

## FROM INVESTMENT LOGIC TO ACCOUNTING CONSTRAINTS: A CONCEPTUAL FRAMEWORK AND OPERATIONAL MATRIX FOR RISKS, IMPAIRMENT AND FINANCIAL GOVERNANCE IN SPORT

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**ABSTRACT.** The article examines the accounting reflection of sports investments within multi-entity and multi-sport portfolios, in which the investment logic (value creation through brand, sports performance and media exposure) interacts with the constraints of financial reporting (recognition, valuation, depreciation, depreciation and consolidation). The approach is predominantly theoretically applied, based on conceptual and documentary analysis, without claiming to investigate a singular “particular case”. Methodologically, the study uses the triangulation between (i) the academic literature on financial reporting in sport, with a focus on specific intangibles (rights to athletes), impairment and quality of disclosures; (ii) records from audit practice, through recurring topics in Key Audit Matters (KAM) reported for listed European clubs; and (iii) the compliance frameworks of sports regulators, in particular UEFA’s licensing and

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financial sustainability requirements. On this basis, the paper proposes (a) an investment classification scheme (equity / M&A, intangibles, infrastructure, sponsorship / marketing, technological capabilities and talent development), (b) an IFRS / IAS mapping of the relevant accounting treatments and (c) an operational matrix of misstatement risks. The main contribution is an integrated tool for the interpretation and governance of sports investment reporting, extendable to multi-jurisdiction portfolios and useful to investors, creditors and internal audit/control functions.

**Keywords:** sports accounting; investments in sport; intangible assets; impairment; consolidation; financial regulation in sport

**JEL classification:** M41, G32, G34, L83, M42, G38

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## Introduction

The present work has a theoretical-applied character and aims to build a conceptual framework and an operational tool for interpreting the accounting reflection of investments in sport. Consequently, the paper does not claim to investigate a singular “particular case”, but operationalizes the literature, IAS/IFRS standards and institutional benchmarks (including compliance requirements) into an investment classification scheme and a misstatement risk matrix (Probability × Materiality), extensible for multi-entity portfolios<sup>6</sup>. A multi-sport portfolio (football, motorsport, winter sports and extreme sports) raises relevant accounting questions for investors, creditors, regulators and stakeholders, in particular regarding: (i) the consolidation and allocation of the purchase price, (ii) the recognition and valuation of intangible assets, (iii) the treatment of sponsorship/marketing expenses, (iv) impairment tests and (v) the comparability between jurisdictions and reporting regimes.

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<sup>6</sup> In this paper, multi-entity refers to a portfolio comprising multiple legal entities (subsidiaries, associates or jointly controlled arrangements) linked through ownership/control or significant influence; multi-sport denotes exposure to different disciplines with distinct monetization logics (media rights, sponsorship, ticketing, merchandising, prize money); multi-jurisdiction captures cross-country heterogeneity in currency, taxation, legal form and local reporting constraints that may affect comparability and consolidation.



**Figure 1.** Key topics of concern to investors, creditors, regulators and stakeholders  
*Source: (authors' compilation)*

## Synthesis of literature and conceptual foundations

The literature on sports accounting has developed rapidly amid the commercialization of competitions, the globalization of media rights markets, and the emergence of increasingly sophisticated ownership and control structures. In professional sport, investments are not only aimed at tangible assets (infrastructure, equipment), but also intangible assets with sectoral specificity: athlete rights, brand, fan relations, analytical capabilities, as well as organizational networks (affiliated clubs, academies, partnerships). This reality creates a structural tension between the economic logic of investment - focused on monetizing the audience, exposure and sports performance - and the logic of financial reporting, which imposes strictly defined recognition and evaluation criteria for assets, income and expenses.

The literature review highlights two recurring challenges. The first is the issue of “accounting visibility” of value: a significant part of the value created in sport remains off-balance sheet (e.g. internal brand generated or relational capital), while recognized assets (especially intangibles associated with athletes and

goodwill from acquisitions) are sensitive to assumptions, performance volatility and impairment requirements (Morrow, 1996; Martin Lozano & Carrasco Gallego, 2011; Morrow, 2013). The second is the issue of comparability and consistency of reported results: differences between jurisdictions, between depreciation policies and between sectoral regulations can lead to situations where financial indicators are difficult to compare between clubs and leagues (Amir & Livne, 2005; Forker, 2005).

Next, the literature is summarized on thematic axes relevant to the reflection of investments in sport: (1) athletes/contracts as intangible assets and implications on accounting performance; (2) valuation models and relevance of accounting information; (3) intellectual capital, brand and “invisible value”; (4) financial governance, accountability and regulation; (5) restructuring, insolvency and institutional complexity; (6) public investments and mega-projects; (7) predictive analytics and the convergence between evaluation, control and reporting. Finally, gaps and research directions are identified, with a focus on multi-sport portfolios and the integration of non-financial information into investment analysis.

### ***Athletes and contracts as intangible assets: recognition, measurement and limits***

A founding theme in sports accounting is the treatment of athletes as ‘assets’ and, in particular, the capitalization of the costs of player registrations or contracts. In his classical analysis, the recognition of athletes as assets is conditioned by the possibility of credible measurement, and measurement is presented as the critical factor in relation to the recognition criteria. The case study discussed by the author shows that although clubs can control future economic benefits through contracts and federative rights, performance volatility, injury risk and market value uncertainty make the assessment problematic. Therefore, accounting tends to capture historical cost rather than economic value, creating a potential gap between “book value” and “sport-economic value” (Morrow, 1996).

In the same vein, it highlights accounting deficits in the evaluation of rights to exploit players’ performance, arguing that the balance sheet may omit a significant part of the intangible value generated by the club’s human capital and intellectual capital. This argument is important for investors: a high market value or a high revenue-generating capacity does not necessarily translate into a high book value of the assets, especially when the brand and the relationship with the fans cannot be recognized as internally generated assets (Martin Lozano & Carrasco Gallego, 2011).

From an accounting policy perspective, it summarizes the capitalization versus expense dilemma, showing that the option to capitalize the costs associated with players (where it is allowed and practiced) significantly modifies the performance indicators: profit, total assets and debt indicators can be materially affected. Therefore, comparability between clubs depends on the consistency of accounting policies and the transparency of the explanatory notes, particularly with respect to depreciation, renewals, and impairment testing (Oprean & Oprisor, 2014).

In this sub-field, two conclusions are constantly drawn. First: sports accounting is dependent on measurement conventions and contracts, and the assets associated with athletes are recognized in a form that reflects the cost and duration of the contract, not necessarily the market value. Second: as the transfer and contract market evolves, the pressure for reporting models that improve the consistency of results and the usefulness of information for investors and creditors is increasing (Morrow, 1996; Morrow, 2013; Oprean & Oprisor, 2014; Ganji, 2025).

Beyond recognition, literature deals intensely with the issue of time allocation. The practice of amortizing player rights over the duration of the contract turns an investment decision (acquisition/transfer) into a recurring expense profile. As a result, accounting performance becomes sensitive to contracting strategies: clubs that extend contracts can redistribute depreciation and alter the trajectory of reported profit. While these mechanisms may be consistent with the principles of cost-to-revenue matching, they may reduce transparency for users when explanatory notes do not explicitly describe the treatment of rollovers, conditional bonuses or performance clauses (Amir & Livne, 2005; Forker, 2005).

Another dimension is impairment and the identification of depreciation triggers. In sport, the triggers are often operational (injuries, drop in performance, loss of tenure) and market (decrease in demand for certain player profiles, regulatory changes). This specificity makes impairment testing inherently dependent on managerial judgment and scenarios of future economic benefits. The literature points out that in the absence of sound disclosure practices, the risk of accounting arbitrage increases and comparability deteriorates (Morrow, 1996; Martin Lozano & Carrasco Gallego, 2011).

Finally, a cross-cutting theme is the distinction between “cost” and “value”. Even when an asset is recognized at cost, users tend to interpret the book balance as an approximation of economic value. In sports, this interpretation is problematic: an athlete’s market value can rise or fall rapidly, while book value evolves linearly through depreciation. This results in a need for sectoral financial education and reporting frameworks that explicitly explain this asymmetry, so that

investment analysis is based on consistency of results over time and on appropriate indicators, not on analogies with industries with predominant tangible assets (Oprean & Oprisor, 2014; Andon & Free, 2019).

### ***Relevance of accounting information and models for evaluating athletes***

A central contribution to the relationship between accounting and valuation is his study, which investigates the link between accounting information on football contracts and the market valuation of clubs, with an explicit focus on the duration of contracts. The essential idea is that depreciation and contract duration can influence both the reported profit and the signaling of value to the market. The authors' results suggest that accounting information may be relevant to valuation, but this relevance is mediated by the design of accounting policies, the transparency of disclosures, and the way users interpret depreciation and capitalization (Amir & Livne, 2005).

Forker (2005) develops a critical discussion of valuation approaches and comparability issues, highlighting that apparently technical differences – e.g. contract durations, the treatment of renewals or differences in cost recognition – can alter the interpretation of performance and value. The literature is therefore becoming sensitive to the fact that the analysis of investment in sport cannot depend exclusively on balance sheet figures; triangulation with contractual and operational information is required.

A complementary vein is oriented towards alternative financial models for evaluating athletes. I propose to apply an option pricing model for player evaluation, explicitly integrating performance uncertainty and adverse events. This approach is relevant because it shows how financial instruments can formalize sports risk and produce robust estimates of changes in assumptions, providing a common language for management, investors and advisors (Coluccia *et al.*, 2018).

In recent years, literature has increasingly integrated predictive analytics. It proposes an approach based on predictive analytics for estimating the value of players in the transfer market. The key implication for accounting and investing is that valuation becomes a hybrid organizational practice: sporting data (performance, potential) is combined with financial data (revenue, costs) and contractual constraints. Even if these models do not directly translate into book value, they influence acquisition decisions and, implicitly, cash flows and the structure of recognized intangible assets (Li, 2025).

