Football players and asset manipulation: the management of football transfers in Italian Serie A

ABSTRACT

Research question:

We consider player trading as one of the distinctive features of football clubs' business models and how these models have been influenced since the implementation of Financial Fair Play (FFP). Considering the Italian financial and economic context in the football sector, we investigate whether Serie A football clubs adopt earnings manipulation as a result of trading players' economic rights.

Research methods:

The empirical analysis includes the football clubs competing in the Italian Serie A from 2005 to 2018. Using an unbalanced panel dataset composed of 275 club-year observations (38 different clubs), our estimations are run by using fixed effects OLS models. Clubs' net capital income from sales of football players is used as a proxy of earning manipulation. We control for clubs' football performance, size and reputation.

Results: and Findings:

By applying Bartov's model based on asset sales, our results confirm the adoption of asset manipulation behaviours in the football industry, wherein players' economic rights sales are a preponderant financial item affecting economic performance. Specifically, net income from trading players is significant and positively linked with Serie A clubs' profitability, while leverage is significant after the introduction of FFP and especially for the most prominent Serie A clubs.

Implications:

Our results confirm that Italian Serie A has been chronically dependent on player trading to maintain their financial sustainability. UEFA's regulations could be assessed and modified to enable them to prevent and reveal the real activities and dynamics behind the player transfer market (profit smoothing behaviours).

KEYWORDS:

Serie Afinancial fair playplayer tradingasset manipulationnet income

Introduction

Over the last few decades, elite professional football has become a global industry playing a key role in the entertainment industry (Kennedy & Kennedy, 2012). Professional clubs generate revenues from three main activities: i) match day revenues from ticket sales, food, merchandising and hospitality; ii) commercial revenues from advertising and sponsoring partnerships; iii) broadcasting revenues from the sale of media rights (Deloitte, 2019). Apart from being profit or utility maximisers (Garcia-del-Barrio & Szymanski, 2009; Kesenne, 2006; Sloane, 1971), and from their governance structure (Franck, 2010), football clubs are expected to balance financial and sporting performance (Ferri et al., 2017; Ghio et al., 2019; Rossi et al., 2013). Beside these main activities, a relevant financial impact is also generated by the players' contract length management (Buraimo et al., 2015), developing football talent within the academies (Amir & Livne, 2005; Baroncelli & Lago, 2006), and trading players' economic rights. Specifically, players are high profile assets that represent a crucial part of the clubs' worth and of their accounting figures (Binder & Findlay, 2012). According to UEFA (2018), from 2009 to 2018 both transfer spending and net transfer earnings on players in European football registered increasing trends, from €2.996 to €8.017 billion and from €2.542 to €6.037 billion, respectively. Nevertheless, despite increasingly generating revenues from multiple streams, professional football clubs are mostly renowned for their financial instability and poor solvency by having cumulated debts and losses over the last two decades (Morrow, 2014; Wilson et al., 2013).

From 2007 to 2011, revenues across European football clubs increased at an average rate of 5.6%, but expenditure simultaneously grew at a faster rate of 9.1%; the combined employee and net transfer costs to revenue ratio increased from 62% to 71% (Franck, 2018). Consequently, most football clubs were loss-making and their unsustainable debts were increasing the occurrences of insolvency (Deloitte, 2014; Gammelsæter, 2010; Robinson & Simmons, 2014). As Franck (2018) explains, football leagues generate a certain form of economic competition, often called an 'arms race', which can lead football clubs to overinvest in order to attempt to be successful on the pitch. Due to the extreme financial conditions, he conceived the term 'zombie race', as several clubs were technically bankrupt. To confirm, in 2011 cumulative net losses and the net losses margin as percentage of revenues of the European top clubs were around €1.7 billion and 12.8%, respectively. Moreover, this extreme financial situation was exacerbated by the condition of soft budget constraints (SBCs), in which football clubs rationally expect to be supported financially by their owners and/or other types of organisations sooner or later in order to save them from their financial distress (Storm & Nielsen, 2012). In other words, SBCs were distorting football clubs' decisions, moving them to potential bankruptcy due to their insolvency situation (Andreff, 2007).

Against this background, in 2010, the European football governing body – the Union of European Football Associations (UEFA) – issued its Financial Fair Play Regulation (FFP) to further monitor the clubs' financial positions and performances on the basis of the accounting information reported, requiring them to 'balance their books' or 'break even' (Morrow, 2013; UEFA, 2012). Moving from a condition of SBCs to one of hard budget constraints (HBCs), FFP aims to mitigate the effects of extreme financial decision-making due to the competitive pressure on the pitch. Due to this, clubs might face a lower systemic risk of bankruptcy as they become more financially sustainable and minimise the negative externalities by being more solvent toward their creditors within and outside the football industry. FFP was welcomed as an opportunity to change the business model of clubs, by adopting a more sustainable business approach (Deloitte, 2014). Albeit with differences among countries (Ahtiainen & Jarva, 2020), since the implementation of FFP in 2012, European football has experienced robust financial improvement far from the abovementioned financial distress. In 2017, overdue payables were 90% lower than in 2011, while clubs in the top divisions have been registering operating profits since 2013, though FFP does not force football clubs to make a profit (Franck, 2018). Although it is a stimulus for good practices and behaviours, FFP cannot prevent decision makers from taking bad decisions in terms of frauds and manipulations, as the incentive to circumvent regulation persists (LaFond & You, 2010). This risk is even stronger in the football industry due to the historical poor governance structure of football clubs (Dimitropoulos et al., 2016; Scafarto & Dimitropoulos, 2018). Among the top European football leagues, the Italian Serie A represents an interesting case, as it has been historically linked to financial instability and mismanagement decisions by recording high losses and huge debts in operational terms with several scandals along the way (Deloitte, 2014, 2018; Hamil et al., 2010). Serie A clubs' financial performance has been highly affected by its football clubs' inability to diversify their revenue sources to turn around their finances, boosting match-day revenues and commercial revenues (FIGC et al., 2011, 2020; Regogliosi, 2016). Apart from broadcasting revenues, part of clubs' income comes from the trading of players' economic rights (22% in season 2017-18). In the 2018–19 season, this budget item represented an extraordinary component of income and amounted to a quarter of total Serie A revenue (FIGC et al., 2020). Between 2013–14 and 2017-18, Serie A clubs accumulated €2.557 billion in capital gains from such trading (FIGC et al., 2019). In the five-year period examined, only the Premier League recorded a similar level of capital gains (€2.686 billion) but its turnover was triple that of Serie A, followed by the Bundesliga (€2.161 billion) and La Liga (€1.815 billion) (Deloitte, 2014, 2020).

