and what to exclude in the calculation of the BER. Moreover, the proprietary data have been validated and, when necessary, reclassified by UEFA in order to improve consistency and quality of information provided by clubs, which do not necessarily apply the same accounting principles across leagues.

Drawing on Amadeus data and the outputs the UEFA obtained by applying our analyses to their data, we find that the introduction of the FFPR has been associated with an average significant improvement in the income statements of the European football clubs that is consistent with the BER having 'real effects'. Moreover, we find that clubs facing higher regulatory pressure to demonstrate financial soundness (i.e. those likely to participate in UEFA tournaments) have increased the gap between (relevant) income and expenses more than the other clubs. However, this positive development has yet to be translated into better overall financial sustainability of the European football industry as revealed by the clubs' balance sheets and cash flow statements given that their responses vary substantially from club to club.

The rest of the paper is organized as follows. Section 2 places our analysis into context by providing background information on the FFPR and a selective review of the related literature beyond what has already

been discussed in the Introduction. Section 3 presents the publicly available data we use and our measurement approach. It then reports some descriptive statistics for those data and their econometric analysis together with some robustness checks. Section 4 repeats the analysis exploiting the UEFA proprietary data. Section 5 concludes.

2. Background and literature review

This section places our analysis into context by first providing background information on how the FFPR works and then a selective review of the relevant existing literature beyond what we already discussed in the Introduction.

2.1 The FFPR

The FFPR prescribes that, in order to be admitted to the UEFA club tournaments (Champions League and Europa League), clubs must fulfill five broad categories of requirements related to sporting, infrastructures, personnel, legal and financial issues.[4] The FFPR pursue two intertwined types of goals. "General" goals target the standards of all aspects of football, including the care of young players, the promotion of practice of good management, the improvement of sporting infrastructures, the protection of the integrity of UEFA tournaments. "Specific" financial goals target the financial sustainability of clubs including the increase in transparency and credibility, the protections of creditors, the introduction of financial discipline, the need for operating on revenues, the emphasis on long-term financial capability. In this respect, the FFPR is about urging football clubs to improve the management of their expenses, and to achieve a sustainable balance between income, spending and investments. This is the real novelty introduced by FFPR, as the Club Licensing System, which was implemented at the start of the 2004/2005 season, already prescribed that clubs had to fulfil some quality standards related, for example, to infrastructure, personnel, legal issues to be admitted to UEFA's competitions.

Specifically, with the introduction of the FFPR, football clubs are required to present annual audited financial statements (i.e. an income statement, a balance sheet, and a cash flow statement) including explanatory notes on significant accounting policies. After verification of these documents and reclassification of relevant income and expenses needed to calculate the BER, if clubs are not compliant, the UEFA's Club Financial Control Body (CFCB) decides which disciplinary measures and sanctions to adopt among: warning, reprimand,

[4] The aims of these requirements are to: a) further promote and continuously improve the standards of all aspects of football in Europe and give continued priority to the training and care of young players in every club; b) ensure that clubs have an adequate level of management and organization; c) adapt clubs' sporting infrastructures in order to provide players, spectators and media representatives with suitable, well-equipped and safe facilities; d) protect the integrity and smooth running of the UEFA club tournaments; e) foster the development of benchmarking for clubs in financial, sporting, legal, personnel, administrative and infrastructure-related criteria throughout Europe.

fine, deduction of points, withholding of revenues from a UEFA competition, prohibition on registering new players in UEFA competitions, restriction on the number of players that a club may register for participation in UEFA competitions, disqualification from competitions in progress and/or exclusion from future competitions, withdrawal of a title or award. The CFCB can also take a "rehabilitative" approach by defining settlement agreements with non-compliant clubs, which are meant to offer them a roadmap to meet the BER in the near future. The first sanctions for clubs not fulfilling the BER were set following the first BER assessment in May 2014 and the conditions of non-compliance became effective for the 2014/15 campaign. From June 2015, the scope of the FFPR has been potentially expanded to include clubs not yet qualified for UEFA competitions but that anticipate participating in the future.

According to Articles 58-63 of the FFPR (UEFA 2012), clubs comply with the BER, if "relevant expenses" do not exceed "relevant income" by more than an "acceptable deviation" in a string of reporting periods called "monitoring period".

Specifically, Article 58 (1) clarifies the notion of relevant income as follows: "Relevant income is defined as revenue from gate receipts, broadcasting rights, sponsorship and advertising, commercial activities and other operating income, plus either profit on disposal of player registrations or income from disposal of player registrations, excess proceeds on disposal of tangible fixed assets and finance income. It does not include any non-monetary items or certain income from non-football operations."

Article 58 (2) clarifies the notion of relevant expenses as follows: "Relevant expenses is defined as cost of sales, employee benefits expenses and other operating expenses, plus either amortization or costs of acquiring player registrations, finance costs and dividends. It does not include depreciation/impairment of tangible fixed assets, amortization/impairment of intangible fixed assets (other than player registrations), expenditure on youth development activities, expenditure on community development activities, any other non-monetary items, finance costs directly attributable to the construction of tangible fixed assets, tax expenses or certain expenses from non-football operations."

The notion of "acceptable deviation" is defined in Article 61 as of €5M. The "monitoring period" assessed for the license season 2013/14 covered the reporting period ending 2013 and the reporting period ending 2012. From then onwards, the three previous reporting periods are assessed for every new license season. For example, in the 2014/15 license season, the assessment is performed based on the three reporting periods ending 2014, 2013 and 2012.

The FFPR originated from UEFA's willingness to protect the overall long-term viability of the European football industry by reshaping the incentives of football club decision-makers. Managers of top league clubs have a strong motivation to overspend to buy big names in the search of sporting performance. This is because, over time, a positive association between wage expenditure and league position has been proven:

other things being equal, spending more on wages turns into on-pitch success. However, not all clubs gambling short-term in the hope of long-term achievements can be successful, which leads to dangerous financial instability and even bankruptcy in some cases.[5] Therefore, the need to balance financial sustainability with sporting success represents a major and peculiar challenge of the football industry.

The pressure on clubs' managers is enormous from supporters. This is particularly true for clubs in the middle of the tables, that is, those endeavoring either to bridge the gap with the clubs above them or to preserve their league status. Also all the other clubs are under pressure to spend their revenues and more on players, as the wealthier clubs overspend on transfer fees and player wages to chase sporting performance and broader non-financial goals.[6] In this respect, football clubs are special businesses: they exist in a distinctive emotional and social space, because of uncommonly strong relationships – based on identity, belonging, and a high engagement and activism (Michie and Oughton, 2005) – with stakeholders such as supporters and the community. These relationships affect the clubs' economic activities and their managers' decision making (Morrow, 2003) and, ultimately, their financial performance. The strength of relationships between clubs, supporters and geographical communities (i.e., their 'social value') can be understood as being as important as clubs' cash flows and debt levels (i.e., their 'economic value'). The appeal to 'live the dream' thus needs to be kept in check. This is basically the essence of the FFPR: clubs must operate as self-sustaining businesses.