In conclusion, the literature on the evaluation of athletes converges towards the idea that there is a distance between market valuation and accounting recognition, but this distance can be managed through better disclosures and

the use of analytical tools in managerial control. At the same time, the need for consistency of results is emphasized when accounting indicators are used for inter-club or inter-league comparisons (Amir & Livne, 2005; Forker, 2005; Coluccia *et al.*, 2018; Li, 2025).

An important aspect in the discussion about relevance is the role of sport-specific revenues in “validating” investments in athletes. Unlike industries where revenue is generated primarily through sales of goods, sports combine revenue from the day of the event (matchday revenue), media rights, and commercial revenue. Investments in athletes are thus valued not only by their direct contribution to sporting results, but also by indirect effects on audiences, the value of media rights and the attractiveness of sponsors. The literature suggests that valuation models that integrate these channels (e.g., through scenarios or options-inspired approaches) can provide a more coherent interpretation of risk and return, reducing reliance on a single indicator (Coluccia *et al.*, 2018; Li, 2025).

At the same time, studies warn of the risk of overconfidence in models. When management and investors rely on predictive scores and value estimates, pro-cyclical effects can occur: optimistic valuations can fuel salary expenditure and investments that exceed the structural capacity to generate revenue, and subsequent corrections can trigger depreciation adjustments and deterioration of solvency indicators. In this key, the literature on valuation connects with that on financial regulation and disciplines the conclusion that models should be integrated into governance and managerial control, not used as a substitute for economic judgment (Evans *et al.*, 2019; Nappert *et al.*, 2025).

In addition, the relevance of accounting information must also be read through the eyes of users. For lenders, for example, the main question may be the ability to repay, not the theoretical value of the athletes’ portfolio. For strategic investors in a multi-sport portfolio, the interest may be aimed at brand synergies and stability of commercial revenues. It follows that a single evaluation metric is insufficient; The literature indicates the usefulness of a “toolkit” that combines accounting indicators (depreciation, salaries/income) with market and operational indicators (audiences, performance), in order to achieve relevance and consistency of results in decisions (Amir & Livne, 2005; Andon & Free, 2019; France *et al.*, 2024).

### ***Intellectual Capital, Brand and Non-Balance Sheet Value***

A structural feature of the sports industry is the high share of intangibles that, while generating value, are not recognized as assets in traditional reporting. Hence the literature’s interest in intellectual capital and complementary measurement tools propose the FOrNeX (Football Organization Nexus Index) index as a composite tool

for club intangible resources, including brand dimensions, relational capital and human capital. The methodological contribution of the index is twofold: (i) it produces a standardized metric for comparison between clubs and (ii) it allows to connect investments (e.g. in academies or marketing) with non-financial outcomes that precede financial performance (Andrikopoulos & Kaimenakis, 2009).

Dimitropoulos & Koimanakos (2015) investigates the relationship between intellectual capital and profitability in European clubs, suggesting that intangible resources are associated with economic performance. Although the exact design of the measurement may vary, the message is consistent: investments that increase intellectual capital (organizational know-how, scouting processes, reputation) can have positive effects on revenue-generating capacity and cost efficiency.

Occhipinti (2022) uses sports organizations as a conceptual laboratory to re-think intellectual capital accounting, arguing that accounting standards for intangibles may under-represent the ability to create value. The proposal is to move towards complementary indicators and integrated reporting, which connect intangible resources with strategy and performance. This direction is relevant for the reflection of investments in sports because part of the expenses (marketing, academies, digital) is treated as OPEX, although they can represent long-term strategic investments.

In the area of business models and profitability, he shows that profitability in football can vary depending on the economic model (income structure, dependence on transfers, salary control). The link to intellectual capital is implicit: clubs that manage to monetize the brand and the relationship with fans can reduce their dependence on volatile revenue. From an accounting perspective, it reinforces the argument that investment analysis must include recurring revenue sources and stability indicators, not just annual profit (Regoliosi, 2018).

Therefore, the literature on intellectual capital and brand reinforces the idea of “invisible value” and suggests two complementary directions: (i) the development of standardized indicators (composite indices, scorecards) and (ii) the improvement of disclosures in financial reporting to increase the usefulness of information in the evaluation of investments (Andrikopoulos & Kaimenakis, 2009; Dimitropoulos & Koimanakos, 2015; Regoliosi, 2018; Occhipinti, 2022).

### ***Financial reporting in sports: towards more user-friendly models***

Morrow (2013) explicitly asks whether the financial reporting of football clubs needs a new model. The argument starts with the specifics of sport: multiple objectives (sports and economic), performance volatility, stakeholder pressures and sectoral regulation. Under these circumstances, investor-only

reporting may be insufficient; users include fans, sports authorities, local communities, and funders, each with different expectations.

An important element in the reporting literature is the link between regulation and reporting discusses reporting standards and specificities for clubs and leagues, stressing the need for harmonization and improved transparency. Even though general accounting standards (IFRS) provide a framework, sport often operates with additional rules (licensing, sustainability requirements) that influence behavior and, indirectly, reporting (Ganji, 2025).

Andon & Free (2019) provides a synthesis of the field, arguing that accounting is not only a technical mechanism, but also a mechanism that shapes the business of sports: through classification, measurement and control, accounting influences investment decisions, legitimacy and governance. The authors propose a research agenda that includes transparency, accountability and digitalization, confirming that the evolution of the sports industry requires analytical frameworks that go beyond the balance sheet.

A higher-level conclusion emerges: the reporting literature suggests that the accounting “model” applied in sport should be interpreted in the institutional context and in relation to the set of users. In practice, investments in sport should be analyzed through a combination of information: financial statements, explanatory notes, operational indicators and non-financial metrics, in order to achieve consistency and relevance in interpretation (Morrow, 2013; Andon & Free, 2019; Ganji, 2025).

One area where literature emphasizes the need for clarification is the recognition of income and its classification. Revenues from media rights, sponsorships, and partnerships can have complex contractual structures with variable components and performance obligations. Even though general standards provide principles, their application in sport involves significant judgments, and the consistency of results can be affected by how entities identify obligations and allocate the price of the transaction. Hence the call for more informative explanatory notes and reporting practices that allow users to distinguish between recurring and volatile revenue (Morrow, 2013; Ganji, 2025).

In addition, reporting in sports is closely related to cost management, especially salary costs. The literature on business models and regulation suggests that reporting should facilitate sustainability analysis, for example through indicators such as wage-to-revenue and disclosures about contract structure. These elements are essential to assess whether investments are calibrated to revenue-generating capacity or whether the organization is pursuing a risky strategy to maximize sports performance at the expense of financial stability (Regoliosi, 2018; Evans *et al.*, 2019).

Finally, the literature argues that sports reporting is an area where segmentation is crucial. In portfolios and groups, consolidated results can hide divergent dynamics between sports or between entities. Segmented reporting, even if it is not always required in detail for private entities, increases the usefulness of the information for users and reduces the risk of misinterpretation of performance. This is all the more important when investments include both competitive activities (clubs/teams) and commercial activities (media, marketing), where the mechanisms for creating value are different (Morrow, 2013; Andon & Free, 2019).

### *Accountability, governance and financial regulation in sport*

A major pillar of the literature is the analysis of accountability, i.e. the way in which sports organizations justify their use of resources and performance in front of stakeholders. I introduce the concept of “Vulgate Accountability”, showing that public accountability in football is built and publicized through narratives, not just through financial statements. This perspective expands investment analysis: capitalization decisions, salary expenses or investments in transfers are also evaluated in terms of reputation, fan expectations and media pressures (Cooper & Johnston, 2012).

At the institutional level, it analyzes the effectiveness of financial regulation in a professional league, highlighting the tension between sports competition (which stimulates performance spending) and financial discipline. The results suggest that rule design, enforceability, and transparency are critical. The implication for investment is that regulation can alter the reaction function of clubs: it can reduce over-investment in the short term and increase attention to sustainability (Evans *et al.*, 2019).

The work of Agostino & Thomasson (2024) discusses hybrid forms of governance in football clubs, in which logics of the type co-exist **Non-Profit Organization** (NPO) and private logics. Such a hybrid model generates different accountability requirements and can influence the prioritization of investments (e.g., investments with social value versus investments with financial returns). Similarly, it shows that sports organizations can respond to multiple logics (“for love and money”) by developing innovative control and reporting arrangements to reconcile goals (Skirstad & Chelladurai, 2011).

Adams (2024) addresses the paradox of success in supporter-owned hybrid clubs: sporting success can amplify investment pressures and financial risks. The study highlights the importance of internal governance mechanisms, budgetary transparency and decision discipline. It completes this direction by

analyzing the institutional complexity in football organizations and the way in which management navigates competing requirements (sports, commercial, regulatory) (Jacobsen, 2023).

At the synthesis level, it provides a scoping review on accountability in sports organizations, identifying measurement gaps and the need for comparative studies and linking with financial performance. For investments, this review indicates that accountability should be conceptualized as a system: it includes financial reporting, non-financial reporting, governance, and stakeholder relations (France *et al.*, 2024).

In the area of grassroots organizations, it shows that accounting mechanisms support the professionalization of voluntary sports organizations, but there is a risk that the excessive focus on financial metrics will erode community objectives. This tension is relevant in multi-sport portfolios, where entities with different missions (elites vs grassroots) may coexist and require distinct reporting and control approaches (Melnick *et al.*, 2025).

Overall, the literature on accountability and governance highlights that investments in sport are evaluated simultaneously on financial and symbolic dimensions, and regulation can act as a disciplinary mechanism. An investment analysis framework must include both financial indicators and governance and transparency mechanisms in order to achieve consistency of results and comparability between entities (Cooper & Johnston, 2012; Evans *et al.*, 2019; France *et al.*, 2024; Agostino & Thomasson, 2024; Adams, 2024; Jacobsen, 2023).

A distinct contribution of literature is the understanding of accountability as a multi-channel phenomenon. In addition to financial statements, sports organizations communicate through sustainability reports, public statements, pricing policies and commitments to the community. In football, these channels are often amplified by the media and digital platforms, which changes the balance of power between management and stakeholders. The concept of “vulgate accountability” suggests that legitimacy is not only obtained through accounting compliance, but also through narratives that explain “why” investments were made and “how” they are justified in relation to the identity of the club (Cooper & Johnston, 2012; Baumeister, 2025).