Accordingly, our analysis is based on Italian football league Serie A from 2005 to 2018. In this paper, we look at the asset sales behaviours and rationales of football clubs, because, like other firms, they have to generate revenues to achieve their aims and to face any liabilities and possible failures and, according to the specific characteristic of their business, most of their revenue is boosted by the sales.

Specifically, we consider the trading of players' economic rights as one of the distinctive features of football clubs' business models (Morrow, 2013, 2014) and how these models have been influenced since the implementation of FFP. Considering the Italian financial and economic context in the football sector, we investigate whether Serie A football clubs adopt earnings manipulation as a result of the trading of players' economic rights. Earnings management is often studied by taking discretionary accrual into consideration – the reference model being Modified Jones (Jones, 1991) – but it has been subject to several criticisms since it is not able to capture particular typologies of earnings management (Guay et al., 1996). Taking into consideration these aspects, we use Bartov's (1993) model to measure football clubs' earnings management in the specific context of the income derived from their sale of fixed assets, i.e. players' economic rights. Although not completely discretionary, the income generated by the sale of these assets contains a discretionary component: a club's management can exercise discretion in relation to the timing of its asset sales and, in some cases, even with regard to which specific assets to sell taking into account any difference between historical cost and market value (Brown, 1999). The accounting and reporting practices enacted in relation to fixed assets in the football industry are among football clubs' main earnings management concerns. Fixed assets are valued at historical cost less accumulated depreciation. The difference between historical cost and market value is persistent until a fixed asset is sold, even when market value is below cost, as fixed-asset impairments are not recognised in the football sector – except for those listed clubs (only three) that adopt IAS/IFRS (Amir & Livne, 2005). As the market value of individual fixed assets changes, an unrecorded holding gain or loss is created; thus, by selecting and timing the specific assets to be sold, management can influence the capital income recognised for the period in which the asset was sold. When current accounting performance is below expectations, management has an incentive to recognise holding gains in the current period and save holding losses for recognition in future periods. In our paper, we contribute to the field of the application of asset sales by using the gains from the sale of players' economic rights as a proxy for earnings management in the football industry. While previous works have generally used the Jones model or Modified Jones models (i.e. Dimitropoulos et al., 2016) this paper, according to our knowledge, is the first that has used the Bartov model. Additionally, our empirical results corroborate the hypothesis that, in the Italian professional football environment, the adoption of those management practices, which can erode accounting quality, have been fostered since the implementation of FFP.

The remainder of the paper is organised as follows. The next section describes the economic and financial context of the Italian Serie A. Then, we introduce the chosen theoretical perspective in earnings management and state the related research hypotheses. Subsequently, we present the dataset and specify the adopted empirical model. Finally, we comment on the empirical results in line with the tested research hypotheses by providing plausible explanations according to the

theoretical reference framework. To conclude, we highlight the contribution of this paper and propose some considerations for further research.

Research context

From being the best football league in the world, Italian Serie A has been losing national and international appeal since the 2006 Calciopoli scandal (Boeri & Severgnini, 2012). Accordingly, since 2000, at least 15 football clubs that competed in at least one Serie A season over this period have declared bankruptcy and been involved in several scandals, such as administrative doping, balance sheet manipulation, factious capital gains or do-it-yourself profits (Mandis, 2018). Fewer and less renowned star players are playing in Serie A, and its football clubs cannot compete in the international transfer market by easily poaching players from rival top foreign teams, as was the norm until two decades ago.

With respect to the Italian macro-economic scenario, in the last five years the aggregated value of production of the Italian football industry has grown more than the Italian GDP, reaching its highest peak in the last decade, from €2.31 billion in 2007 to €3.35 billion in 2016 (FIGC et al., 2017). In the 2017–18 season, the aggregated value of production increased by 6%, and the net result was positive (€0.6 billion) after several years of overall losses. This operational performance led to an EBITDA[1] of €780 million, supported by the profits made on player disposals – mostly attributable to major club transfers – which increased by 7.4%, from €719 million to €777 million. The growth of player disposal profit has offset the negative net result; it can be considered a direct consequence of the more cautious policies adopted by clubs and of growing inflation in line with the trend of the international player transfer market. In line with the macro-economic scenario, the alarming level of debt of Italian football has not recently improved, as it exceeded the €4 billion threshold for the second time with a value of €4.2 billion in 2016 (FIGC et al., 2019). The overall cost of production grew by 7.1%, from €3.3 billion to €3.5 billion. The labour cost of Italian professional football also increased at a faster pace than that of the national labour market. Specifically, the level of employee cost on revenue was 61%. The financial condition of Italian football is worse than the numbers support. The chronic losses recorded over the last few accounting years are not completely truthful as the net profits are inflated by capital gains of the player transfer market. Equity value is equal to €7.7 billion, the highest recorded in the previous five-year period. The weight of debts on revenues has decreased from 51% to 34%, but the equity ratio presents a value of 24% and so our analysis highlights that Italian football is still undercapitalised (FIGC et al., 2019). However, this is considered an improvement, as the same ratio had oscillated between 2% and 5% over the past few years. In other countries such as Germany, Spain, and England, this ratio is, respectively, 40%, 25%, and 36%. In other words, if we look at its direct competitors, Italian football is not as sustainable as it should be, and the entire industry is poorly capitalised.