2.2 Related literature

Our analysis is related to other contributions on the FFPR in the football industry, which, however, are mostly in the field of economics and tend to be concerned with the (unintended) consequences of the FFPR especially for competitive balance. In fact, with the exception of Franck (2014), almost all existing studies in economics cast doubts on the effectiveness of the FFPR in achieving its declared objectives. Yet, these studies are typically based on theoretical arguments with empirical investigation virtually missing.[7]

In particular, existing contributions generally emphasize both the importance of 'competitive balance' and the fact that football clubs are not profit-maximizing businesses (e.g. Arnold and Benveniste, 1987). In this respect, the FFPR is frowned upon, as it is seen as being inspired by the view of clubs as 'standard' profit-

[5] See, for example, the *House of Commons Culture, Media and Sport Committee Football Governance Seventh Report of Session 2010–12 HC 792-I*, published on 29 July 2011 by authority of the House of Commons London, The Stationery Office Limited (hiips://publications.parliament.uk/pa/cm201012/cmselect/cmcumeds/792/792i.pdf): *The fact that the wealthiest owners in the Premier League, the proprietors of Chelsea and Manchester City, have almost unlimited resources to spend on their sides tends to inflate the overall market for players and further ratchet up the cost of staying in the Premier League. In 2009/10 Chelsea and Manchester City recorded the two highest operating losses in Premier League history, of £38 million and £55 million respectively. At the extreme it can lead to the sort of debt-fuelled expenditure that Leeds United Football Club embarked upon in the early 1990s – "living the dream", as the then Chief Executive described it.*

[6] Ibidem.

[7] See Plumley, Ramchandani and Wilson (2019) for a recent exception.

maximizing businesses. This in turn implies that, given that competitive balance is an irrelevant concept for 'standard' industries, a likely outcome of the FFPR is the deterioration of that balance.

Following this line of reasoning, three main objections have been advanced regarding the FFPR. A first objection is that UEFA, by implementing the FFPR, forgoes potential benefits stemming from benefactors (also known as "sugar daddies") injecting unlimited quantities of external capitals into the football industry. Given some current arrangements on the allocation of league money (from prizes to television rights), absent external injections, the introduction of the BER would lead to a worsening of the competitive balance and, consequently, to a decrease of the leagues' appeal. European leagues run the risk of the so-called 'ossification' once the FFPR is in force. As competitive balance has already followed a secular downward trend within each national league, the introduction of the FFPR would freeze the current imbalanced setup (e.g. Sass, 2012; Vöpel, 2013; Budzinski, 2014; Petit, 2014).

A second objection (Storm and Nielsen, 2012) is related to the social significance and community embeddedness of football clubs and the consequent limitations of a reasoning based solely on economic and financial criteria. The authors explain that the experiences of clubs in financial distress demonstrate that these organizations are not considered by society as mere businesses, i.e. they are not simply evaluated based on traditional measures of return, or allowed to prosper or fail just on the basis of conventional measures of business success. These organizations are 'too big to fail' not in financial terms, but in social terms. This questions the applicability of traditional financial reporting to football clubs as a relevant means for measuring and communicating their activities. The fact that football clubs are characterized by highly engaged stakeholders, inherent interdependences, and activities at the intersection of the economic, the social and the political contexts, may impair traditional forms of disclosure based uniquely on conventional financial performance measures.

A final objection is that the FFPR introduction is likely to produce unintended adverse effects (Preuss et al., 2013). The new rules would not improve the clubs' financial performance neither promote competitive balance: on the contrary, clubs would have strong incentives to bypass the regulations, for example, using "creative" accounting especially in the form of accruals. This imposes extra costs both on clubs and on UEFA, which must spend additional resources to detect deviant behaviors.

Our analysis is also related to contributions that examine the effects and effectiveness of regulatory and accounting policies in specific industries. Existing papers have analyzed, for example, how disclosure and supervisory regulations affect the stability and development of the commercial banking industry (Granja, 2018), or the influence of normative and regulative factors on cost shifting by nonprofit hospitals in their publicly reported statements (Krishnan and Yetman, 2011). No previous contribution has however analyzed empirically the football industry notwithstanding the stimulating context-specific characteristics. Franck

(2014) notices that, before the FFPR, the football industry was characterized by the so called 'soft budget constraints' (SBCs): football club managers could rationally expect that some form of supporting organization, either the state or a private benefactor, would step in in case of a deficit (Kornai et al. 2003). The problem is that the likelihood of such bailouts distorts the incentives of club managers who tend to take more risk and regularly spend more than what they earn, hoping to be saved by external money injections year after year if the bet goes wrong (Franck, 2014). Potentially unlimited money injections crowd out business models founded on good management practices and give rise to managerial moral hazard behaviours, a situation common to SBCs' contexts and that has been studied in different settings, including the financial sector.

3. The FFPR and the financial performance of clubs in publicly available data

Our analysis relies on two datasets, one assembled by us using information from Amadeus (Bureau van Dijk) and the other collected by the UEFA for the specific purpose of implementing the FFPR. The Amadeus dataset has the advantage of being publicly available, but it lacks the breakdown of the specific accounting items relevant for the BER and to deep delve in the analysis of financial sustainability. The UEFA dataset obviously features such breakdown, but is not publicly available. By using both datasets, we will be able to cross-validate our results with an eye to replicability as well as information detail. While this section explores the Amadeus dataset, the next will be devoted to the UEFA dataset.

3.1 The Amadeus dataset

We have collected information on 150 clubs playing in the top five European leagues. In particular, we consider all the teams taking part in the English Premier League, the Spanish Liga, the French Ligue One, the Italian Serie A and the German Bundesliga, between the seasons 2005-2006 and 2014-2015.[8] Specifically, we retain in the sample all the clubs that were included in the top league of each country at least once in the ten-year period we cover.

Financial data are extracted from Amadeus (Bureau van Dijk) and refer to the balance sheets, statements of income and global ratios of the football clubs.[9] Despite some missing values on the financial side, the dataset coverage is generally good and consistent.

[8] Due to more limited data availability, financial information for year 2015 is underrepresented. Our results are nonetheless robust to the exclusion of that year from the sample.

[9] Amadeus (Bureau van Dijk) is a database of comparable financial and business information on Europe's largest 500,000 public and private companies by total assets. In our analysis, we use the following variables extracted from the Amadeus database: Loans (Short term financial debts + part of Long term financial debts payable within the year); Long Term Debt (Long term financial debts, e.g. those to credit institutions in the form of loans and credits, bonds); Cash Flow (Profit for

3.2 Clubs' performance measures

We capture the financial performance of the European football clubs using first a proxy of the BER and second a traditional measure of financial sustainability.

We proxy the BER by the difference between Turnover and Cost of employees. The use of this proxy is motivated by the fact that direct information on "relevant income" and "relevant expenses" is unfortunately unavailable in Amadeus. Yet, the cost of employees is arguably a key component of the latter. In this respect, although our measure does not perfectly overlap with the difference between income and expenses as defined in Articles 58 (1) and 58 (2) of the FFPR, it is broadly consistent with such difference and with the BER logic urging clubs to live within their means. In Section 4 we will exploit the UEFA dataset to overcome this limitation of the Amadeus data.

Financial sustainability is measured in terms of the Debt over Cash Flow ratio (D/CF), which expresses the amount of debts owed by a club in relation to the yearly cash flow it generates. The higher the D/CF, the higher the financial leverage, and the lower the club's financial sustainability. The D/CF is known to be an effective predictor of corporate loan covenant violations and bankruptcy, and has been used as a long standing and common measure to assess the borrowing capacity and financial health of corporations. Moreover, it is a substantial measure of the ability of football clubs to sustain their operations, independently from the particular accounting principles used by the clubs and by the specific UEFA rules.

Table 1 describes the financial coverage of our database for the key variables to be use for the analysis. With the only exception of the German Bundesliga, the dataset covers more than 60% of all the potential club-year combinations during the period of observation.