From an investment perspective, this framework implies that brand-driven investments may require a different set of monitoring indicators than strict sports investments. For example, sponsorships and brand activations can be evaluated through exposure and perception metrics, while investments in athletes and infrastructure can be evaluated through combinations of performance and cash-flow. The literature on hybrid forms of governance shows that the mix of objectives (social, identity, commercial) affects the way in which success

criteria are defined and, implicitly, the way in which accounting and control systems are designed (Agostino & Thomasson, 2024; Adams, 2024; Skirstad & Chelladurai, 2011).

Finally, financial regulation appears as a mechanism for alleviating incentives. When rules sanction excessive losses or impose transparency requirements, management is forced to improve planning and reporting. However, the literature suggests that effectiveness depends on the quality of implementation: poorly enforced rules can induce avoidance behaviors, while well-designed rules can increase the consistency of results and reduce the risk of insolvency. This nuance is important for investors, who need to assess not only the formal framework of the rules, but also institutional practices (Evans et al., 2019; France et al., 2024; Ganji, 2025).

### ***Insolvency, restructuring and financial fragility***

Financial fragility is a persistent theme in sport, especially in football, where competitive pressures can encourage overspending and risk-taking. analyzes the practice of insolvency in football, showing that procedures are influenced by sporting rules and multiple interests, which can produce different results than insolvency in other industries. This observation has accounting implications: classic solvency indicators must be interpreted in context, and early signs of difficulty (e.g. dependence on volatile income, rapid growth of the wage bill) can be decisive (Cooper & Johnston, 2012).

Theiri (2012) discusses the effects of changing the status of sports clubs, highlighting that the legal form and institutional regime can influence governance, budgeting and reporting. Although the paper has a more general orientation, it suggests an important mechanism: organizational transformations can be used to facilitate investments, but they can also introduce agency and opacity risks. In multi-sport portfolios, these transformations are relevant when investors use hybrid vehicles, partnerships, or structures to control entities from different jurisdictions.

From the point of view of the literature, these works reinforce the idea that the analysis of investments in sport must include the dimension of continuity risk and the effects of regulation on insolvency. Furthermore, they suggest that financial reporting should provide disclosures that increase the relevance for users on risk exposure, debt structure and dependence on sources of uncertain income (Cooper & Joyce, 2013; Theiri, 2012).

***Public investments, infrastructure and mega-events: accounting, risk and externalities***

In addition to private investments in clubs and teams, the literature dedicated to infrastructure and mega events provides essential lessons for sports investment accounting shows that mega-projects, including the Olympics, have systematic tendencies to exceed costs and underperform benefits, with “fat-tailed” distributions. For accounting and budgetary control, the message is that risk estimation and reporting must be prudent, and governance mechanisms must be designed to reduce strategic optimism (Flyvbjerg, 2021).

Burton & O’Reilly (2009) argue that, in the evaluation of Olympic candidacies, the intangibles (image, urban brand, social capital) must be considered, because the analysis strictly on costs/revenues can be incomplete. Although this literature is not strictly accounting, it is relevant for investment: it shows that sports projects produce reputational effects and externalities, and reporting should include broader evaluation frameworks.

McLeod & Holden (2017) discuss the public financing of stadiums from a green economy perspective and highlights the risk of under-reporting of costs and externalities. The implication for public accounting and auditing is the need for transparency, scenarios and systematic evaluation of benefits. In the context of private investment, this literature can be used to assess public-private partnerships and to understand the distribution of risks and benefits among the actors involved.

Overall, the literature on infrastructure and mega-events completes the picture of sports investing with its focus on risk, externalities and governance. It suggests that when investments include infrastructure or events, the analysis should include indicators of sustainability, social impact and cost overruns, and financial reporting should be complemented by non-financial reporting and audit of benefits (Flyvbjerg, 2021; Burton & O’Reilly, 2009); McLeod & Holden, 2017).

***Assetization, organizational evaluation and the role of professional accountants***

A major conceptual contribution in recent literature is the introduction of the concept of “assetization” in sport, i.e. the transformation of athletes and their promise of performance into assessable and tradable objects. analyzes the process in baseball, highlighting the role of signing bonuses and contracts as mechanisms for instrumentalizing promises and allocating risk. This perspective is valuable for accounting because it shows that valuation is not a neutral act, but

a socio-technical practice in which contracts, data, and institutional norms build assets (Nappert & Plante, 2023).

Nappert *et al.* (2025) delve into the role of accountants and valuation practices in player decisions, indicating that performance valuation (analytics) is combined with monetary valuation and reporting and control responsibilities. For investments, the implication is that data governance and standardization of metrics are essential to increase the consistency of results and reduce the risk of overconfidence in models.

This literature connects directly with developments in football (predictive models, market valuation) and complements the argument that investment in sport is mediated by data infrastructures and accounting expertise. In a multi-sport portfolio, where entities from different disciplines use different sets of metrics, the challenge is to integrate these practices into a common framework of managerial control and reporting (Nappert & Plante, 2023); Nappert *et al.*, 2025, L, 2025).

### ***Integrated implications for multi-sport portfolios and conglomerate investments***

Although many studies are focused on football or a specific sport, the literature reviewed allows the formulation of implications for multi-sport portfolios. In such portfolios, investments are distributed between holdings (M&A), specific intangible assets (athletes), commercial expenses (sponsorship/marketing) and capabilities (analytics, academies). Accounting reporting treats these investments differently: shareholdings influence consolidation and goodwill; athletes can generate depreciable intangibles; marketing remains predominantly expense; In-house capabilities tend to be recognized to a limited extent as intangible assets. The result is a balance sheet structure in which economic value is unevenly distributed between what is recognized and what remains “invisible” (Morrow, 2013; Occhipinti, 2022; Ganji, 2025).

The literature on governance and accountability suggests that multi-sport portfolios must be managed as systems of multiple logics: sports, commercial, community and regulatory. Hybrid models (Maglio & Rey, 2017; Gazzola *et al.*, 2019) indicate that a single reporting framework may be insufficient; there is a need for segmentation, differentiated indicators and transparency mechanisms adapted to each entity. Additionally, specific regulations may vary between leagues and sports, affecting investment behavior and performance interpretation (Agostino & Thomasson, 2024; Evans *et al.*, 2019; Skirstad & Chelladurai, 2011).

On the financial front, studies on profitability and business models show that reliance on volatile sources (e.g., transfers) increases risk and reduces consistency of results. For multi-sport portfolios, diversification can reduce aggregate risk, but it can introduce valuation difficulties: the motorsport or extreme sports segment can generate brand value that does not appear on the balance sheet, while football can feature large intangible assets and significant depreciation. Thus, investors should use cash-flow and income stability indicators, supplementing the accounting profit (Regoliosi, 2018).

Methodologically, the literature suggests the usefulness of composite tools and the integration of analytical data for investment evaluation. A promising agenda is the development of an integrated framework that connects: (i) accounting indicators (depreciation, depreciation, wage-to-revenue), (ii) operational indicators (performance, audience), and (iii) governance indicators (transparency, quality of disclosures), in order to obtain a coherent assessment of investments in sport (Andrikopoulos & Kaimenakis, 2009; Li, 2025; Nappert et al., 2025).

In multi-sport portfolios, a methodological problem is the separation of sports performance effects from marketing and media exposure effects. For example, a poor sports season can coexist with increases in viewership and commercial revenue, if the brand strategy is effective. The literature on intellectual capital and accountability suggests that the analysis should include both sports performance indicators (rankings, results) and market indicators (audiences, engagement) and financial indicators (margins, cash-flow). The integration of these sets is necessary to achieve a coherent assessment of investments, especially when the portfolio pursues synergies between sports (Andrikopoulos & Kaimenakis, 2009; Occhipinti, 2022; Cooper & Johnston, 2012).

Another challenge is intra-group governance: how resources are allocated between entities and how to avoid permanent subsidization of unprofitable segments. The literature on financial regulation and insolvency suggests that, without institutional disciplines, competitive pressure can lead to resource transfers that erode sustainability. Hence, the importance of segment budgeting, risk limits and internal reporting mechanisms that make investment decisions and their consequences visible. In accounting terms, this translates into the need for segmented reporting and rigorous impairment testing, including goodwill associated with acquisitions (Cooper & Joyce, 2013; Evans et al., 2019; Morrow, 2013).

Finally, multi-sport portfolios amplify the problem of comparability because different sports have different monetization models. Motorsports, for example, can generate major value through global exposure and commercial partnerships, while football is heavily influenced by the transfer market and media rights. In the absence of a common framework, investors risk comparing “apples to pears”. The literature suggests that a common framework should be built on several cross-cutting dimensions: (i) income stability, (ii) cost volatility

(especially wages), (iii) intensity of intangibles and sensitivity to impairment, and (iv) quality of governance and disclosures. Thus, a basis for comparison can be obtained that maintains the relevance and consistency of results between sports (Regoliosi, 2018; Ganji, 2025; France et al., 2024).

### ***Gaps, future directions and conclusions of the review***

The literature review highlights some recurring shortcomings. First, there is a convergence deficit between the market valuation of resources (athletes, brand, audiences) and accounting recognition, which limits the balance sheet's ability to fully reflect sports investments. Although the literature proposes alternative indicators and models, they are often used fragmented and without standardization (Andrikopoulos & Kaimenakis, 2009; Occhipinti, 2022; France et al., 2024; Gazzola et al., 2019).

Secondly, comparing them remains a major issue. Differences in accounting policies, financial regulation and contractual structures reduce the consistency of results in inter-club analysis. Studies in football have been pointing to this problem for a long time, and recent literature on standards suggests that harmonization and improvement of disclosures is still needed (Amir & Livne, 2005; Forker, 2005; Ganji, 2025).

Third, the literature on accountability shows that performance and investments are evaluated in a multi-dimensional way, and research needs models that connect financial reporting with governance practices and stakeholder pressures. This is all the more important in a multi-sport context, where reputation and exposure can be strategic objectives, and commercial expenses can have an investment role without recognition as an asset (Cooper & Johnston, 2012; Evans et al., 2019; France et al., 2024).