As reported by Melis (2010), the Italian football industry has been kept afloat financially by the pervasive use of creative accounting practices, incentivised by their financial conditions and the financial covenants to be licensed to compete in Serie A. The first practice, known as creative gains, involved the trading of two players' economic rights between two clubs. AC Milan and Internazionale FC, for instance, used to sell each other two players' economic rights at the same inflated prices, so that each club could match the debt with the credit with no cash payments involved. This legal trading activity usually involved two young home-grown players whose historical costs were irrelevant or null in order to maximise the capital gains that clubs could record in their respective balance sheets. Another practice allowed understating the reported losses. In 2003, the Italian government issued the so-called Save Football Law that lengthened the period over which a club could amortise the transfer costs to 10 years maximum (Morrow, 2006). More precisely, clubs could create a new intangible asset, the Save Football asset, which included all the players' contracts that had not been fully amortised. Then, for each included asset, clubs could amortise the difference between the unamortised cost prior to the written down and the realisable amortised cost over an arbitrary period of 10 years instead of over the period of the original contract duration. In doing so, 15 Serie A football clubs reduced their cost charge to the profit and loss accounts. The last practice concerns the sale of a football club's brand by the club itself to a controlled company, whose accounts are not consolidated in the club's financial statements (otherwise, the effect of the transaction would have been zero). By selling it at a current market value, this transaction would inflate the reported income, as the value of the brand is often recorded very low (or even zero). This capital gain is recorded in the club's profit or loss statement, as some Serie A football clubs did. For example, in September 2005, AC Milan sold and leased back its brand through a related company, Milan Entertainment Srl, owned by the same shareholders. This sale recorded a capital gain of €181.7 million in favour of AC Milan. The creativity of this transaction lies in the legality of its financial form, but its substance is fictitious as the use and ownership of the brand is controlled and maintained by the club.

Despite the acknowledgement that the use of these practices has been questioned and debated, the practice of financial manipulation remains (Schubert & Hamil, 2018). In June 2018, the so-called buy-back right clause was incorporated into article 102 of the NOIF[2], the domestic organisational rules of the FIGC, the Italian Football Association (Toffoletto De Luca & Partners, 2018). By including this option in a transfer agreement, a football club has the right to buy back a transferred player's economic rights definitively. In the case of promising players who do not play regularly for the club, it allows them to be transferred to other clubs where they can play and, hence, are valued to be repurchased later at a fixed price by their previous clubs. Italian football clubs immediately saw the opportunity this clause provided to record artificial and inflated capital gains with their young player trading strategies. In order to prevent the exploitation of this practice for financial aims, the FIGC reformed this clause to minimise the so-called

accounting doping (Porzio & Murgia, 2019). However, the need of recording capital gains has become more systemic than ever within Italian football, as a tool to conceal financial crises. This provides the motive for the research approach and questions of this paper as the following literature review and research hypotheses further highlight.

Literature review and hypotheses development

Player sales and earnings management

The quality of annual reports plays an important role in ensuring the efficiency of the stakeholders' economic decision process. Reliable reports mitigate information asymmetry and adverse selection in the capital markets (Leuz & Wysocki, 2016), increase market liquidity (Lang & Maffett, 2011; Verrecchia, 2001), and decrease the cost of capital (Lang et al., 2012; Shroff et al., 2013). Financial reporting transparency also influences the real economy, in terms of managers' behaviour regarding investments and proper use of resources directly involving the corporate decision-making process (Leuz & Wysocki, 2016). High quality reports can decrease possible inconsistencies of managerial decisions (Lambert et al., 2007), increase the efficiency of investments (Bens & Monahan, 2004; Biddle et al., 2009; Cheng et al., 2013) and provide better economic outcomes overall. On these premises, a growing literature investigates the transparency of accounting information from different standpoints such as earnings persistence, predictability of future performance, earnings variability and the relation between cash, accruals and income (Cohen et al., 2008; Roychowdury, 2006). Most of this research stresses the role of earnings manipulation as a possible proxy of low quality of financial reporting (Dechow et al., 2010). Earnings management is a technique by which company decision-makers present earnings figures in financial statements through managerial judgements based on justification, speculation and, even, deception. They generally carry it out to achieve some individual gains by meeting organisational goals, with the intent of manifesting accountability towards the organisation and its stakeholders (Dechow et al., 1995; Dechow & Skinner, 2000).

In our research, the main idea is that the asset sales of players' economic rights appear to capture the earnings manipulation behaviour in the football industry. From an economic perspective, these rights can be differentiated from other assets that yield financial returns. Football players bring future economic benefits to the clubs, depending on their performance and skills; indeed, their economic rights are an intangible resource, controlled by the clubs by signing their contracts and the inner economic value of which is expected to increase through their performance (Morrow, 2006). Moreover, the football transfer strategy of trading players' economic rights is another element that supports the application of real activity management as a model for earnings management. The consideration of asset sales and earnings management, in fact, implies decisions pertaining to the actual occurrence and timing of real transactions in order to achieve a specific desirable

level of reported earnings – as opposed to the use of more observable techniques such as changing accounting methods or applying a classificatory choice. Wolk et al. (1989) argued that the timing of transactions is the most direct and influential method of manipulating accounting income. Football club managers generally have some discretion over the sale of their players' economic rights; typically, they exercise some degree of control over which players are to be sold and the timing of those sales. Even in those cases in which the decisions on whether to sell players are predetermined for previous conditions, the ongoing selling process provides the possibility of slowing down or speeding up the real variable transactions, depending on the earnings management objective (Cohen et al., 2008; Jones, 1991). The level of discretion varies according to different elements, such as the financial situation, the strategic investment plan and the degree of managerial control over firm ownership. Thus, due to the prevalence of selling players' economic rights and considering the previous arguments, their timing could provide a more efficient earnings management technique compared to alternatives such as changing accounting methods or early debt retirement, if only because of the requirement to disclose the effects of these techniques in financial statements.