The table highlights differences in the financial characteristics of clubs across leagues. English clubs display a high value of debt compared with the other leagues, especially to the French league where clubs are, on average, the least indebted among the Top 5 leagues. English clubs are also the ones with the highest costs of employees, followed by those in Germany (but this could be determined by a selection effect due to the bad coverage of our database for this country), Italy, Spain and France. This could be explained by higher revenues from broadcasting rights in England than elsewhere. The large standard deviations signal substantial within-league inequality in the distribution of debt, turnover or costs of employees.[10]

period + Depreciation); Costs of employees; Turnover; Gearing Ratio and Interest Cover. We have also manually collected data on sporting statistics (points, rank, number of goals, etc.) with exhaustive coverage for clubs in the main leagues.

[10] For instance, Real Madrid and FC Barcelona represent more than 80% of the operating profits in Spain in 2014-2015 according to Deloitte (2016).

Table 1. Descriptive statistics (Amadeus dataset)[11]

	Mean	Std. Dev.	Max	Obs	Coverage
England (370 observations)					
Total debt	95.8	153	1098.6	312	84%
Costs of employees	58.3	52	272.7	326	88%
Turnover	82.6	80.3	465.9	326	88%
DCF>0	12.3	30.6	219.4	178	48%
SDCF>0	4.7	11.7	109.3	178	48%
France (360 observations)					
Total debt	4.3	7.6	54.3	231	64%
Costs of employees	26.5	28.7	244	264	73%
Turnover	40.7	49.7	460.8	265	74%
DCF>0	1.4	2.7	16.7	159	44%
SDCF>0	0.7	1.6	10.7	159	44%
Germany (310 observations)					
Total debt	32.6	50.7	220.92	116	37%
Costs of employees	40.8	44.8	236.4	115	37%
Turnover	94.6	103.0	528.7	108	35%
DCF>0	4.1	8.8	61.1	84	27%
SDCF>0	0.5	2.0	17.6	84	27%
Italy (350 observations)					
Total debt	21.7	49.6	298.5	270	73%
Costs of employees	38	46.6	234	277	79%
Turnover	65.4	72	344	281	80%
DCF>0	4.5	14.4	125.0	165	47%
SDCF>0	3.8	11.9	92.9	165	47%
Spain (360 observations)					
Total debt	51.2	74.8	389.8	206	57%
Costs of employees	31.1	45.8	269.6	229	64%
Turnover	49.3	93.5	549.3	229	64%
DCF>0	6.0	7.2	58.2	145	40%
SDCF>0	1.2	2.4	13.5	149	41%

Note: Some clubs are always missing while some appears non-continuously in the dataset (Bayer Leverkusen or Hamburger SV for instance). We have 6 missing observations for the FC Barcelona and 3 missing for the Real Madrid. Figures are expressed in millions of euros.

3.3 Research design

To check whether and how the financial outcomes of European clubs changed after the introduction of the FFPR, we follow a *difference in differences* (DID) strategy. The idea is to mimic an experimental research design with our observational data through the analysis of the differential effect of the introduction of the FFPR ('treatment') on clubs exposed to these rules ('treatment group') relative to clubs not exposed to them ('control group'). This way we can estimate the effect of the FFPR on clubs' financial outcomes by comparing their average change between the treatment and the control groups.

At face value a major obstacle to the successful implementation of the DID approach in our context is that in principle the FFPR apply to all clubs, which implies that all clubs are 'treated' and there is thus no control

[11] In Table 1, we report the total Debts to Cash Flow ratio (DCF) and the Short-term Debts to Cash Flow ratio (SDCF). In the first ratio, we use total debts (D), which sums up the long-term and the short-term debts (in general, loans). For the second ratio, we use short-term debts (SD) only.

group. The fine grain of the rules tells, however, a different story. As we discussed, eight different punishments exist for clubs that do not comply with the rule: warning, fine, points deduction, withholding of revenue from a UEFA competition, prohibition to register new players for UEFA competitions, restrictions on how many players a club can register for UEFA competitions, disqualification from a UEFA competition in progress and exclusion from future competitions. Hence, all punishments are immaterial for clubs that do not (aspire to) participate to UEFA competitions so that these clubs have no incentive to abide with the FFPR as long as doing so involves additional costs.

As the logic of sanctions for infringing the FFPR *de facto* implies that clubs aspiring to UEFA competitions should care much more than other clubs about complying with the FFPR, we take the probability of participating in such competitions as a proxy for the intensity of 'treatment'. This way we can assess the effects of the FFPR by comparing the performance of clubs with UEFA competitions aspirations with that of the other clubs. We call the former 'targeted' (by the FFPR) and the latter 'non-targeted'.[12] Operationally, we define as targeted the clubs that participated at least 4 times (out of 6) to UEFA competitions between the seasons 2005-2006 and 2011-2012, which we take as a proxy for UEFA aspirations. For robustness, we will also try an alternative definition of 'targeted clubs' that does not rely on the relevance of punishments. Under this alternative definition 'targeted clubs' are the most indebted ones, the reason being that the FFPR are intended to prevent debt bubbles to arise and thus for clubs with a sound financial position to start with the introduction of the FFPR should be immaterial.

3.4 Descriptive analysis and regression results

Based on our definitions of 'targeted clubs', we implement our DID strategy by estimating the following specification:

$$Y_{it} = \beta_1 * Post_t + \beta_2 * Target_i + \beta_{DiD} * Post_t \times Target_i + \varepsilon_{it} \qquad \text{(DID)}$$

where Y_{it} is the outcome variable for club i at time t, *Post* corresponds to a dummy equal to 1 in the years after the FFPR are implemented, *Target* is a dummy equal to 1 for clubs that we consider as targeted by the FFPR, and ε_{it} is an error term. As the FFPR were announced in September 2009 (football season 2009-2010; fiscal year: 2010) and started to be implemented in the football season 2011-2012, the *Post* period goes from season 2011-2012 to season 2014-2015 (4 football seasons). All standards errors are clustered at the club level. In terms of interpretation of the coefficients, the estimated β_2 will tell us by how much the outcome variable would have differed on average between targeted and non-targeted clubs if the FFPR had not been introduced. The estimated β_1 will tell us by how much the outcome variable would have changed on average for targeted clubs between the pre-2011 and post-2011 periods if the introduction of the FFPR had not

[12] We use 'targeted' instead of 'treated' to stress the fact that, as discussed above, all clubs are potentially treated but some clubs should react more to the introduction of the FFPR rules.

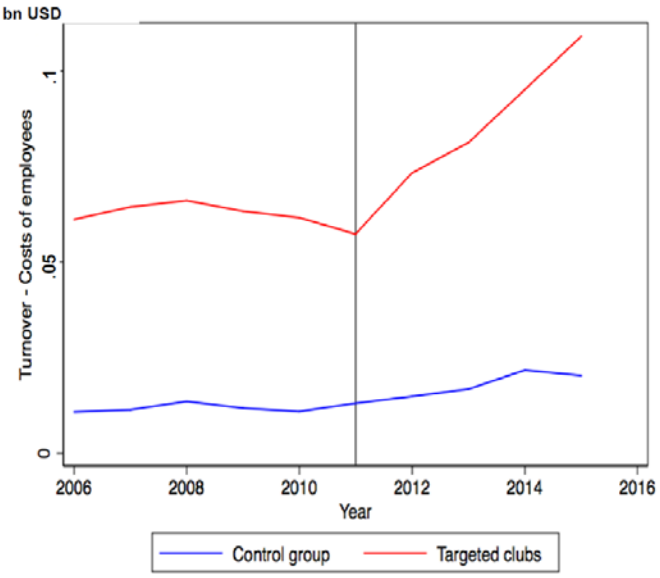
affected them differently than non-targeted clubs. The estimated β_{DiD} is the main object of interest as it will measure the causal effect of the introduction of the FFPR on the outcome variable for the targeted clubs.