Finally, the literature on infrastructure and mega-events reminds us that investments in sports can generate systemic risks, externalities and cost overruns. Integrating these risks into reporting and investment analysis remains a challenge, and studies suggest prudent and transparency-oriented approaches (Flyvbjerg, 2021; McLeod & Holden, 2017).

Based on these conclusions, future research directions may include: (i) multi-jurisdictional comparative studies on depreciation and depreciation policies of intangibles associated with athletes; (ii) integrated models combining accounting and non-financial data for investment valuation; (iii) analyses of multi-sport portfolios and brand synergies, including how they can be communicated through reporting; (iv) research on the role of professional accountants and data infrastructures in standardizing valuation; and (v) assessing the effects of financial regulation on investment discipline and the quality of disclosures (Andon & Free, 2019; Ganji, 2025; Nappert et al., 2025).

In conclusion, the literature confirms that sport is a privileged field for studying the limits of traditional accounting in the reporting of intangibles and for the development of accountability frameworks oriented to multiple stakeholders. For the analysis of investments, the major recommendation is to use an integrated lens, in which the financial statements are interpreted together with non-financial indicators and the institutional context, to ensure the relevance and consistency of the results.

### **Research questions**

The analysis of the specialized literature leads us to the formulation and analysis of four questions:

- Q1:** How do sports investments rank in a multi-entity portfolio and what accounting treatments are relevant (IAS/IFRS and/or local regulations)?
- Q2:** To what extent does accounting capture the economic value of sport-specific intangible assets (e.g., player rights, brand, fan relationship)?
- Q3:** How do consolidation, purchase price allocation, goodwill, and impairment tests affect the interpretation of financial performance?
- Q4:** What role do governance and financial sustainability rules in sport play in investment discipline and reporting quality?

### **Research methodology**

The study follows a theoretical–applied design grounded in documentary analysis and structured triangulation. The unit of analysis is the mechanism through which sports investments may affect financial reporting quality (recognition, measurement, disclosure and consolidation), operationalized as risks of material misstatement mapped to Balance Sheet / P&L / Cash-flow. The outputs of the design are: (i) the risk matrix with P×M prioritization, (ii) the RQ-level synthesis table (cross-walk between questions, standards and financial-statement channels), and (iii) an IFRS/IAS mapping of alternative treatments relevant to sports investments. Also, the followings are taken into consideration: sport-specific misstatement mechanisms (intangibles, revenue recognition, consolidation/PPA, impairment, related parties, FX/multi-country, compliance constraints).

Through this research, the paper provides an operational framework that can be calibrated *ex post* on entity-level historical data.

#### ***General information and analytical scope***

The study is built as a conceptual and documentary analysis applied to sports investments in a multi-entity and multi-sport portfolio (e.g.: football

clubs, motorsport teams, hockey and extreme sports). In this logic, “investment” is treated as a set of decisions that are reflected in: (i) acquisition and control structuring transactions (shareholdings, consolidation), (ii) recognition and valuation of sport-specific intangible assets (in particular rights to athletes, but also commercial and technological intangible assets), (iii) recognition of revenues (sponsorship, media, tickets, merchandising) and their correct classification, (iv) valuations and impairment tests (intangibles and goodwill), as well as (v) relationships with related parties and intra-group financing arrangements.

The methodological objective is to assess the quality of the accounting information and the risk of distortion that may affect the interpretation of financial performance. Therefore, the analysis does not follow the “real value” of the investment but identifies accounting and organizational mechanisms that can alter the interpretation of financial statements (Balance Sheet / Profit and Loss / Cash-flow) and reduce the consistency and relevance of results between entities, sports and periods.

### *Data and sources*

The data used are structural and come from the following categories of sources used in the approach:

(a) academic literature on financial reporting in sport, with a focus on specific intangible assets (rights to athletes). For each risk, the following are documented: the area (e.g. intangibles, consolidation, revenues, related parties), the typical mechanism of occurrence, the likely direction of the distortion, the anticipated impact on Balance Sheet/P&L/Cash-flow, red flags and control/mitigation measures, as well as the Probability (1–5) and Materiality (1–5) scores.

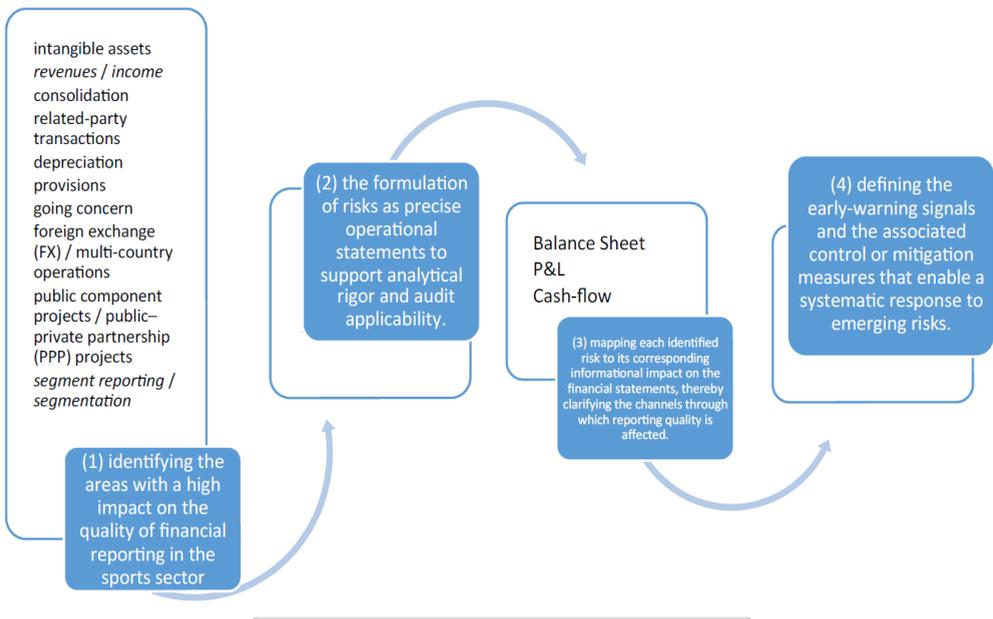
(b) The regulatory and accounting framework (IAS/IFRS) used as a reference for delineations and treatments: **Operating Expenditures / Capital Expenditures** (OPEX/CAPEX), recognition of intangibles, consolidation, purchase price allocation (PPA), impairment testing, provisions and foreign currency transactions.

(c) The sport-specific institutional framework (financial sustainability rules, licensing and reporting requirements), used to understand reporting incentives and areas where reclassification behaviors may occur to meet indicators or thresholds.

The approach is not based on a single numerical panel of financial statements; instead, it operates literature, accounting standards and sectoral rules into a risk assessment tool, which can be used for both performance interpretation and group-level financial governance.

### **Construction of the risk matrix**

The construction of the matrix followed a four-step logic: (1) identification of areas with a high impact on the quality of reporting in sports (intangibles, revenues, consolidation, transactions with related parties, impairment, provisions, continuity, FX/multi-country, projects with public component/PPP, segmentation); (2) the formulation of risks as operational statements ('major danger'), each associated with a typical mechanism; (3) mapping each risk to the informative impact on the financial statements (Balance Sheet / P&L / Cash-flow); (4) definition of warning signals and control/mitigation measures.



**Figure 2.** Construction of the risk matrix  
Source: Authors' projection

The resulting matrix functions as a sport-specific financial-accounting risk register: it explains the mechanisms of distortion, supports the interpretation of reported performance and facilitates the prioritization of interventions (controls, disclosures, review procedures) in sports organizations and multi-entity groups.

The methodological details underlying the construction of the matrix are presented in *Appendix 1. Risk matrix (Probability × Materiality) and financial statement mapping*, where each step of the procedure is documented to ensure transparency and replicability.

The matrix presented below represents the final output of the analytical process, synthesizing the criteria and indicators derived from the conceptual framework.

**Matrix – Major dangers of distortion of accounting information in sports investments<sup>7</sup>**

*Note: Risk score = Probability (1–5) × Materiality (1–5).*

ID	Aria	Major danger	Impact (balance sheet / P&L / CF)	P	M	Score	Red flags	Controls
1	Intangible – athletes	Aggressive cost capitalization (players/academies/scouting) can overvalue assets and profit.	Balance: Intangibles ↑; Total assets ↑; Equity ↑P&L: Current expenses ↓; Future depreciation ↑CF: CFO (Chief Financial Officer) ↑ (by OPEX reduction); CFI (Cash Flow from Investing Activities) ↓ (capex ↑)	4	5	20	Abrupt growth of intangibles; vague politicians; large differences between comparable clubs.	Strict IAS 38 policies; approvals by cost type; audit trail; Portfolio Reconciliation.
2	Intangible – athletes	“Optimized” depreciation / uneven contract durations distort profit and comparability.	Balance sheet: Net intangibles ↑ (temporary) P&L: Amortization ↓ short-term; profit ↑CF: Neutral on total CF; reclassifications may affect CFO/CFI	4	4	16	Decrease in depreciation/income without explanation; average contract durations increase sharply.	Consistent renewal policies; disclosure of durations; controls on changes in estimates.
3	IAS 36 / impairment	Deferred impairment (intangibles/goodwill) produces overstated profit until sudden adjustments.	Balance sheet: Goodwill/ Overvalued Intangibles P&L: Deferred impairment expenses; subsequent major loss CF: Non-cash (generally), but can affect covenants and funding	3	5	15	Lack of sensitivities; growth rates > the market; No impairment in poor sports periods.	Hypothesis Committee; mandatory sensitivities; back-testing; involvement of an independent evaluator.

<sup>7</sup> **How to read the risk matrix (P×M):** The matrix should be read as a prioritization and interpretation tool: the P×M score ranks risks by expected severity, while the BS/P&L/CF columns indicate where misstatements are likely to appear and how they may distort performance interpretation. Scores in the mid-range (e.g., 12–15) are treated as ‘judgement-sensitive’: small changes in assumptions (±1 in P or M) may alter ranking, therefore these risks are reviewed through peer checks and sensitivity testing. High scores (e.g., ≥16) trigger enhanced disclosure focus and control recommendations, given the likelihood of discrete adjustments (reclassifications, impairments, or covenant/compliance effects).