By studying earnings manipulation, Bartov (1993) finds that highly geared (aggressive borrowing) and low-income firms report higher revenues from asset sales. He verified two common motivations for a connection between asset sales and earnings management on a sample of 653 U.S. firm-years: the income-smoothing and the debt-equity hypothesis. Moreover, Barth et al. (1999) provided evidence that the capital market rewards firms for long streams of increasing earnings. A further explanation for the timing of asset sales found by Bartov (1993) was the level of debt relative to equity. He found that U.S. firms are more likely to sell assets for a gain when their debt-to-equity ratios increase. Highly leveraged companies may be at risk of bankruptcy or be unable to find new lenders in the future if they are unable to make payments on their external debt financing. There seems to be a positive/negative association between earnings management and leveraged firms. A positive association can be justified as follows: if a firm is highly leveraged, managers must meet the expectations of investors/lenders and consequently engage in income-increasing accruals. According to Billings (1999) and Tendeloo and Vanstraelen (2005), firms with high leverage ratios engage more in upward earnings management because they want to avoid debt covenant violations. On the other hand, leverage seems to increase the control of opportunistic behaviour of managers, as leveraged firms use huge amounts of free cash flow in order to repay their loans. As a result, managers are left with less free cash flow and they do not invest in value-decreasing projects due to the lack of free cash. This leads managers to depend upon earnings management to hide their poor performance. The Bartov model is well suited to the football industry and is applied to our research object to test the relationships between income from selling players' economic rights, which constitute the main assets of football clubs, and other economic and financial factors. We state the two respective hypotheses, for

the Italian football clubs, in order to validate the application of the Bartov model to our research context:

Hp1. There is a positive correlation between income from player sales and profitability.

Hp2. There is a positive correlation between income from player sales and debt equity.

Earnings manipulation and FFP

FFP has increased the amount of financial information and scrutiny of football clubs to control their operations. Furthermore, in Italy, through the years FIGC has introduced some financial ratios (including liquidity, solvency and cost of labour) in order to monitor the control of the financial and economic equilibrium of football clubs and also to make internal regulation more in line with the rules established by UEFA (SBM, 2015). This new environment might have incentivised clubs to increase the level of their managerial practices. To investigate the impact of FFP upon management practices related to accounting quality, Dimitropoulos et al. (2016) selected a sample of 109 European football clubs over the 2008–2014 period. By considering all the main accruals manipulation, in line with the main accounting literature, and using different measures of accounting quality, the authors found that the implementation of FFP might have been accompanied by management practices, which could erode accounting quality. Football clubs have pointed to an increase in earnings management in the industry, which decreased conditional conservatism and produced a switch to non-big-four audit firms. In a similar research context, Dimitropoulos and Koronios (2018) utilised a large sample of 109 football clubs that participated in UEFA competitions from 2008 to 2016 in order to examine their earnings predictability and persistence, and whether the implementation of FFP has pushed these clubs to generate more predicable revenue streams. Their empirical evidence suggests that cash flow, as an earnings component, better predicts one-year-ahead earnings than accruals do and that this impact is stronger after the introduction of FFP. Moreover, the impact of this empirical evidence is stronger for football clubs from smaller leagues than for those from the big five leagues, as their revenues generated from UEFA competitions are more crucial for their financial stability and sustainability. Finally, Dimitropoulos and Scafarto (2021) considered the impact of FFP on the relationship between the capital gains generated from player trading and the financial performance of 15 Italian Serie A clubs from 2007 to 2017. The authors suggested that these 15 clubs might have switched to a more efficient and sustainable business model, in which financial performance and the capital gains from player trading are positively correlated, and this relationship has become even stronger since the introduction of FFP. Interestingly, in line with Dimitropoulos et al. (2016), the authors suggested that further research should control for the possibility that football clubs might adopt earning management practices, such as

earnings manipulation, to respect the provisions of the regulatory bodies. Most football clubs have tried to trigger sustainable and virtuous cycles, both in financial and sporting terms, in which player trading plays a central part in the business model (Baroncelli & Lago, 2006). The provisions of FFP have pushed clubs to adopt transfer market strategies that balance players' expensive signings with other players' disposals and save on relevant expenses such as players' wages and their transfer amortisation (Mourao, 2016). As highlighted by Dimitropoulos and Scafarto (2021), this strategy has increased the level of relevant income in terms of capital gains on player disposals and this effect is stronger for clubs from leagues such as the Italian Serie A, whose player trading income has a greater impact than any other type of revenues source. Consequently, clubs are more likely to further adopt earnings manipulation behaviour in order to respect the FFP parameters. These competing arguments lead to the following hypothesis:

Hp3. Earnings manipulation is more significant since the implementation of FFP.