We look at two types of financial outcomes that, as we already discussed, are relevant for the FFPR: clubs' balance between income and expenses as required by the BER, and their overall financial sustainability.

As, according to the BER, clubs must balance the income from and the expenses for the operations of their professional teams involved in the UEFA competitions (with some tolerance only for temporary deviations of limited size), the implementation of the FFPR should be expected to affect the gap between revenues and costs differentially for targeted and non-targeted clubs.

This prediction is borne out by the data. **Figure 1** depicts the evolution of the difference between Turnover and Cost of employees over the period of observation. In the figure, targeted clubs follow the higher trajectory, which exhibits a clear break in trend when the FFPR are implemented. As the break is hardly detectable for the lower trajectory corresponding to the non-targeted clubs, the figure mostly highlights a differential increase in the margin between Turnover and Costs of employees for targeted clubs post-FFPR that is consistent with the increasing relevance of the BER for them.

Figure 1. Turnover minus Cost of employees (Amadeus dataset)



Importantly, Figure 1 also shows that before the introduction of the FFPR targeted and non-targeted clubs follow similar trajectories. This "common trend" feature is a crucial prerequisite for a meaningful implementation of the *difference in differences* strategy, which allows us to refine the analysis by running regression (DID) with Turnover minus Costs of employees as outcome variable on the left hand side.

Column (1) in **Table 2** reports the corresponding results for the baseline definition of 'targeted clubs' as all those participating at least 4 times (out of 6) to UEFA championships between seasons 2005-2006 and 2011-

2012. In the table, the estimated coefficient for *Target* is β_{DiD}=1.815, which shows that the introduction of the FFPR has caused Turnover minus Costs of employees to grow on average by 18.15 million USD per year for targeted clubs. Moreover, the estimated ratio $\beta_{DiD}/(\beta_{DiD}+\beta_2)$=1.815/(1.815+0.561)=76% reveals that the introduction of the FFPR has driven around three quarters of the increase in Turnover minus Cost of employees for targeted clubs after 2011.

Table 2. FFPR and BER: baseline regressions (Amadeus dataset)

	(1) Baseline	(2) Costs of emp.	(3) Turnover
Post	0.561***	0.708***	1.251***
	(0.153)	(0.190)	(0.319)
Target	4.965***	7.300***	12.27***
	(0.820)	(1.104)	(1.698)
Post × Target	1.815*	1.995**	3.828**
	(1.062)	(0.974)	(1.864)
Observations	964	972	970
R-squared	0.327	0.443	0.435

Robust standard errors clustered at the club level in parentheses. Data is expressed in 10 millions (10^7) dollars. *** p<0.01, ** p<0.05, * p<0.1.

To check robustness, **Table 3** shows the results on Turnover minus Costs of employees for alternative definitions of 'targeted clubs': (1) only clubs that participated at least 4 times to UEFA competition and were always in the top leagues; (2) all clubs that participated at least 3 times (out of 5) to UEFA championships; (3) all clubs that participated at least 5 times (out of 5) to UEFA championships; (4) all clubs in the top decile of the distribution of Total debt; (5) all clubs in the top quintile of the distribution of Total debt.

Table 3. FFPR and BER: alternative definitions of targeted clubs (Amadeus dataset)

	(1)	(2)	(3)	(4)	(5)
		Alternative targets			
	Only 1st League	3/5	5/5	Top 10 debt	Top 20 debt
Post	0.852***	0.397***	0.676***	0.580***	0.357**
	(0.242)	(0.111)	(0.179)	(0.205)	(0.158)
Target	4.104***	4.740***	5.743***	4.168***	3.246***
	(0.837)	(0.766)	(1.042)	(1.378)	(0.876)
Post × Target	1.644	2.440**	1.542	3.477**	3.031***
	(1.092)	(1.024)	(1.271)	(1.405)	(0.968)
Observations	591	964	964	964	964
R-squared	0.259	0.371	0.303	0.222	0.245

Robust standard errors clustered at the club level in parentheses. Data is expressed in 10 millions (10^7) dollars. "3/5" (resp. 5/5) designates a robustness test where clubs that participated at least to 3 (rest. 5) UEFA championships out of 5 are included in the targeted group. *** p<0.01, ** p<0.05, * p<0.1.

Two important conclusions can be drawn from column (1) in Table 2 and all columns in Table 3. First, the estimated coefficient on *Post* is always positive and significant, which implies that on average the margin between Turnover and the Costs of employees increases for all clubs after the implementation of the FFPR, something that was not easily detectable in Figure 1. Second, while the coefficient on *Target* is also always positive and significant (showing that targeted clubs systematically exhibit a larger margin), the DID estimator on the interaction term *Post* ×*Targeted* is also always positive and significant (except in columns (1) and (3) of Table 3, probably due to a lack of power), which confirms the visual impression from Figure 1: the margin between Turnover and the Cost of employees increases for targeted clubs relative to the other clubs after the implementation of the FFPR. Results are consistent for the different definitions of 'targeted clubs'.

These two results lend strong support to the so-called the 'real effects hypothesis' discussed in the Introduction: the new accounting measurement and disclosure rules associated with the FFPR had significant effects on the real decisions of managers not only in targeted but also in non-targeted clubs.

Columns (2) and (3) in **Table 2** report the estimated differential changes of Turnover and the Costs of employees when the two variables are entered separately as outcomes on the left hand side of regression (DID). They show that after the implementation of the FFPR, while both outcome variables increase for targeted clubs relative to the non-targeted clubs, Turnover increases more. It is, therefore, the stronger rise in Turnover than in the Costs of employees that explains the positive DID effect in the margin between them.

Our DID analysis so far shows that the introduction of the FFPR is associated with a widening gap between Turnover and the Cost of employees for targeted clubs relative to the other clubs, determined by stronger growth for Turnover than for the Costs of employees. Tables 4 and 5 check whether this virtuous outcome from the BER viewpoint also maps into an improved outlook in terms of debt and financial sustainability. **Table 4** shows that nothing has changed after the introduction of the FFPR with reference to our financial sustainability measure (D/CF). By looking at its determinants in columns (2) and (3), the coefficient *Post* is positive and significant for cash flow (while the decrease in debts suggested by the negative coefficient is not significant). This implies that, on average, cash flow increases for all clubs after the implementation of the FFPR. The coefficient on *Target* is positive and significant for both debts and cash flow, showing that targeted clubs systematically exhibit higher cash flows but also higher debts. However, the DID estimator on the interaction term *Post* ×*Targeted* is never significant. All in all, these results suggest that the FFPR has not translated (yet) in an improvement in the financial sustainability of football clubs.

Table 4. FFPR and Financial sustainability I (Amadeus dataset)

	(1) D/CF	(2) ln(Total Debt)	(3) Cash Flow
Post	14.16	-0.0409	3.397**
	(9.760)	(0.140)	(1.308)
Target	20.63	1.276**	19.87***
	(15.81)	(0.580)	(6.341)
Post × Target	-12.28	0.400	9.079
	(10.42)	(0.510)	(7.644)
Observations	894	843	972
R-squared	0.02	0.047	0.164

Robust standard errors clustered at the club level in parentheses. Data is expressed in 10 millions (10^7) dollars. Coefficients in column (2) have been multiplied by 10^6 to be in a readable form. *** p<0.01, ** p<0.05, * p<0.1.