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ID	Aria	Major danger	Impact (balance sheet / P&L / CF)	P	M	Score	Red flags	Controls
4	IFRS 3 / PPA	Opportunistic purchase price allocation (PPA) distorts depreciation and impairment risk.	Balance sheet: Intangibles/goodwill ↑; ↑P&L assets: PPACF-dependent amortization and impairment: Non-cash; Indirect impact on funding/covenants	3	4	12	ASF difficult to replicate; disproportionately “new” intangibles; weak justifications.	Independent appraiser; PPA documentaries; audit review; Reconciliation of assumptions.
5	Consolidation (IFRS 10/12)	Unconsolidated entities, although there is (de facto) control, hide debts and losses.	Balance sheet: Off-balance assets/liabilities; hidden exposure P&L: Unconsolidated expenses/loss CF: Hidden future CF obligations	2	5	10	Recurring transactions with affiliates; guaranteed financing; common management.	IFRS 10 control analysis; IFRS 12 disclosures; group mapping; legal confirmations.
6	Reporting / segmentation	Excessive aggregation without segmentation masks the actual performance by sport/country.	Balance sheet: N/A (presentation) but hides financial position risks by segments P&L: Profit apparently stable, although segments are volatile CF: Aggregate CF masks cash consumption in segments	4	3	12	Stable profit but volatile CFO; Lack of explanations by segments.	Internal reporting by segments; standardized KPIs; Consolidated segment → consolidation.
7	Revenue (IFRS 15)	Premature recognition of sponsorship/media revenue overestimates performance.	Balance sheet: Distorted receivables/advance income P&L: Revenue ↑; ↑CF profit: CFO ↓ relative (cashless income) / or CFO ↑ if advances not classified correctly	3	5	15	Cashless income increases; complex contracts; subsequent adjustments.	Revision of IFRS 15; contractual break-downs; Cash-to-cash reconciliation; contract approvals.
8	Revenue (presentation)	Misclassification net vs gross distorts revenue size and margins.	Balance sheet: N/A (presentation), possibly trade receivables/liabilities P&L: Revenue and costs simultaneously CF: Generally neutral	3	3	9	Unusual margins; high commissions; intermediation contracts.	Principal/agent analysis; consistent policies; Explanatory note.
9	Transfers / Transactions	“Creative” accounting for transfers (swaps, conditional clauses) distorts the results.	Balance sheet: Intangibles/receivables ↑; hidden contingent liabilities P&L: Transfer gains ↑; Deferred expenses CF: CF can be weak, although high profit	3	4	12	Many trades closed at the end of the period; many variable clauses.	Variable clause policies; external confirmations; Reconciliation of profit transfer vs cash.
10	Brand/market ing	Ineligible brand/marketing capitalization creates artificial assets.	Balance sheet: Intangibles ↑ artificial P&L: Marketing expenses ↓; future depreciation ↑CF: CFO ↑; CFI ↓	2	4	8	The emergence of “brand” assets without acquisitions; policies are not aligned with IAS 38.	Explicit prohibitions; audit review; accounting training; IAS 38 checklist.
11	Related parties	Transactions with related parties at non-market prices move	Balance sheet: Distorted intra-group receivables/liabilities P&L:	3	4	12	Dominant intra-group contracts; unexplained margins.	Transfer pricing policies; benchmarking; disclosures to

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ID	Aria	Major danger	Impact (balance sheet / P&L / CF)	P	M	Score	Red flags	Controls
		profit between entities.	Distorted margins CF: CF can be transferred intra-group					related parties; independent approvals.
12	Salary costs	The camouflage of remuneration (bonuses, image rights, third parties) underestimates costs and obligations.	Balance sheet: Liabilities/provisions ↓ artificial P&L: Salary expenses ↓; disputes may arise CF: CFO distorted (timing); Hidden future payments	3	4	12	Increase in "other expenses"; tax disputes; complex contracts.	Disclosures of remuneration structure; tax compliance; Contract review.
13	Provisions (IAS 37)	Underestimating provisions (disputes, penalties, clauses) overstates profit.	Balance: Provisions ↓; contingent liabilities ↑P&L: Provisional expenses ↓CF: Unexpected negative future CF	3	4	12	Informally referred to disputes; few provisions; repeated changes in estimates.	Letters to lawyers; risk committee; scenarios; periodic review.
14	Going concern	Optimistic assumptions of continuity hide the real risk and can affect the classification of debts.	Balance sheet: Current liabilities may be under-reported; insufficient disclosures P&L: Profit n/a direct but insufficient ratings CF: Liquidity crisis risk not disclosed	2	5	10	High due debts; chronic negative CFO; dependence on funding.	Liquidity tests; documented financing plans; robust disclosures; stress tests.
15	Quality of earnings	Profit vs cash dissonance (low earnings quality) induces misinterpretations of performance.	Balance sheet: Assets (receivables/intangibles) ↑P&L: Accounting profit ↑ no cash CF: CFO ↓; Distorted CFI/CFF	4	4	16	Profit ↑, dar CFO ↓; increase in receivables; many adjustments.	Earnings quality analysis; Cash Reconciliation; conservative policies.
16	FX / multi-Country	Under-reported currency risk can distort results and financial position.	Balance sheet: Distorted foreign exchange assets/liabilities P&L: Under/over-reported exchange rate differences CF: CF futures exposed to exchange rate	3	3	9	Large exchange rate differences; lack of hedging policies; undisclosed exposures.	FX Policies; disclosures; stress test; accounting for financial instruments correctly.
17	Infrastructure	Underestimated project costs or incorrect capitalization distort assets and depreciation.	Balance: Distorted EPP; hidden project debts P&L: Wrong amortization; potential losses CF: CFI ↑; Budget overruns consume cash	3	4	12	Budget overruns; renegotiations; changes of scope.	Project control; project audit; capitalization by components; cost-to-complete monitoring.
18	/ Obligations	Ignored externalities and contingent obligations hide material risks.	Balance sheet: Underreported contingent provisions/liabilities P&L: Unreflected future expenses CF: Unexpected negative future CF	2	4	8	Public contracts with complex clauses; lack of inventory obligations.	Inventory of obligations; IAS 37; disclosures; legal review.

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ID	Aria	Major danger	Impact (balance sheet / P&L / CF)	P	M	Score	Red flags	Controls
19	Sports Rules / Compliance	The “gaming” of sustainability rules (form vs substance) distorts comparability.	Balance: Off-balance positions; reclassifications P&L: Profit/expense moved between periods CF: Actual CF may remain weak	3	3	9	Frequent accounting adjustments; atypical contracts; complex structuring.	Governance; internal audit; economic vs accounting reconciliation; transparency on adjustments.
20	Non-financial reporting	Selective KPIs (Key Performance Indicator) and methodological changes can “cosmeticize” performance and mislead.	Balance: N/AP&L: N/A direct; but influences the interpretation of the result CF: N/A	4	2	8	KPIs without definition; frequent changes; lack of reconciliation with the financial.	KPI standardization; metrics governance; KPI-revenue-cash correlation; limited insurance.

Source: Authors' compilation

***Quality assurance: consistency/relevance, results and sensitivity***

In order to increase the consistency of the results and the replicability of the score, the methodology involves: (i) applying the same heading 1–5 for all risks; (ii) checking the consistency between the score and the description of the Balance Sheet/P&L/Cash-flow impact; (iii) peer review of high-scoring (e.g.  $\geq 16$ ) and borderline (low/medium/high) risks, with documented justifications; and (iv) sensitivity tests, by adjusting scores to the limit ( $\pm 1$  point) to verify the stability of prioritization and to identify risks for which conclusions are judgment-sensitive.

***Limitations and refining paths***

Probability  $\times$  Materiality scoring has an inevitable judging component, especially in the absence of a uniform quantitative database for all entities and sports. In addition, some risks are interdependent (e.g. aggressive capitalization may subsequently amplify the risk of depreciation), and separate scoring may underestimate knock-on effects. The method can be improved by: (i) calibration on historical data (audit observations, subsequent adjustments, restatements, sanctions/regulatory findings); (ii) industry benchmark (comparison of accounting policies and indicators with similar entities); (iii) structural interviews with auditors, controllers and reporting officers; and (iv) the formalization of indicative quantitative thresholds (e.g. EBITDA impact ranges, total assets or operating cash flow) that anchor the materiality score in verifiable quantities, without losing the qualitative dimension (comparability, compliance and continuity)

## Results and discussions

This section presents the answers to the research questions (RQ1–RQ4) linking them to the proposed risk matrix and its Balance Sheet / P&L / Cash-flow mapping.

### ***RQ1: Classification of sports investments in a multi-entity portfolio and relevant accounting treatments (IAS/IFRS and/or local regulations)***

The literature highlights that investments in sports, when viewed at the level of a multi-entity portfolio, cannot be reduced to “buying a team”. The investment includes (a) equity investments in sports entities, (b) rights acquisitions and contracts that generate economic benefits, (c) investments in infrastructure and technology, as well as (d) sponsorship and marketing commercial investments that build audience and brand. Consequently, a useful classification starts from the nature of the acquired right (ownership, control, contract law) and the way in which it is monetized, in order to be able to map the applicable IAS/IFRS standards and comparability risks.

- 1. Equity investments and M&A transactions.** For club/team holdings, the accounting treatment depends on control and influence. If the investor gains control, full consolidation (IFRS 10) becomes relevant, and IFRS 3 applies to the acquisition: assets and liabilities are identified at fair value, identifiable intangibles (e.g. trademarks, contractual relationships, licenses, commercial rights) are recognized, goodwill is recognized, and non-controlling interests are established. If there is significant influence, the equity method (IAS 28) applies, and for passive holdings without material influence, IFRS 9 (classification and measurement as a financial instrument) applies. At the portfolio level, this distinction determines whether the entity’s results enter “line by line” in consolidated statements or appear as a single row (result from associates) and affects comparability between investors with control strategies versus minority shareholding strategies.
- 2. Investments in sport-specific intangible assets: rights to athletes and contracts.** In football, player registration rights are a frequently recognized asset, but recognition is conditional on credible measurement; argues that the critical factor is measurement, not the mere existence of contractual control. IAS 38 is the framework standard: acquisition/transfer costs are typically capitalized as intangibles, amortized over the term of the contract, and impairment is measured in accordance with IAS 36.