As explained by Franck (2018), the introduction of FFP has been argued to have further polarised the gap between smaller and bigger clubs competing in UEFA competitions. From a financial perspective, bigger clubs have become more dominant in terms of revenue generation as their payrolls are largely financed by their own means and their ability to generate extra income in line with the break-even requirement (Sass, 2016). Similarly, this increasing polarisation has also been evident within the national leagues, whose more established clubs must respect FFP provisions since their participation in UEFA competitions provides additional revenues that are fundamental to maintaining their financial sustainability and their sporting competitiveness (Mourao, 2016). As Dimitropoulos and Koronios (2018) argue, clubs' dimensions affect the adoption of earnings management practices because of the implementation of regulatory changes. Accordingly, we argue that more prominent clubs, those with more appearances in Serie A, are more likely to increase their earnings manipulation than less prominent clubs. Based on this discussion, the fourth and final hypothesis states that:

Hp4. There is a significant difference in earnings manipulation between less prominent clubs and more prominent clubs since the implementation of FFP.

Research methodology

Sample selection and variables

The empirical analysis includes football clubs competing in the Italian Serie A from 2005 to 2018. The financial information for each club was primarily collected from the annual reports retrieved from the Amadeus-Bureau van Dijk database, from the investor relation section of football companies (if any) or from other sources (i.e. websites specialised in the industry). Four annual reports were not available and one annual report is not consistent due to a change of fiscal year

closing month. Therefore, the final sample consists of an unbalanced panel dataset composed of 275 observations distributed in 38 cross sections (teams - i) for fourteen periods (years – t).

As Table 1 shows, we have two sets of variables. The first includes the financial variables provided by the database and/or through a content analysis conducted on the annual reports. A proper calculus was developed in order to evaluate the size of the variables introduced in the models to estimate. The dependent variable PLUS_NET is capital income (gains minus losses that are included, respectively, under items A5 and B14 of the Income Statement of Italian football clubs' annual reports) from player transfers weighted by the invested capital (total assets) at time t-1. From a theoretical perspective, this approach reflects the idea that managers' earnings manipulation strategy often occurs at a later point, when financial situations and results have been clarified at the end of the previous fiscal year. The first independent variable is the adjusted Return on Investment (ROI), calculated as Earnings Before Interest and Taxes at time t divided by the invested capital (total assets) at time t-1 ($EBIT_t$ / Total $Assets_{t-1}$), that measures the effectiveness of a firm's investments. Instead of change in ROI or EPS (earnings per share), we use adjusted ROI as Italian football clubs frequently close fiscal years with losses or erratic results. The second independent variable, DETEQ, summarises the financial position of a club and is calculated as (Financial $Debts_{t-1}$ / $Equity_{t-1}$). A company's financial debt to equity shows the degree to which a company is financing its operations through debt versus wholly-owned funds, and it is an indicator of financial leverage, or a measure of solvency. The third independent variable, AMM, measures the influence of player labour costs on total costs in the year under observation calculated as (Amortisation of players' multi-year economic $rights_t$ + players labour $costs_t$) / (Total $Costs_t$). Finally, following Dimitropoulos et al. (2016), we also control for the growth of each football club (GR), measured as the percentage change in operating revenue (we refer here to item A1 of the Income Statement of Italian football clubs' annual reports) and we used PROFIT, which is a dummy receiving (1) if a football club obtains a profit at the end of the year and (0) otherwise.

Table 1. Summary of variable definitions and measures.

The second set includes the control variables. The first control variable, RANK,

proxies seasonal performance and team success and it is calculated as:
$RANK_{i,t} = -log[\frac{P_{i,t}}{N_t + 1 - P_{i,t}}]$,

where $P_{i,t}$ is the position of team i in the season t, and N_t is the number of competing teams. As suggested by Szymanski and Smith (1997) and Szymanski (2004), RANK, instead of position, emphasises the gap between teams positioned at the top or bottom of the final standings with respect to the same gap

between teams positioned in the middle. Higher values of *RANK* imply better performance. In our model, we control for the seasonal performance influence on managers' behaviour and accounting relationships, as suggested by Carlsson-Wall et al. (2016). Another control variable, ARISTOCRACY, measures the number of Serie A seasons played by the clubs as it recognises their tradition in terms performance (Di Betta & Amenta, 2010), and consequently potential revenues. In addition, we include POPULATION, the number of inhabitants of the city hosting the club retrieved from the online database of the Italian Institute of Statistics (ISTAT, 2020). This variable is a proxy for potential revenue differences among teams (Caruso et al., 2019). Finally, we include among the controls a dummy, FAMILY_CEO, identifying clubs whose CEO is the owner himself or a component of the controlling family (Scafarto & Dimitropoulos, 2018). Therefore, we test for the robustness of the accounting relationships once those variables are introduced.

Model specification

To test player disposal and linkages with earnings manipulation, we relied on the model developed by Bartov (1993), which we adapted to the football industry. The model aims at investigating the potential association between a club's financial performance/structure and earnings manipulation by way of its player market strategy. As indicated previously, we tested the hypothesis that clubs possibly manipulate earnings, and then financial results, through the disposal of their main assets, the players' economic rights; this is done so that capital gains (or losses) resulting from the disposal of players could be associated with profitability, with debt position, and with cost structure other than field sport achievements and

controls. We then estimate the following equation:
$$PLUS\_NET_{i,t} = \alpha + \beta_i Financial_{i,t} + \beta_j Controls_{i,t} + \beta_k FFP_{i,t} + \mu_i + e_{i,t}$$

where *PLUS_NET* is the main independent variable, α is the constant, β_i is the coefficients associated with the financial variables, β_j is the coefficients associated with controls, β_k is the coefficient measuring the effect of FFP, μ_i is the cross section team-specific time-invariant term, and $e_{i,t}$ is the error term. The empirical strategy follows the results of specification tests (Davidon & MacKinnon, 1993; Davidson & MacKinnon, 1989; Hausman, 1978). Firstly, the null hypothesis of zero variances among units is tested by using the two-sided Breusch and Pagan (1980) Lagrange Multiplier (LM), and one-side Honda (1985) tests. Our hypothesis about the presence of panel effects is confirmed, but only at cross sectional level. The hypothesis of time fixed effects is strongly rejected. Subsequently, we test the null hypothesis that random effect must be preferred to the fixed effect models, which

is whether the unique errors μi are correlated with regressors. As shown in Table 2, the null hypothesis is rejected by the Hausman test, suggesting the selection of fixed effect models, as confirmed later by the regression analyses.