Also the results reported in **Table 5** do not point to any significant effect of the FFPR on the financial sustainability of football clubs, which is proxied by two additional measures, the interest cover and the gearing ratio.[13]

Table 5. FFPR and Financial sustainability II (Amadeus dataset)

	(1) Interest Cover	(2) Gearing ratio
Post	7.830	-14.17
	(5.941)	(20.28)
Target	-2.074	-8.054
	(6.646)	(44.70)
Post × Target	-11.08	43.70
	(9.902)	(45.31)
Observations	784	522
R-squared	0.005	0.003

Robust standard errors clustered at the club level in parentheses. Data is expressed in 10 millions (10^7) dollars. *** p<0.01, ** p<0.05, * p<0.1.

[13] Same conclusions can be drawn from an additional (untabulated) analysis on Debts/Assets and Debts/Revenues.

To sum up, based on publicly available Amadeus data, we can conclude that the introduction of the FFPR has been associated with an improvement in financial outcomes consistent with the efficacy of the BER, but this positive development in the clubs' income statements has yet to be translated also into better overall financial sustainability of their balance sheets.

4. The FFPR and the financial performance of clubs in the UEFA data

The analysis of the Amadeus dataset lends support to the idea that the FFPR have had real effects on the management of European football clubs in terms of better balance between revenues and expenses. However, a possible source of concern is that the evolution of Turnover and Cost of employees could be driven by items that have nothing to do with the ones listed as 'relevant income' and 'relevant expenses'. This is why analysis of the UEFA proprietary data becomes crucial.

4.1 The UEFA dataset

According to the UEFA, this dataset contains financial information directly gathered by the UEFA every year though a form filled by registered football clubs. The dataset contains very rich information about the financial performance of clubs. It includes the standard variables used for accounting purposes but also a set of specific variables generally not available in other datasets such as Amadeus.

Beyond exhaustiveness, the UEFA dataset's crucial appeal is that it provides the breakdown of clubs' financial accounts into the different items of 'relevant income and 'relevant expenses', which are at the centre of the FFPR.

The period covered by the UEFA dataset goes from 2008 (the year in which the UEFA systematically started collecting this type of data) to 2017 (currently the latest available year). Complete information is available for 165 clubs with virtually exhaustive coverage.

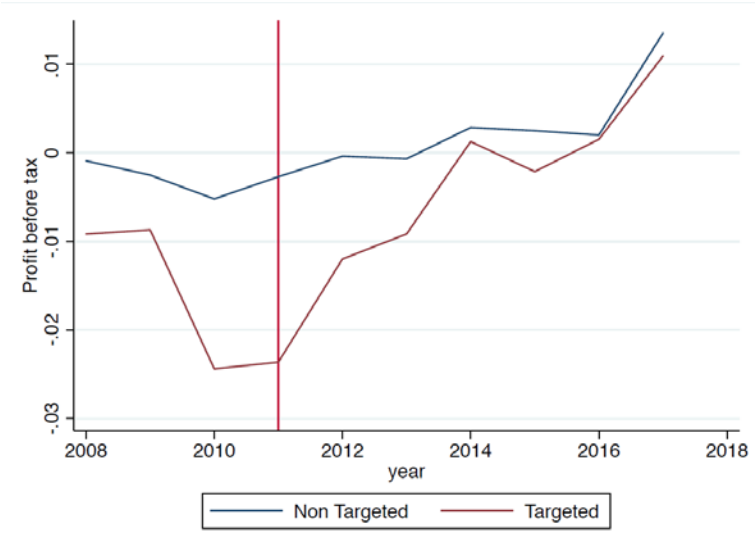
4.2 Descriptive analysis

The evolution of key financial variables for targeted and non-targeted clubs before and after the introduction of the FFPR is depicted in **Figures 2 to 10** in billion euros.

Figure 2 reveals the impact of the FFPR on club's profit before tax. We observe first that, before the introduction of the FFPR, there exists an important gap (around 10 million euros on average) between profits (or losses) in targeted and non-targeted clubs. This suggests that our targeted group is well designed: targeted clubs exhibit on average more losses than non-targeted clubs, and their losses increase until the

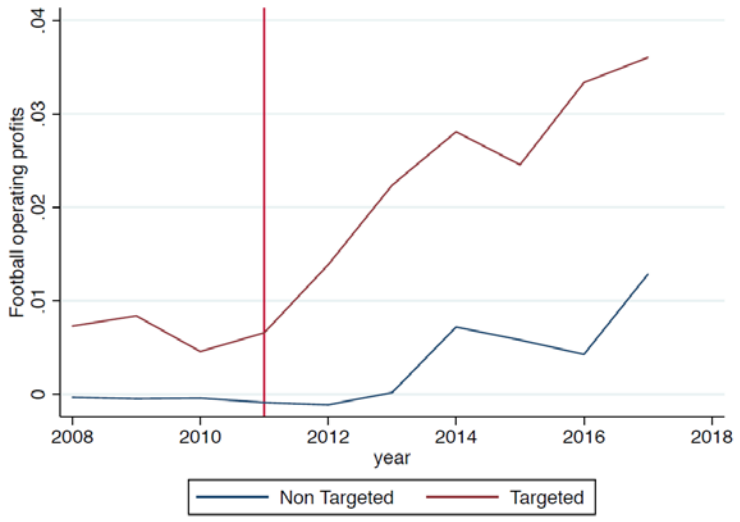
introduction of the FFPR in 2012 while the losses of non-targeted clubs are quite stable. Following the introduction of the FFPR, the figure shows a convergence between the two groups, which is consistent with a positive effect of the FFPR on targeted clubs' profits.

Figure 2. Profit before tax (UEFA dataset)



Information provided by the UEFA allows us to refine the profit measure zooming on Football operating profit. When we do so, **Figure 3** reveals a clear path of divergence between targeted and non-targeted clubs after, but not before the introduction of the FFPR. In particular, it highlights the emergence of an upward trend for non-targeted clubs but a much stronger upward trend for targeted clubs.

Figure 3. Football operating profits (UEFA dataset)



Figures 4 and 5 look at the break-even categories of relevant income and expenditures as computed by the UEFA. Both income and expenditures start growing faster after the introduction of the FFPR break-even expenditures but the former increases faster than the latter.

Figure 4. Break-even expenditures (UEFA dataset)

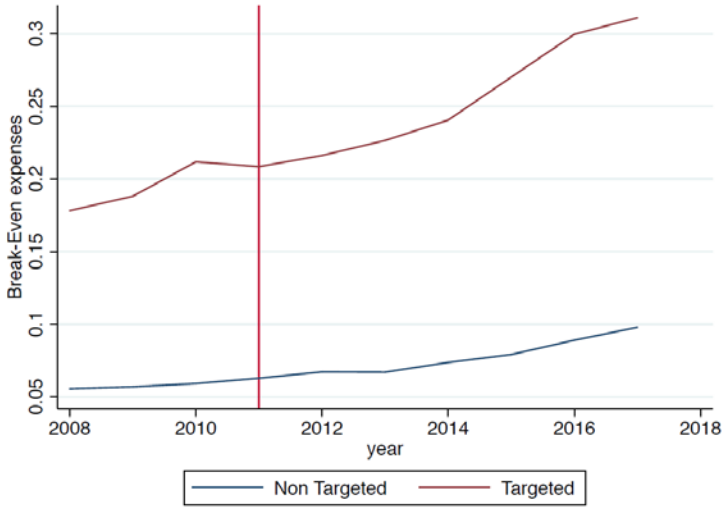
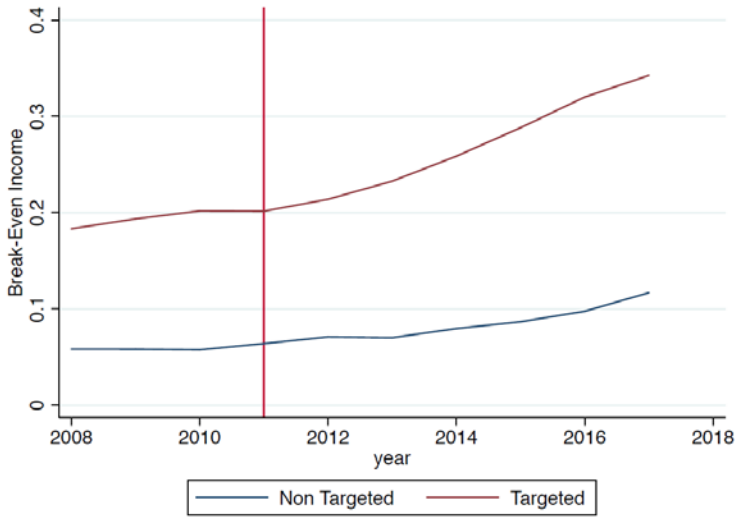