The literature shows that the policy of capitalization versus spending can materially change profitability and leverage indicators, which makes explanatory notes essential. In portfolios, these intangibles are a “core” of recognized accounting value, but also a major source of volatility (depreciation, impairment) and differences between jurisdictions and leagues (Morrow, 1996; Oprean & Oprisor, 2014).

3. **Investments in tangible assets and infrastructure.** Stadiums, training bases, technical centers and equipment are usually covered by IAS 16 (capitalization, depreciation; optional, reassessment if the policy is allowed and chosen). Where there are indications of impairment, IAS 36 applies, and IAS 37 and its interpretations may be relevant for dismantling/rehabilitation obligations. The literature on public investment, infrastructure and sports mega-projects warns of systematic risks of cost overruns and uncertainty about the benefits, which reinforces the need for prudent budgeting and project governance. For investors, these investments have a different risk profile: they are less volatile than “talent” but can lead to liquidity bottlenecks and high fixed costs (Flyvbjerg, 2021; McLeod & Holden, 2017).
4. **Commercial investments: sponsorship, marketing, brand activation and media content.** In multi-sport portfolios, a significant part of the investment is for exposure and reputation. The intellectual capital literature shows that these expenses create value but are rarely capitalizable because IAS 38 imposes strict criteria for internally generated intangibles, and the internally generated brand is not typically recognized. For associated revenues (sponsorships, media rights, partnerships), IFRS 15 is central to recognition and classification, and the way performance obligations are defined and variability influences the consistency of results (Andrikopoulos & Kaimenakis, 2009; Occhipinti, 2022).
5. **Investments in organizational capabilities and data infrastructures (analytics, scouting, academies).** Recent literature on association shows that data infrastructures and evaluation practices are becoming decisive for athlete investment decisions and managerial control (; ;), and predictive analytics influence athlete evaluation and transactions. Accounting, capitalization is limited: only components that meet the criteria of IAS 38 (e.g. identifiable software) can be recognized, so a large part of the “investment in capabilities” remains in expenses, although it has investment logic (Nappert & Plante, 2023; Nappert *et al.*, 2025; Li, 2025).

In addition to IAS/IFRS, local and sectoral regulations (licensing, league financial sustainability rules) influence both classification and reporting, through format, indicators, and disclosure requirements. Studies on regulation

show that these rules can discipline investment decisions and increase the importance of transparency, and recent work calls for harmonization and standardization of reporting in sport. Basically, in a multi-entity portfolio, investment analysis must combine accounting classification (applicable standards) with mapping of sectoral rules, in order to correctly interpret indicators and assess sustainability by segments (Evans *et al.*, 2019; Ganji, 2025).

Traceability to the matrix: the main misstatement risks underpinning RQ1 are operationalized in the risk matrix (see risk categories/IDs such as intangibles capitalization, revenue classification, consolidation boundary) and are summarized in Table 1, below.

***RQ2: Extent to which accounting captures the economic value of sport-specific intangible assets (players' rights, brand, fan relationship)***

The literature review converges on the idea that financial reporting only partially captures the economic value of intangibles in sport, and the “gap” is structural, not accidental. On the one hand, there are intangibles that are recognized relatively consistently (especially athletes' rights) because they are traded, identifiable, and measurable by cost. On the other hand, there are intangibles whose economic value is central to the business model (internal brand generated, relational capital with fans, media ecosystem), but which are largely “invisible” on the balance sheet, due to the recognition criteria and measurement constraints of IAS 38.

1. **Athletes' rights: accounting visibility, but imperfect approximation of value.** Classical literature argues that the recognition of athletes as “active” is critically dependent on measurement; shows that, although there are contractual control and plausible future economic benefits, the uncertainty of performance and the volatility of value make the issue of measurement decisive. In practice, the balance sheet captures the historical cost (transfer fee and directly attributable costs), amortized over the duration of the contract. This produces an asymmetrical: the economic value can increase rapidly (performance, market demand), while the book value decreases linearly through depreciation. They argue that this approach generates deficits in reflecting the exploit value of sports performance and shows that the policy of capitalization versus expenditure materially influences profit and financial position. The conclusion is that, for athletes' rights, accounting provides a “minimum framework” of the cost invested and its recovery over time, but not a measure of the current economic value (Morrow, 1996; Martin Lozano & Carrasco Gallego, 2011; Oprean & Oprisor, 2014).

2. **Market relevance: Accounting information can matter, but it depends on disclosures.** The paper of Amir & Livne (2005) suggests that accounting information related to contracts and durations may be relevant for valuation, but this relevance is mediated by the design of accounting policies and the transparency of the notes. Forker (2005) insists that apparently technical differences (contract durations, treatment of renewals, capitalization of costs) can produce large variations in results, which means that users have to ‘reconcile’ the reported profit with the economic reality of the athletes’ portfolio. In practical terms, the economic value is indirectly captured: by the ability of accounting information to signal investment discipline (how it is amortized, how aggressively it is capitalized, how depreciation is tested), rather than by the level of the accounting asset itself (Forker, 2005).
3. **Brand, intellectual capital and the relationship with fans: high economic value, low accounting visibility.** The literature on intellectual capital shows that a major part of the value of clubs derives from non-traded intangible resources: reputation, fan community, scouting processes, know-how, media ecosystem. I propose a composite index (FOrNeX) to measure the intangible resources of clubs, precisely because the balance sheet does not reflect them. Occhipinti (2022) and Dimitropoulos & Koimanakos (2015) find associations between intellectual capital and profitability and argue that sport is a “laboratory” that shows the limits of traditional accounting for intangibles, supporting the need for complementary indicators and, sometimes, integrated reporting. Specifically, the relationship with fans is an economic asset (audiences, engagement, monetization), but it is not typically recognized as an asset if it is generated internally; it becomes accountable only in acquisition scenarios (PPA) or through recurring revenues (media rights, merchandising) (Andrikopoulos & Kaimenakis, 2009; Dimitropoulos & Koimanakos, 2015; Occhipinti, 2022).
4. **Consequences for investment interpretation: need for complementary indicators and user-oriented reporting.** Morrow (2013) argues that financial reporting in football is strained between multiple objectives and multiple stakeholders, and a strict financial model may be insufficient. In practice, investment analysis must combine the accounting lens (recognized intangibles, depreciation, depreciation) with the economic lens (audiences, engagement, value of commercial contracts, income stability). The literature on business models suggests that profitability is highly dependent on revenue structure and wage discipline, implying that the “economic value” of the brand and fanbase is better seen in the stability of commercial revenues than in the balance sheet (Regoliosi, 2018).

Traceability to the matrix: the main misstatement risks underpinning RQ2 are operationalized in the risk matrix (see risk categories/IDs such as player registrations/intangibles (IAS 38), impairment triggers (IAS 36), disclosure quality) and are summarized Table 1.

The literature on accountability completes the discussion: investors, fans and authorities do not evaluate clubs only by profit, but also by narratives about resource use and strategic coherence. Even though IAS 38 limits the recognition on the balance sheet of brand and internally generated relational capital, disclosures can reduce information asymmetry: depreciation policies, athlete portfolio reconciliation, depreciation triggers, and indicators linking sports performance to audiences and commercial revenues (Cooper & Johnston, 2012; Morrow, 2013; France *et al.*, 2024 ).

### ***RQ3: Effects of consolidation, purchase price allocation, goodwill and impairment tests on performance interpretation***

In multi-entity portfolios, the literature shows that the interpretation of financial performance is deeply influenced by the “mechanics” of consolidation and the accounting treatment of acquisitions. Two organizations with similar economic flows may report very different indicators depending on (i) whether the entities are fully consolidated or reflected by equivalence, (ii) how much of the price paid is allocated to identifiable intangibles versus goodwill, and (iii) how impairment tests are designed for UGC (cash-generating units) in sports, where sports and commercial performance are strongly interdependent.

1. **Strengthening and “masking” performance by segments.** Full consolidation aggregates revenues and expenses, which can hide divergent dynamics between sports or between entities. The literature emphasizes the usefulness of segmented reporting to avoid misinterpretations, especially when the portfolio includes disciplines with different monetization models (e.g., football with transfer market versus motorsport with global exposure and commercial partnerships). Without segmentation, consolidated results can “net out” volatility: losses in one entity can be covered by gains in another, and users can underestimate the specific risk of segments. In addition, the equivalence method (IAS 28) may produce limited visibility into the asset structure and accounting policies of the associate, which complicates investment analysis when part of the portfolio is ‘outside’ the consolidated balance sheet (Morrow, 2013; Regoliosi, 2018).

2. **Purchase price allocation (PPA) and recognition of identifiable intangibles.** Under IFRS 3, the allocation of the price paid between identifiable assets and goodwill is a critical step, as it subsequently defines the depreciation profile (for intangibles with a finite duration) and the exposure to impairment (for goodwill and intangibles with an indefinite duration). In sports, PPA may include brands, contractual relationships (sponsors, media rights), licenses, and in certain configurations, customer relationships (fans) as identifiable assets if they are separable/contractual. The literature on “invisible value” suggests that many components of brand and relational capital occur accounted for only through acquisitions, not through organic growth. The consequence is low comparability: a group that grows through acquisitions will have a balance sheet “loaded” with intangibles and goodwill, while a group that grows organically may have similar economic value, but a “thinner” balance sheet (Morrow, 2013; Occhipinti, 2022).
3. **Goodwill: economic significance, but accounting volatility through depreciation tests.** Goodwill is the premium paid for synergies and value creation that cannot be identified separately. In sports, this premium may reflect expectations of marketing synergies, media exposure and increased commercial value at group level. However, since goodwill does not amortize, the reported performance may be relatively favorable in the short term (without depreciation expense), and the adjustment will occur in the form of an impairment loss when the assumptions are no longer supported. Given the volatility of sport (results, qualifications, injuries, regulatory changes), this mechanism makes profit sometimes lumpy: periods of profits followed by significant impairment.
4. **Impairment tests (IAS 36) as an area of managerial judgment and arbitrage risk.** IAS 36 requires that assets be tested for impairment based on recoverable amount, defined as the maximum of fair value, less costs of sale and value in use. In sports, the estimation of future flows involves scenarios regarding sports performance, qualifications in competitions, audiences and commercial contracts. The literature on valuation and intangibles in sport suggests that in the absence of robust disclosures, there is a risk of arbitrage: management may delay the recognition of deterioration through optimistic performance assumptions, which reduces the consistency of results for users. Hence the importance of explanatory notes on discount rates, growth rates and sensitivities (Morrow, 2013; Martin Lozano & Carrasco Gallego, 2011).