Table 2. Model specification tests.

Once the empirical strategy was established, we first estimated the model (1) by introducing the financial variables, and then we added the control variables to test for the robustness of the models when both sets of variables are included. Once the model selected the control/s to introduce, we test for the effect of FFP and possible interaction among relevant variables and FFP to test for the robustness of our hypotheses.

Findings and discussion

Descriptive statistics

Table 3 presents the descriptive statistics for all variables included in the analysis. PLUS_NET presents a mean of 0.145, a value that is close to median and not so far from the minimum, meaning that many football clubs show a slightly positive net capital income in relation to the amount of their assets. The mean of ROI is −0.015 and its range is quite evident (respectively 0.809 and −1.776). This is probably due to the fact that (few) clubs have, at the end of each fiscal period, a positive operating profit, while (many) others show an operating loss that in some cases is even quite significant. DETEQ highlights a mean of 6.24, showing a consistent and significant predominance of financial debt as the main form of financing for football clubs. The data are quite erratic, moving from a maximum of 920.32 for clubs highlighting a high and important leverage situation and low capitalised clubs, to a minimum of −30.6 (there are few clubs that present negative equity due to a paradoxical situation with losses higher than capital).

Table 3. Descriptive statistics.

If we divide the sample into two sub samples considering the periods PRE and POST FFP adoption, we notice some interesting changes across the two periods. First, the PLUS_NET variable increases intensively, on average, from 0.128–0.162, and the median doubles, moving from 0.07–0.14. Together with the reduction in the minimum (in absolute value) and in the standard deviation, and the increase in the maximum, the statistics on PLUS_NET validate the Hp3 for which earnings manipulation was implemented after the introduction of FFP. Moreover, while the mean of ROI is slightly positive in the PRE period (0.004) it moves to a negative result in the POST period (−0.028). DETEQ also shows significant differences, moving from a mean of 1.253 to a mean of 11.227, respectively, in the PRE and POST periods. These variables indicate that, despite the FFP

implementation, clubs' profitability slightly declines, and their chronic debt situation results in a significant and increasing value of DETEQ. Regarding the controls, no sizable differences emerge from the comparison of the two sub periods. RANK is constant by construction, while ARISTOCRACY, as expected, increases on average, since it is associated with time. POPULATION increases on average, as does its standard deviation, suggesting a turnover in favour of teams located in bigger areas, and FAMILY_CEO decreases, indicating an increase in the separation between ownership and management of clubs after the FFP.

Table 4 provides the variance-covariance relationship. It is interesting to note that the dependent variable, PLUS_NET, shows a positive relationship with ROI (0.013) but a negative one with most of the other financial variables (−0.026 DETEQ, −0.001 AMM, −0.003 GR). The dependent variable has a negative relationship with all control variables (RANK, ARISTOCRACY and POPULATION). ROI has a similar pathway, highlighting a negative relationship with all other financial variables (except PROFIT) and all control variables. In general, all financial variables provide a negative relationship with RANK except for AMM. The control variables instead show a positive relationship between each other.

Table 4. Variance-Covariance matrix.

Regression results

Table 5 shows the results of our estimations of three models. The first one includes only the accounting variables, the second one contains the control variables and the third one controls for the interaction of FFP. Given the high correlation between three control variables (POPULATION, RANK and ARISTOCRACY), we decided to include in our models only ARISTOCRACY because it is the most significant one of all the models following various controls. First, we note that in all models the coefficient associated with ROI is positive and statistically significant. This result suggests that the disposal of players' economic rights, the main assets held by most Italian clubs, is a key tool for clubs to improve their economic performance. Table 5 supports Hp1, suggesting that capital income from football player transfer is interrelated with football clubs' profitability.

Table 5. Panel least squares.

The coefficients associated with DETEQ show a negative sign and are statistically significant, although the absolute values are close to zero. This result does not support Hp2 in relation to the Bartov model, so the positive relationship between the income from player sales and debt-equity is rejected. Nevertheless, when DETEQ interacts with FFP, the related coefficient turns into a positive sign and is statistically significant, suggesting that both Hp2 and Hp3 are validated with the introduction of FFP. The negative association between the manipulation of

earnings and the financial solvency of the football clubs might indicate that the increase of revenues is countered by a decline in the financial performance and position (Ahtiainen & Jarva, 2020). The growth (GR) is negatively associated and significant and it suggests that clubs which increase and diversify their operating revenues are less likely to have to generate net positive market trading. This finding is in line with the introduction of the liquidity ratio by FIGC in 2015 in order to monitor football clubs' financial liquidity before they trade players in the transfer market (FIGC, 2015). A football club that does not respect the liquidity ratio parameters cannot buy any player during the transfer market window if it sells other players to finance its player trading. The coefficient of FAMILY CEO is not statistically significant, suggesting that the practice of asset manipulation is not influenced by the corporate governance of clubs. In addition, the results show that ARISTOCRACY is positive and statistically significant, supporting the evidence that more prominent Serie A clubs might be more likely to practice earnings manipulation than less prominent clubs. Specifically, this practice has been enhanced since the implementation of FFP, as shown by the positive, but not statistically significant, sign of the interaction of FFP with ARISTOCRACY.