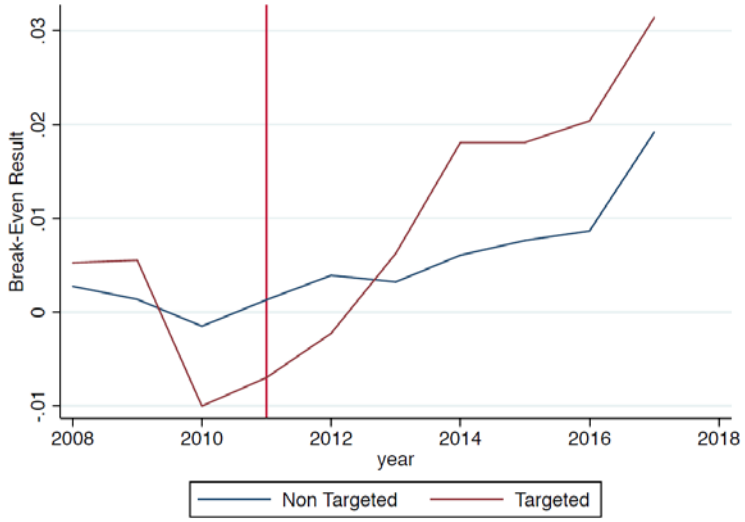
Figure 5. Break-even income (UEFA dataset)



The differential growth between relevant income and expenditures leads to the evolution of the break-even result in **Figure 6**. This result is the UEFA's central monitored outcome. It starts improving for both targeted

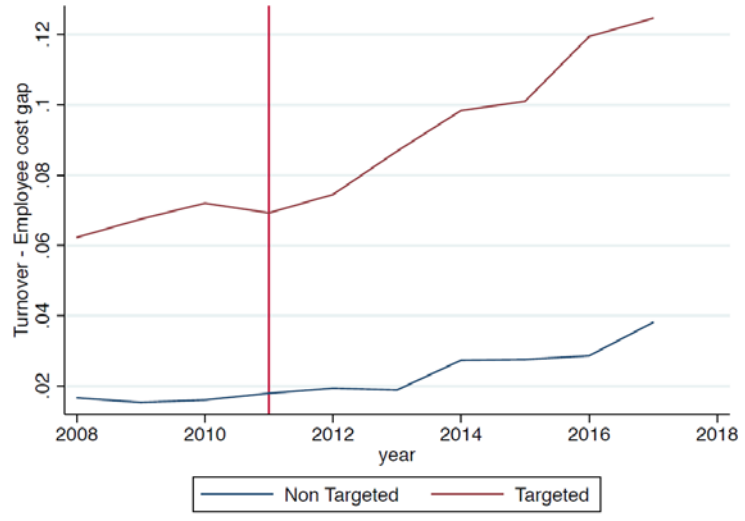
and non-targeted clubs after 2011, but more for targeted clubs. Hence, the introduction of the FFPR has improved the clubs' income statements confirming the real effects of the BER.

Figure 6. Break-even result (UEFA dataset)



The UEFA dataset also allows us to nail down the specific relevant items that reacted the most to the new rules. **Figure 7** looks at the Revenue-wage gap, which is the performance measure closest in spirit to Turnover minus Cost of employees we used in the Amadeus analysis. The comparison between Figure 7 based on the UEFA dataset with Figure 1 based on the Amadeus dataset reveal a similar pattern consistent with the hypothesis that the introduction of the FFPR has had real effects on clubs' managers behavior.

Figure 7. Revenue-wage gap (UEFA dataset)



In finer detail, **Figures 8 and 9** suggest that the behavioral change is clearly visible in Main sponsor revenue for both targeted and non-targeted clubs, but especially for the former. This type of revenue increased, on average, by (more than) 20 million euros between 2011 and 2017 for targeted clubs and by less than 5 million euros for non-targeted clubs.

Figure 8. Main sponsor revenue (UEFA dataset)

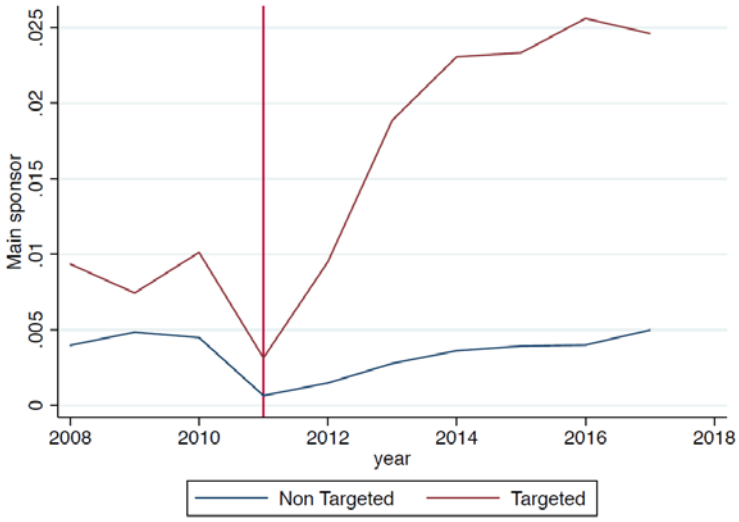
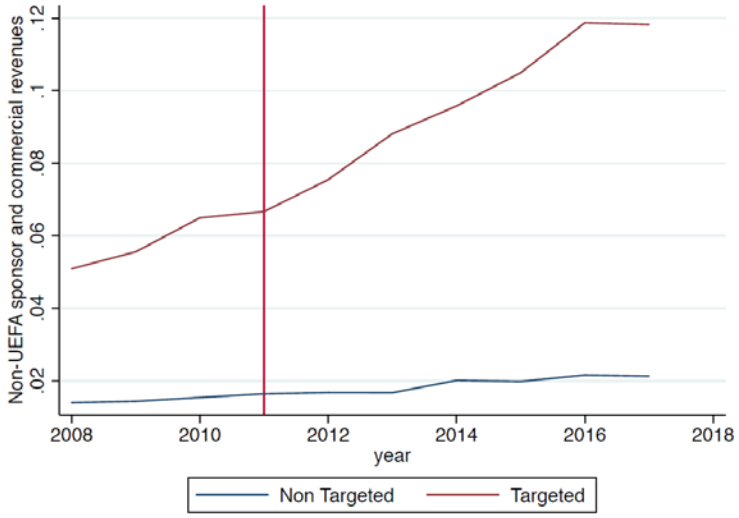