A practical effect is on the indicators used by lenders and leagues that monitor sustainability: through PPA, total assets increase and the depreciation of intangibles reduces operating profit in the following years, while goodwill can keep profit higher until the moment of impairment. Thus, comparability between groups that grew organically and groups that grew through acquisitions is low, and the analysis needs to be based more on cash-flow and revenue stability indicators. Also, in sports, depreciation triggers can be linked to institutional events: relegation, sanctions, loss of license or changes in regulations. The literature on insolvency in football shows that such institutional constraints alter the dynamics of risk and must be integrated into the interpretation of consolidated situations (Regoliosi, 2018, Ganji, 2025; Copper & Joyce, 2013).

Traceability to the matrix: the main misstatement risks underpinning RQ3 are operationalized in the risk matrix (see risk categories/IDs such as PPA/goodwill (IFRS 3), consolidation/disclosures (IFRS 10/12), impairment (IAS 36) and are summarized in Table 1.

Practical implications: For CFO/controlling functions, the matrix supports policy setting (OPEX/CAPEX boundaries, intangibles recognition, consolidation rules), control design and disclosure planning across entities and sports. For auditors and audit committees, it offers a structured lens aligned with judgement-intensive areas (impairment, revenue recognition, PPA, related parties) and improves the consistency/relevance of risk prioritization and audit focus. For investors and creditors, the BS/P&L/CF mapping enhances the interpretation of earnings quality and comparability, particularly when intangible value creation (brand, fan relationship, performance) is only partially captured by accounting.

#### ***RQ4: Role of governance and financial sustainability rules in investment discipline and reporting quality***

The literature indicates that governance and financial sustainability rules are institutional variables that can change both investment behavior and the quality of reporting. In sport, performance pressure creates incentives for short-term over-investment (salaries, transfers), and governance and regulatory mechanisms try to “discipline” these incentives through transparency, budget constraints and sanctions. Studies suggest that financial reporting and sustainability rules are complementary: rules need credible and comparable data, and reporting becomes more relevant when it is geared towards financial discipline and accountability goals.

1. **Governance as a system of alignment of multiple logics.** Sports organizations often operate under multiple logics: sports performance, economic profitability, community mission, and regulatory requirements.

Adams (2024) shows that organizations can adopt innovative arrangements to reconcile “love and money” and discusses hybrid models (NPO and private governance) that generate differentiated accountability requirements. In partially supporter-owned clubs, the paradox of success can amplify investment pressures and financial risk, which increases the importance of internal governance and budget transparency mechanisms. Jacobsen (2023) complements this perspective by showing that “institutional complexity” (competing requirements) forces organizations to develop control and reporting capabilities to navigate between objectives (Skirstad & Chelladurai, 2011; Agostino & Thomasson, 2024; Adams, 2024; Jacobsen, 2023).

2. **Financial sustainability rules and investment discipline.** Evans *et al.* (2019) show that financial regulation can reduce over-investment and encourage planning, but effectiveness depends on design and implementation. To the extent that the rules include quantifiable indicators (e.g. wage-to-income ratio), reporting and audit requirements, they can alter the reaction function of clubs: investments become more correlated with revenue-generating capacity and continuity risk. From this perspective, the rules function as an “external governance framework”, which disciplines competition for performance through financial constraints.
3. **Quality of reporting: transparency, disclosures and reduction of arbitration.** Regulation does not only improve the quality of reporting through constraints, but also through disclosure requirements. The literature underlines that, in sports, the areas of managerial judgment are wide (intangibles, depreciation, recognition of income), and without transparency there is a risk of arbitration and comparability decreases. Ganji (2025) synthesizes the research on accountability and shows that there is a need for tools and indicators that connect financial reporting with accountability to stakeholders. He points out that accountability is often mediated by vulgate accountability, which means that, in sports, the quality of reporting also includes the quality of explanations of investment decisions, not just technical compliance (Morrow, 2013; Ganji, 2025; Cooper & Johnston, 2012; France *et al.*, 2024).
4. **Effects on investment decisions in a multi-sport portfolio.** In portfolios, governance must manage both the intra-group allocation of resources and reputational risk. Effective governance defines budgets by segments, risk limits, rules for internal resource allocation and internal

reporting requirements, so that brand synergies do not mask the chronic subsidization of some segments. In this direction, the literature suggests that segmented reporting and sustainability indicators (e.g., wage-to-revenue) are essential to assess whether the portfolio consistently creates value or merely redistributes resources to fund competition.

However, the literature warns that strict rules can lead to avoidance behaviors if monitoring is poor: reframing expenses, optimizing contracts, or shifting costs to associated vehicles can maintain the appearance of compliance without reducing economic risk, which reiterates the importance of governance and auditing. In organizations with high institutional complexity, management must negotiate sports, commercial and regulatory requirements simultaneously; show that this complexity affects decision-making processes and may impose additional control mechanisms. In addition, the professionalization of sports organizations (including grassroots level) depends on accounting and accountability capabilities, and the focus solely on financial metrics can erode community goals. In multi-sport portfolios, these results suggest a governance 'design' in which financial indicators are complemented by social and reputational indicators, so that investment discipline is compatible with the identity and legitimacy of organizations (Ganji, 2025; Cooper & Johnston, 2012; Jacobsen, 2023; Melnick et al., 2025; Baumeister, 2025).

## **Conclusions**

Although the literature provides relevant methodological landmarks, they usually materialize in different forms from the instrument proposed in this study. Some contributions function as a mapping of high-risk areas from an audit perspective, through Key Audit Matters (KAM) reporting, while others punctually delve into critical topics for sport, such as the recognition and valuation of intangible assets, impairment tests or related party transactions (TORs). In parallel, UEFA's institutional framework provides a set of compliance and financial monitoring criteria, useful for disciplining reporting, but geared predominantly towards licensing and sustainability, not a comprehensive tool for assessing the risk of misstatement.

However, no paper has been identified that publishes an identical matrix, in the sense of an integrated configuration with the same dimensions, the same granularity (rows/columns) and an explicit prioritization mechanism through Probability  $\times$  Materiality scoring. In this context, the proposed matrix

constitutes an instrumental contribution: an applied synthesis that integrates audit records, IAS/IFRS requirements and particularities of the sports industry into an operational framework, extensible for multi-entity and multi-sport portfolios.

Table 1 summarizes the synthesized answers to the research questions addressed in this study, together with the relevant IAS/IFRS and sectoral rules, the corresponding financial statement implications, and the associated key risks.

**Table 1.** Synthesis of findings by research question (RQ1–RQ4)

<b>RQ</b>	<b>Synthesis answer (condensed)</b>	<b>IAS/IFRS / sector rules</b>	<b>Financial statement impact</b>	<b>Key risks (Appendix 1 IDs)</b>
<b>RQ1</b>	Investments are classified by type (equity / M&A, intangibles, infrastructure, marketing, capabilities), with different IAS / IFRS treatments and sensitivity to sectoral rules.	IFRS 3, IFRS 10, IAS 28, IFRS 9; IAS 16; IAS 38; IFRS 15; Licensing / Sustainability Rules	Balance sheet, P&L, CF (especially CFI vs profit)	1–5, 8, 14
<b>RQ2</b>	Accounting partially captures the intangibles: the rights to the athletes are visible (cost), the internal brand/fanbase is mostly invisible; relevance increases through disclosure and complementary KPIs.	IAS 38, IAS 36; (PPA in IFRS 3); KPI / integrated reporting	Balance sheet (intangibles), P&L (amortization / impairment), performance interpretation	1–4, 10, 12
<b>RQ3</b>	Consolidation, PPAs, and goodwill affect comparability: aggregation can mask segments; goodwill creates volatility through impairment; IAS 36 assumptions are areas of judgment.	IFRS 10, IFRS 3 (PPA), IAS 36, IAS 28, IFRS 12	Balance sheet (active / goodwill), P&L (Amortization/impairment), note	3, 4, 6, 11
<b>RQ4</b>	Governance and sustainability rules discipline investments but can induce reclassifications; The quality of reporting depends on transparency, TOR and controls.	IAS 24; IFRS 15; reguli UEFA/league (cost control, overdue payables etc.)	P&L (revenue/expenses), CF (intra-group), reputational/compliance	7, 9, 11, 15

Source: Authors' compilation

The sources analyzed (KAM, thematic studies on impairment/disclosure/TPR and the UEFA (Union of European Football Associations) framework provide either inventories of sensitive areas, in-depth analyses on specific topics, or compliance requirements. Our matrix transforms these elements into a single, consistently usable operational tool for financial reporting interpretation and group-wide governance. Furthermore, the matrix brings the following “plus” elements:

### **1. Multi-area integration (full coverage of distortion mechanisms)**

Instead of being limited to a single area (e.g. impairment or TOR) or a set of topics reported by the auditors, the matrix covers simultaneously: intangibles (IAS 38), impairment and goodwill (IAS 36), consolidation and reporting scope (IFRS 10/IFRS 12), purchase price allocation (IFRS 3), revenue recognition (IFRS 15), provisions (IAS 37), going concern, FX/multi-country, PPP/public projects, segmentation and related party transactions (IAS 24).