Accordingly, we test for the robustness of our hypotheses by splitting our sample into clubs with ARISTOCRACY values higher and lower than median to consider the relationships among capital gains from player transfers and the accounting variables, dividing between more and less prominent teams. As reported in Table 6, we see that DETEQ has different signs, specifically negative and positive for low and high ARISTOCRACY clubs, respectively, and the t-test confirms the statistically significant difference between the two associated coefficients. Moreover, we see that the magnitude of coefficient associated with FFP increases for the sub sample of more prominent clubs, moving from 0.045–0.062. Both results support Hp2, Hp3 and Hp4 so that there is a positive correlation between capital gains from player trading and debt/equity ratio, and this correlation has become more significant for more prominent clubs since the implementation of FFP.

Table 6. Panel FE Least squares low and high aristocracy.

Even if our results do not show any relevant impact in terms of governance (FAMILY_CEO is generally not statistically significant), we can't exclude that the results highlighted in this work are driven by governance of Italian football clubs. Serie A clubs are generally typified by the dominance of prominent business individuals or families who own and control football clubs, either directly or via corporate holdings, with decisions that can have the main purpose of maximising the owner or family's utility function (Dimitropoulos & Scafarto, 2021; Hamil et al., 2010).

Conclusion

Players' economic rights are the most important asset for a football club as they generally represent the club's competitive capital and the largest portion of its capital assets (Scafarto & Dimitropoulos, 2018). In this study, we investigated asset sales behaviours of football clubs in relation to earnings management theory. We focused on the Italian Serie A and checked its clubs' behaviours from 2005 to 2018, as the financial conditions of Italian football clubs are chronically poor and unstable and only partially saved by the capital gains made through player trading. This aspect is even more important in consideration of the consistent trends - in terms of capital gains amounts, both in absolute values and in percentage – of the value of production and of operating profits of Serie A football clubs.

By applying Bartov's (1993) model based on asset sales, our results confirm that the model can properly evaluate asset manipulation behaviours in the football industry wherein players' economic rights sales are a preponderant financial item affecting economic performance. Specifically, our results show that income from player trading is significant and positively linked with Serie A clubs' profitability, while leverage is significant after the introduction of FFP and especially for the most prominent football clubs in the Italian top league.

Our findings contribute to the research stream that applies real activities management as a model to evaluate earnings manipulation by managers (Cohen et al., 2008; Roychowdury, 2006). By considering the implementation of UEFA's FFP regulations, we highlight how recourse to earnings management might have increased since the introduction of financial constraints. According to our results, UEFA's regulations could be assessed and modified in order to enable them to prevent and reveal the real activities and dynamics behind the player transfer market (profit smoothing behaviours), and to help football clubs continue to play a credible social role. The regulations should enhance innovation in the football industry in terms of infrastructure and other possible revenue sources (e.g. stadiums, tickets, and sponsorships), and create requirements in terms of other aspects of the role played by football clubs in society.

Further research should focus on more than a single league and consider a wider investigation of other non-financial factors in order to highlight any possible patterns driving the income derived from player trading. It should also investigate the dynamics linked to governance and ownership structures in influencing the multiple institutional logics and earnings management behaviours. Finally, it should consider the purchasing/selling process of football clubs in order to try to distinguish between earnings manipulation and the disposal of assets to buy other assets that are more suitable for a firm.

Table 1. Summary of variable definitions and measures.

Definitions and measures

Financial variables

PLUS_NET	Net capital income (gain minus losses) from player sales deflated by (Total Assets)$_{t-1}$
ROI	Return on investment calculated as [(EBIT)$_t$/(Total assets)$_{t-1}$]
DETEQ	Financial position of a club calculated as [(Financial Debts)$_{t-1}$/(Equity)$_{t-1}$]
AMM	Incidence of player labour costs on total costs calculated as [(Amortisation of players' multi-year economic rights + players labour costs)$_t$/(Total costs)$_t$]
GR	Variation of a company sales calculated as [(Operating revenue$_t$ – Operating revenue$_{t-1}$)/ Operating revenue$_{t-1}$]
PROFIT	Dummy variable equal to 1 if the club obtained a profit at the end of the year
FFP	Dummy variable equal to 1 for the periods under FFP regulations

Control variables

RANK	Seasonal performance of each team calculated as {-log [(P$_{i,t}$)/(N$_t$+1-P$_{i,t}$)]}
ARISTOCRACY	Number of Serie A appearances of the team under observation
POPULATION	Number of inhabitants of the province hosting the club
FAMILY_CEO	Dummy variable equal to 1 if the CEO is the owner and/or a component of the controlling family

Table 2. Model specification tests.

Model	Test	Breusch-Pagan LM Cross Sec. FE	Per. FE	Honda Cross Sec. FE	Per. FE	Hausman RE vs. FE
1	Stat	54.778	0.773	7.401	−0.879	15.838
	p-value	0.000	0.379	0.000	0.810	0.007
2	Stat	29.155	0.030	5.399	−0.174	35.390
	p-value	0.000	0.862	0.000	0.569	0.000
3	Stat	29.971	0.641	5.475	−0.801	40.454
	p-value	0.000	0.423	0.000	0.788	0.000

Table 3. Descriptive statistics.