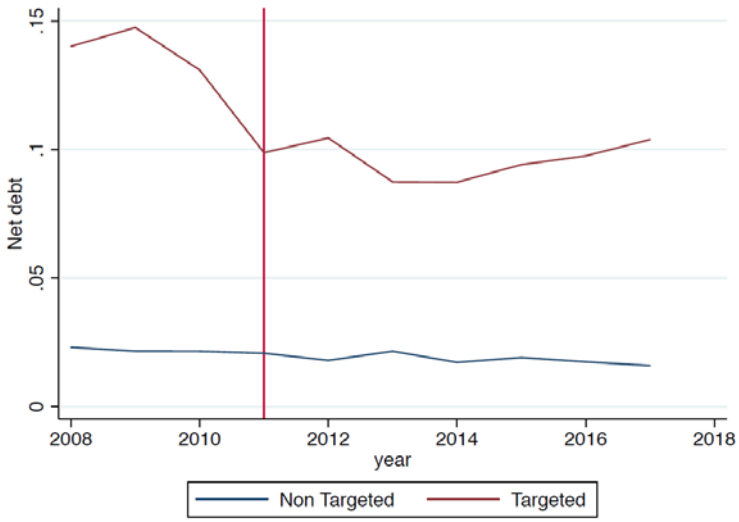
Figure 9. Non-UEFA sponsor, commercial and other revenues



Finally, **Figure 10** looks at Net debt as an important component of football clubs' financial sustainability. Consistent with the Amadeus dataset, it shows that targeted clubs are more leveraged than non-targeted

ones and the gap between the two stabilizes after the introduction of the FFPR. The positive effects of the FFPR on the clubs' income statements do not seem to translate yet into comparable effects on their balance sheets.

Figure 10. Net Debt (UEFA dataset)



4.3 Regression results

The regression analysis is based on the same *difference in differences* (DID) strategy described in Section 3.3, this time applied to the UEFA rather than the Amadeus dataset. The regression results, reported in **Tables from 6 to 13**, confirm the insights of the descriptive analysis and are thus consistent with those obtained for the Amadeus dataset.

Table 6 looks at the break-even (BE) outcomes and parallels Table 2 for the Amadeus dataset. There are four columns corresponding to four different BE measures: *BE result* is the break-even result as computed according to UEFA requirements; *BE Result Adj.* is the adjusted break-even result as computed by the UEFA;[14] *BE proxy 1* is the gap between total revenues and personnel costs; *BE proxy 2* is the gap between total revenues and personnel costs including transfers. In every column, the introduction of the FFPR (dummy *Post*) has a significant positive effect on all clubs. This positive effect is significantly amplified for targeted clubs (dummy *Post* x *Target*).

[14] Relevant income, relevant expenses and the break-even result for a reporting period are calculated in accordance with the Articles 58 and 60 by the licensee inputting figures into the profit and loss account and adjustment schedules in the BE package in the UEFA Club Licensing and Financial Fair Play CL/FFP IT Solution Toolkit.

Table 6. Break-even result (UEFA dataset)

	(1) BE Result	(2) BE Result Adj.	(3) BE Proxy 1	(4) BE Proxy 2
Post	0.00712***	0.00980***	0.0101***	0.0108***
	(0.00141)	(0.00179)	(0.00175)	(0.00175)
Target	-0.00251	-0.00283	0.0513***	0.0366***
	(0.00701)	(0.00702)	(0.0117)	(0.0113)
Post x Target	0.00976*	0.0190**	0.0229**	0.0176**
	(0.00565)	(0.00931)	(0.0102)	(0.00869)
Observations	975	975	975	975
R-squared	0.040	0.073	0.300	0.237

Robust standard errors clustered at the club level in parentheses. Dependent variable in billions of euros. BE result corresponds to the break-even result as computed by the UEFA, BE Result Adj. corresponds to the adjusted break-even result as computed by the UEFA, BE proxy 1 corresponds to the gap between total revenues and personnel costs and BE proxy 2 corresponds to the gap between total revenues and personnel costs including transfers.

Table 7 exploits the richer numerosity of the UEFA dataset to check the robustness of the findings in Table 6 by controlling for club fixed effects and total assets. As we have seen that targeted clubs are more leveraged, we drop the dummy Target. In the four columns the introduction of the FFPR (dummy *Post*) has a significant positive effect on all clubs. This positive effect is again significantly amplified for targeted clubs (dummy *Post* x *Target*).

Table 7. Break-even result controlling for Total assets and club fixed effects (UEFA dataset)

	(1) BE Result	(2) BE Result Adj.	(3) BE Proxy 1	(4) BE Proxy 2
Post	0.00303*	0.00626**	0.00445*	0.00552**
	(0.00166)	(0.00257)	(0.00241)	(0.00224)
Target	-	-	-	-
Post x Target	0.0105*	0.0182**	0.0223**	0.0164**
	(0.00550)	(0.00892)	(0.00906)	(0.00798)
ln(Total Assets)	0.0114***	0.0148***	0.0213***	0.0219***
	(0.00294)	(0.00491)	(0.00597)	(0.00418)
Observations	951	951	951	951
R-squared	0.526	0.349	0.860	0.782

Robust standard errors clustered at the club level in parentheses. All regressions include club fixed effects. Dependent variable in billions of euros. BE result corresponds to the break-even result as computed by the UEFA, BE Result Adj. corresponds to the adjusted break-even result as computed by the UEFA, BE proxy 1 corresponds to the gap between total revenues and personnel costs and BE proxy 2 corresponds to the gap between total revenues and personnel costs including transfers.

Table 8 looks at profits. The first three columns correspond to Operating profits, Football profits and Profits before taxes (PBT) when targeted clubs are identified by the dummy *Target* as in Table 6. The subsequent three columns refer to the same performance measures when the dummy *Target* is replaced by Total assets as in Table 7. The strongest results are observed in column (2) for Football profits, which improve for all clubs (dummy *Post*) and especially for target clubs (dummy *Post* x *Target*) after the instruction of the FFPR. This positive effect remains significant only for targeted clubs when the dummy *Target* is replaced by Total assets in column (5). Together with the fact that Total assets have a significant positive coefficient in column (5) whereas the dummy *Target* is insignificant in column (2) suggests that the introduction of the FFPR has mainly affected the largest clubs.

Table 8. Profits (UEFA dataset)

	(1) Op. profit	(2) Football profit	(3) PBT	(4) Op. profit	(5) Football profit	(6) PBT
Post	0.00332**	0.00536***	0.00613***	0.00147	0.00135	0.00241
	(0.00133)	(0.00134)	(0.00133)	(0.00140)	(0.00165)	(0.00153)
Target	-0.0166**	0.00724	-0.0136*	-	-	-
	(0.00751)	(0.00693)	(0.00742)			
Post x Target	0.00538	0.0143**	0.00876	0.00810	0.0157**	0.00964*
	(0.00500)	(0.00696)	(0.00552)	(0.00505)	(0.00653)	(0.00535)
ln(Total Assets)				-0.00292	0.00883**	0.00960***
				(0.00223)	(0.00371)	(0.00242)
Club FE				Yes	Yes	Yes
Observations	975	975	975	951	951	951
R-squared	0.060	0.094	0.051	0.626	0.673	0.525

Robust standard errors clustered at the club level in parentheses. Dependent variable in billion of euros. PBT corresponds to profits before taxes.

Tables 9 and 10 investigate the revenue side. They show that, on average across all clubs, adjustment takes place along several relevant margins such as higher Sponsor and commercial revenue (*Spons. and com.*), TV rights (*Broadcast*), Gate receipts, Transfers and Merchandising. However, for targeted clubs (dummy *Post* x *Target*) the most important margins are Sponsor and in particular Main sponsor, Transfers and UEFA matches.