### **2. Explicit prioritization: Probability (1–5) × Materiality (1–5) scoring**

Sources indicate the importance of homework, but do not provide a standardized prioritization mechanism. The matrix introduces a comparable scoring scheme between risks and sports, which allows the ordering and focus of resources (internal audit, due diligence, group controls) on high-scoring risks.

### **3. Complete accounting interpretation: impact mapped to Balance Sheet / P&L / Cash-flow**

Distinctly, each risk is translated into the informative impact on the three financial statements. This mapping reduces the ambiguity of interpretation and helps to assess the quality of earnings (profit–cash), financial position (assets/liabilities) and sustainability of funding.

### **4. Probable direction of distortion and typical mechanism (how it breaks)**

The matrix not only lists risks but explicitly explains the mechanism by which the distortion occurs and the likely direction (overvalued vs. undervalued profit/assets). This is essential for interpreting variations between periods and for quickly diagnosing the causes.

### **5. Red flags and controls/mitigations (direct link to governance)**

Each risk is accompanied by observable red flags and control/ mitigation measures. Thus, the matrix becomes a risk management tool, not just a descriptive

framework, facilitating the implementation of accounting policies, review procedures, benchmark and disclosure requirements.

### **6. Scalability for multi-sport and multi-jurisdiction portfolios**

Unlike sources focused on football or a regulatory perimeter (UEFA), the matrix is built for multi-entity (multiple clubs/teams) and multi-sport (football, motorsport, extreme sports) portfolios, including multi-country and multi-currency exposures. This increases relevance for sports conglomerates and global investors.

### **7. Compatibility: treat existing sources as a ‘subset’ and operationalize them**

The matrix does not contradict the sources but integrates them: the KAM themes become operationalized rows; conclusions about impairment/disclosure/TPR are mapped to risks and controls; UEFA requirements are treated as a subset of compliance within the broader reporting quality framework. This avoids fragmentation and achieves a coherent vision.

### ***Practical and scientific value***

From a practical perspective, the matrix functions as a financial-accounting risk register for sports investments, useful in due diligence, internal audit, group control and communication with auditors/regulators. From an academic perspective, the contribution consists of the applied and replicable synthesis of literature and standards in a tool that increases the consistency and relevance of interpretative results and allows for systematic comparison of sources of distortion between entities and sports.

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## Appendix 1. Risk matrix (Probability × Materiality) and financial statement mapping

This Appendix documents the scoring rubric and parameter construction (probability, materiality, decision rules, quality checks and sensitivity), enabling replication of the prioritization logic used in the matrix.

The matrix of risks of misrepresentation of accounting information was constructed through a triangular approach, combining three complementary sources: (i) academic literature on financial reporting in sport, with a focus on specific intangible assets (rights to athletes), impairment tests and quality of disclosures (e.g.; (ii) audit practice records, through the use of recurring Key Audit Matters (KAM) themes reported for listed European clubs (Auvinen, 2025), which function as an operational proxy of significant estimation and high-risk areas; and (iii) compliance and monitoring requirements of sports regulators, in particular the UEFA Licensing and Financial Sustainability Framework (UEFA, 2025), which imposes criteria and verifications for reporting scope, related party transactions, relevant revenues and costs, as well as financial discipline indicators. In addition, the matrix explicitly includes risks associated with related party transactions and fair value issues in the context of break-even rules, according to the dedicated literature. Based on these sources, each risk was described by the typical mechanism of occurrence, the likely direction of the distortion and the anticipated impact on the balance sheet, profit and loss account and cash flows, and prioritization was achieved through a simplified Probability (1–5) × Materiality (1–5) scoring (Maglio & Rey, 2017; Gazzola et al., 2019; Cincimino, 2014).

### *Scoring methodology: Probability (1–5)*

Probability (P) estimates how likely it is that the mechanism described will generate a significant distortion in practice, in the absence of additional controls. For each risk (row in the matrix) the P score was established through a cumulative assessment of the following criteria: (i) frequency of transactions/associated conditions in sport; (ii) contractual and accounting complexity; (iii) the degree of judgment/estimation (including assumptions and models); (iv) vulnerability to managerial bias (performance incentives, reputational pressure, licensing/sustainability constraints); and (v) the difficulty of ex-post verification (auditability) of assumptions and allocations made. The same criteria have been applied consistently to all risks, and the justification of the score is supported by the descriptive fields in the matrix (typical mechanism, red flags, controls).

The scale used for Probability (1–5) is:

ü **1 – Very low:** Rare/atypical mechanism; simple transactions; limited managerial judgment; strong controls; low pressure for reclassifications.

ü **2 – Reduced:** May occur occasionally, under specific conditions; moderate complexity; distortion would require multiple failures of internal control.

ü **3 – Average:** Appears periodically in practice; significant judgment (estimates, classifications); moderate vulnerability to bias and documentation gaps.

ü **4 – High:** Occurs frequently in sports; complex contracts/transactions; large room for judgment; relevant managerial pressure; typical recurring errors in the industry.

ü **5 – Very high:** Structural risk of the model; critical estimates difficult to verify; multiple reclassification levers; high probability without strict governance.

*Scoring methodology: Materiality (1–5)*

Materiality (M) reflects the potential magnitude and extent of distortion and its impact on the interpretation of the financial statements. For each risk, the M was determined by combining the following criteria: (i) impact area (one account/segment versus multi-account chain effects); (ii) the sensitivity of the indicators used in the decision (profitability, leverage, cost control, continuity); (iii) the likelihood of materialization through discrete adjustments (depreciation, provisions, reclassifications) that may produce “shocks” in the result; and (iv) the effect on comparability and on the interpretation of performance at group level (e.g., the possibility of masking losses through consolidation/aggregation or of “moving” profit between entities through intra-group transactions). M is thus interpreted as an economic-informational materiality (impact on the decision), not just as a strictly numerical materiality.

The scale used for Materiality (1–5) is:

ü **1 – Very low:** Small and localized impact; does not significantly alter indicators; limited effect on interpretation.

ü **2 – Low:** Limited impact; may occasionally affect an indicator, without threshold effects (covenants/licensing).

ü **3 – Average:** Material impact at the level of accounts/segments; may alter comparability and trends; influences performance interpretation.

ü **4 – High:** Significant impact on profit, assets or liabilities; may affect key indicators or compliance; possible effect on continuity.

ü **5 – Very high:** Potentially pervasive impact; may change the conclusions about solvency/continuity; risk of major adjustments (impairment/restatement).

*Decision rules (heuristics) for multi-entity/multi-sport portfolios*

To ensure consistency and relevance of the results in scoring between risks and between sports, decision rules (heuristics) were used applied consistently at the level of each row in the matrix:

√ “Judgement + complexity” increases the probability: risks based on estimates (impairment, PPA, recognition of variable income) receive, on average, higher P-scores than risks based on standardized transactions.

√ “Effect on three situations” increases Materiality: if a risk can simultaneously distort Balance Sheet, P&L and Cash-flow (e.g. aggressive capitalization, premature recognition of income), M is valued higher.

∨ “Pervasiveness and comparability” increase Materiality: Risks that affect interpretation between entities/segments (consolidation, segmentation, ROT) are treated as having a high M even though the impact on a single accounting line may be difficult to isolate.

∨ “Institutional constraints” increase the probability: where there is compliance pressure (licensing, sustainability indicators), the probability of reclassification and outcome management is treated as higher.

∨ “Ex-post verification difficulty” increases Probability: where auditability is low (fair value in RPT, impairment assumptions, variable components in contracts), P is adjusted upwards.

These rules are appropriate for multi-entity/multi-sport portfolios because they allow for the comparison of risks between disciplines with different monetization models, while maintaining a common unit of analysis: financial reporting mechanisms and their effect on the interpretation of consolidated and segmented financial statements.

*Illustrative examples (application of P×M headings)*

For transparency, we present three examples from the matrix (aggressive capitalization, deferred impairment, related party transactions), explaining the P&M scoring reasoning based on the above headings. The final values are those written in the matrix.

**Example 1 – Aggressive cost capitalization** (players/academies/scouting) can overvalue assets and profit. (P=4, M=5).

Probability Reasoning (P=4): (i) common mechanism in sport because intangible investments are prevalent and there is pressure for results; (ii) high complexity of the OPEX/CAPEX delineation and cost eligibility under IAS 38; (iii) significant discretion in the allocation of directly attributable costs; (iv) vulnerability to managerial bias (improvement of the current result by postponing the recognition of expenses).

Materiality Reasoning (M=5): Misstatement can simultaneously affect the Balance Sheet (overvalued intangible assets), P&L (undervalued current expenses, overvalued profit, future depreciation), and Cash-flow (profit-cash dissonance). In addition, it can distort financial discipline indicators and lead to subsequent significant adjustments (reclassifications/impairment).

**Example 2 – Deferred impairment** (intangibles/goodwill) produces overestimated profit until sudden adjustments. (P=3, M=5).

Probability Reasoning (P=3): mechanism dependent on assumptions (value in use, discount rates, sports and commercial performance scenarios), therefore exposed to judgment; However, its occurrence as a material misstatement is conditional on the existence of triggers and can be mitigated through governance (mandatory sensitivities, independent review of assumptions).

Materiality Reasoning (M=5): impairment can lead to discrete and substantial adjustments, with a major impact on the result (P&L), on the value of assets (Balance Sheet) and on solvency indicators. The effect is pervasive in interpretation, as it can change conclusions on the sustainability of the model and increase the volatility of reporting.

**Example 3 – Transactions with related parties at non-market prices move profit between entities. (P=3, M=4).**

Probability Reasoning (P=3): transactions with affiliated parties regularly occur in groups and portfolios (intra-group sponsorships, licenses, services), but not all of them are non-market. Risk increases when there is compliance pressure or when fair value measurement is difficult, and the lack of proper benchmarking and disclosure can amplify the likelihood of misrepresentation.

Materiality Reasoning (M=4): TOR can significantly distort revenues and margins (P&L) and affect comparability between entities/segments; In certain configurations, it can transfer intra-group cash-flow. While the impact may be concentrated in a few contracts, compliance and reputational effects amplify materiality.