Variables	Full Sample Mean	Median	Max	Min	Std. Dev.	Pre-FFP Mean	Median	Max	Min	Std. Dev.	Post FFP Mean	Median	Max	Min	Std.Dev.
PLUS_NET	0.145	0.109	0.780	−0.101	0.143	0.128	0.078	0.751	−0.108	0.144	0.162	0.143	0.780	−0.063	0.142
ROI	−0.015	−0.009	0.809	−1.776	0.221	0.004	−0.020	0.761	−0.650	0.207	−0.028	−0.005	0.809	−1.776	0.235

Variables	Full Sample					Pre-FFP					Post FFP				
	Mean	Median	Max	Min	Std. Dev.	Mean	Median	Max	Min	Std. Dev.	Mean	Median	Max	Min	Std.Dev.
DETEQ	6.240	0.649	920.32	−30.60	56.38	1.253	0.532	33.419	−30.605	6.025	11.227	0.917	920.32	−25.019	79.332
AMM	0.600	0.597	0.923	0.299	0.112	0.594	0.601	0.867	0.299	0.112	0.606	0.588	0.923	0.306	0.112
GR	0.251	0.027	16.549	−0.886	1.180	0.120	0.014	2.728	−0.886	0.567	0.381	0.061	16.549	−0.673	1.562
PROFIT	0.446	0	1	0	0.498	0.435	0	1	0	0.498	0.456	0	1	0	0.499
RANK	0	0	2.996	−2.996	1.497	0	0	2.996	−2.996	1.500	0	0	2.996	−2.996	1.5
POPULATION	699,034	372,854	2,873,494	40,813	784,997	680,526	365,184	2,761,477	46,188	771,360	717,541	383,505	2,873,494	40,813	801,049 / 797,830
ARISTOCRACY	44.639	47.5	86	1	27.828	40.164	36.5	79	1	26.841	48.541	52.556	86	1	27.856
FAMILY_CEO	0.393	0	1	0	0.489	0.414	0	1	0	0.494	0.371	0	1	0	0.485

Table 4. Variance-Covariance matrix.

	PLUS_NET	ROI	DETEQ	AMM	GR	PROFIT	RANK	ARISTOCRACY	POPULATION	FAMILY_CEO	FFP
PLUS_NET	0.020	0.013	−0.026	−0.001	−0.003	0.021	−0.030	−0.947	$-2.65\mathrm{e}^{+4}$	−0.007	0.006
ROI		0.038	−0.169	−0.003	−0.005	0.056	−0.013	−1.291	$-1.49\mathrm{e}^{+4}$	0.006	−0.006
DETEQ			3,189.151	−0.346	−0.854	−1.734	−3.627	0.976	$-1.16\mathrm{e}^{+6}$	−1.197	2.386
AMM				0.013	−0.007	−0.005	0.058	1.221	$4.28\mathrm{e}^{+4}$	0.002	0.004
GR					1.394	−0.010	−0.239	−4.162	$-8.49\mathrm{e}^{+4}$	0.003	0.046
PROFIT						0.247	−0.007	−2.632	$-1.10\mathrm{e}^{+3}$	0.036	−0.002
RANK							2.159	24.299	$5.70\mathrm{e}^{+5}$	−0.062	0.005
ARISTOCRACY								769.595	$1.43\mathrm{e}^{+7}$	−0.383	2.453
POPULATION									$6.21\mathrm{e}^{+11}$	$6.67\mathrm{e}^{+4}$	$1.38\mathrm{e}^{+4}$

	PLUS_NET	ROI	DETEQ	AMM	GR	PROFIT	RANK	ARISTOCRACY	POPULATION	FAMILY_CEO	FFP
FAMILY_CEO										0.238	−0.012
FFP											0.245

Table 5. Panel least squares.

Dep. Var.: PLUS_NET	1		2		3	
274 obs	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
ROI	0.421***	0.082	0.412***	0.080	0.409***	0.080
DETEQ	$-9.08e^{-5}$***	$1.85e^{-5}$	$-1.54e^{-4}$***	$8.01e^{-5}$	−0.006***	0.003
AMM	0.034	0.102	−0.002	0.075	0.018	0.079
GR	−0.009**	0.005	−0.011**	0.004	−0.010	0.004
PROFIT	0.014	0.019	0.015	0.018	0.014	0.019
FAMILY_CEO			−0.026	0.002	−0.025	0.036
ARISTOCRACY			0.007***	0.002	0.007**	0.004
FFP					−0.037	0.030
FFP*ARISTOCRACY					0.001	0.001
FFP*DETEQ					0.006**	0.002
Constant	YES		YES		YES	
Cross Section FE	YES		YES		YES	
Period FE	NO		NO		NO	
R-squared within	0.321		0.361		0.383	
R-squared between	0.015		0.133		0.140	
F-statistic (Prob)	21.09 (0.000)		14.85 (0.000)		16.81 (0.000)	
X^2 Normality Test (Prob)	15.19 (0.000)		11.43 (0.000)		12.55 (0.000)	

Std. Err. adjusted for 37 clusters in teams. Statistical significance: ***>99% **>95%, *>90%.

Table 6. Panel FE Least squares low and high aristocracy.

	Low Aristocracy		High Aristocracy		Diff.
Dep. Var.: PLUS NET	Coeff.	Std. Err.	Coeff.	Std. Err.	
ROI	0.460***	0.133	0.398***	0.116	0.351
DETEQ	−0.003***	0.001	$2.38e^{-5}$**	$1.02e^{-5}$	8.902***
AMM	−0.231	0.152	0.088	0.076	1.883*
GR	−0.012**	0.004	−0.014	0.015	0.084
PROFIT	0.010	0.032	0.002	0.020	0.023
FAMILY_CEO	−0.077**	0.033	0.006	0.059	1.239

Dep. Var.: PLUS NET	Low Aristocracy		High Aristocracy		Diff.
	Coeff.	Std. Err.	Coeff.	Std. Err.	
FFP	0.045***	0.018	0.062***	0.021	0.687
Constant	YES		YES		
R-squared within	0.380		0.430		
R-squared overall	0.165		0.310		
F Stat	17.54 (0.000)		13.71 (0.000)		
Teams	27		12		
Seasons (min/max)	1/14		1/14		
Obs.	136		138		

Std. Err. adjusted for teams' clusters. Statistical significance: ***>99% **>95%, *>90%. Diff. indicates the t-Student and significance of the difference of coefficients between the sub-groups [Cohen et al. (2003)].

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes

1 Earnings Before Interest, Taxes, Depreciation and Amortisation.

2 Norme Organizzative Interne della FIGC.

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