Table 9. Revenues I (UEFA dataset)

Revenue item	(1) BE	(2) Total	(3) Spons. And com.	(4) Broadcast	(5) Gate receipts	(6) Transfers
Post	0.0274***	0.0224***	0.00431***	0.0149***	0.000932*	0.00628***
	(0.00427)	(0.00362)	(0.00145)	(0.00228)	(0.000559)	(0.00138)
Target	0.136***	0.123***	0.0445***	0.0277***	0.0326***	0.0158***
	(0.0202)	(0.0194)	(0.00757)	(0.00529)	(0.00725)	(0.00248)
Post x Target	0.0536***	0.0498***	0.0363***	0.00599	0.00256	0.00863**
	(0.0190)	(0.0187)	(0.0124)	(0.00458)	(0.00307)	(0.00411)
Observations	975	975	972	973	972	975
R-squared	0.424	0.405	0.345	0.245	0.324	0.183

Robust standard errors clustered at the club level in parentheses. Dependent variable in billion of euros. BE corresponds to break-even revenues as computed by the UEFA, Spons. and com. corresponds to sponsor and commercial revenues.

Table 10. Revenues II (UEFA dataset)

Rev item	(1) Sponsor	(2) Main spons.	(3) Com.	(4) Merchand.	(5) UEFA matches	(6) UEFA pr. mo.
Post	0.00244***	0.000026	0.00103	0.00107**	0.00263***	0.00237***
	(0.000863)	(0.000441)	(0.000763)	(0.000528)	(0.000917)	(0.000767)
Target	0.0213***	0.00388**	0.0155***	0.00607***	0.0193***	0.0172***
	(0.00595)	(0.00180)	(0.00472)	(0.00157)	(0.00254)	(0.00228)
Post x Target	0.0324**	0.0135**	0.00448	0.00506*	0.00756*	0.00600
	(0.0125)	(0.00660)	(0.00597)	(0.00282)	(0.00426)	(0.00364)
Observations	972	804	970	830	975	975
R-squared	0.278	0.111	0.213	0.176	0.353	0.355

Robust standard errors clustered at the club level in parentheses. Dependent variable in billions of euros. Com. corresponds to commercial revenues; Merchand. to merchandising revenues; UEFA pr.mo. to UEFA prize money.

On the expenditure side, **Table 11** reveal a generalized significant increase in the relevant expenses associated with Employees, Players wages, Operating costs and Transfers, for both targeted and non-targeted clubs. However, the rise in expenses is larger for targeted than non-targeted clubs.

Table 11. Expenditure (UEFA dataset)

Exp. item	(1) BE	(2) Employees	(3) Player wages	(4) Operating Costs	(5) Transfers
post	0.0203***	0.0116***	0.00456**	0.00475***	0.00777***
	(0.00384)	(0.00256)	(0.00220)	(0.00115)	(0.00212)
target	0.138***	0.0864***	0.0316***	0.0440***	0.0343***
	(0.0195)	(0.0132)	(0.00720)	(0.00725)	(0.00825)
Post x Target	0.0438***	0.0322**	0.0255**	0.00862*	0.0185**
	(0.0152)	(0.0129)	(0.00998)	(0.00510)	(0.00768)
Observations	975	975	783	975	864
R-squared	0.462	0.403	0.296	0.400	0.272

Robust standard errors clustered at the club level in parentheses. Dependent variable in billions of euros. BE corresponds to break-even expenditures as computed by the UEFA; Merchand corresponds to merchandising revenues.

Turning from break even to financial stability, **Table 12** shows that the introduction of the FFPR has no significant impact on the debt to cash flow ratio (column 1), nor on its determinants (columns 2 and 3). Only the *Target* coefficients with reference to net debts and cash flow are positive and significant suggesting that the clubs in the target group generate more cash but are also more indebted.

Table 12. Financial Sustainability I (UEFA dataset)

	(1) DCF	(2) (Net) Debts	(3) Cash Flow
Post	87.87	-0.00350	1,213
	(77.55)	(0.00528)	(922.5)
Target	-856.3	0.108***	4,679*
	(896.2)	(0.0347)	(2,505)
Post x Target	847.7	-0.0300	1,710
	(898.6)	(0.0321)	(3,346)
Observations	923	968	928
R-squared	0.008	0.153	0.018

Robust standard errors clustered at the club level in parentheses.

Table 13 completes the analysis and does not show any significant result of the FFPR with reference to two additional measures of financial sustainability, i.e. the interest cover ratio and the gearing ratio. The fact that point estimates are not significantly different from zero may suggest that, even though some clubs increased their stability, the reaction of all targeted clubs is too noisy and too erratic to be precisely estimated.

Table 13. Financial Sustainability II (UEFA dataset)

	(1) Interest Cover	(2) Gearing Ratio
Post	391.7	-1.024
	(306.4)	(0.798)
Target	-54.04	-1.265
	(34.04)	(0.768)
Post x target	-64.38	0.900
	(406.5)	(0.845)
Observations	939	975
R-squared	0.003	0.005

Robust standard errors clustered at the club level in parentheses.

To sum up, the analysis of the UEFA dataset confirms our findings for the Amadeus dataset: after the introduction of the FFPR there has been an improvement in the financial performance of the European football clubs consistent with the real effects of the BER. For all clubs this is mainly due to higher sponsor and commercial revenue, TV rights, transfers and merchandising, and to a lesser extent to Gate receipts. However, for targeted clubs the most important margins are Sponsor and in particular Main sponsor, Transfers, UEFA matches and UEFA prize money. However, this improvement related to the BER has not yet been translated into better overall financial sustainability of the European football industry.

5. Conclusion

We have provided the first detailed quantitative assessment of the effects of the Financial Fair Play Regulation (FFPR) introduced by the Union of European Football Associations (UEFA) on the income statements and balance sheets of European football clubs. While other studies existed documenting the financial challenges of the European football industry, to the best of our knowledge none had yet analyzed the implications of the FFPR.

Our analysis has relied on two sources of information, one we assembled using information from Amadeus (Bureau van Dijk) and the other collected by the UEFA for the specific purpose of implementing the FFPR. Drawing on Amadeus data and outputs the UEFA obtained by applying our analyses to their own data, we have consistently found that the introduction of the FFPR has been followed by a significant improvement in the clubs' income statements, which is consistent with the new accounting rules having 'real effects' on the clubs' management. However, this positive development has yet to be paralleled also in the club's balance sheets (notably in terms of debt) and cash flow statements, which may call for the FFPR to be further extended in that direction.

Taking a step back, some scholars have argued that the fact that football clubs are characterized by highly engaged stakeholders, inherent interdependences and activities at the intersection of the economic, social and political contexts, may impair traditional forms of disclosure based uniquely on conventional financial performance measures. This interesting issue should be matter for future research.

Also worth further investigation is the impact of the FFPR on competitive balance. While this goes beyond the scope of the present analysis, some preliminary results of ours do not reveal any significant change in various measures of competitive balance after the introduction of the FFPR. In particular, we made preliminary tests on national leagues as well as the Champions League. For national leagues we computed, year by year, the standard deviation of points and average winning odds for: all clubs, a simulated league including only our targeted clubs, and a simulated league including only our non-targeted clubs. For the Champions League we computed for three periods (two before and one after the introduction of the FFPR) the probability of participating to the quarter finals for our five leagues clubs and the other leagues as well as for each period the standard deviation of this probability across clubs.

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