



The Enterprise Value of Football Clubs:
An Asset-Based Lower Bound Valuation
Framework
Applied to the Italian Serie A

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Abstract

Title: The Enterprise Value of Football Clubs: An Asset-Based Lower Bound Valuation Framework Applied to the Italian Serie A

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Keywords: Enterprise Value, Football Clubs, Serie A, Asset-Based Valuation, Player Valuation, Real Options, Sports Finance

The financialisation of professional football has produced a persistent and widening gap between the prices at which top-tier clubs change hands and the values that conventional financial methods can justify. Discounted Cash Flow analysis fails in a sector dominated by structurally negative EBIT and binary sporting risk; market multiples lack truly homogeneous comparables; market-capitalisation approaches are constrained by the small universe of listed clubs. This dissertation develops an asset-based Lower Bound valuation framework that delivers a defensible floor price for football clubs, abstracting from the trophy and socio-emotional premia that drive observed transaction prices above any asset-anchored value. The framework is articulated around two pillars: a Player Asset valuation built on Adjusted Present Value logic, with separate discounting of contingent benefits and contractual costs and a Bermuda-option treatment of transfer-window flexibility; and a Stadium valuation through Depreciated Replacement Cost adjusted by an empirical utilisation coefficient that captures fanbase intensity. The framework is applied to all twenty Italian Serie A clubs at the start of the 2025/26 season, producing an aggregate Lower Bound Enterprise Value of EUR 9.56 billion. A transaction backtest against eight Serie A control deals between 2019 and 2025 confirms the floor hypothesis in seven of the eight cases, with multiples of model EV over implied transaction value ranging from 1.02x to 2.48x. The single counter-example identifies the boundary conditions of the framework. The contribution integrates the trophy-asset framework with the value-gap literature, providing a quantitative anchor against which the trophy premium can be measured and negotiated.

Resumo

Título: O Enterprise Value dos Clubes de Futebol: Um Modelo de Avaliação Asset-Based como Limite Inferior Aplicado à Serie A Italiana

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Palavras-chave: Enterprise Value, Clubes de Futebol, Serie A, Avaliação Asset-Based, Avaliação de Jogadores, Opções Reais, Finanças do Desporto

A financeirização do futebol profissional produziu uma divergência persistente entre os preços a que os clubes de topo mudam de mãos e os valores que os métodos convencionais conseguem justificar. A análise de Discounted Cash Flow falha num setor dominado por EBIT estruturalmente negativo e risco desportivo binário; os múltiplos carecem de comparáveis homogêneos; as abordagens de capitalização bolsista são limitadas pelo reduzido universo de clubes cotados. Esta dissertação desenvolve um modelo asset-based como Limite Inferior, que fornece um floor price defensável, abstraindo dos prémios trophy e socio-emocionais que conduzem os preços de transação acima de qualquer valor ancorado nos ativos. O modelo articula-se em dois pilares: a avaliação do Ativo Jogadores, construída sobre a lógica do Adjusted Present Value, com desconto separado dos benefícios contingentes e dos custos contratuais e um tratamento Bermuda-option da flexibilidade das janelas de transferência; e a avaliação do Estádio através do Depreciated Replacement Cost ajustado por um coeficiente empírico de utilização que captura a intensidade da base de adeptos. O modelo é aplicado aos vinte clubes da Serie A italiana na época 2025/26, produzindo um Enterprise Value Limite Inferior agregado de 9,56 mil milhões de euros. Um backtest sobre oito transações de controlo entre 2019 e 2025 confirma a hipótese do floor em sete dos oito casos, com múltiplos entre 1,02x e 2,48x. O único contraexemplo identifica as condições-limite do modelo. A contribuição integra o trophy-asset framework com a literatura sobre value gap, fornecendo uma âncora quantitativa para medir e negociar o prémio trophy.

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1. Introduction

1.1 Background and Motivation

Football has long held a singular place in the global cultural imagination, and over the past two decades it has also undergone a profound financial transformation. What was once a community-rooted sporting tradition has evolved into a global economic ecosystem, sustained by international television audiences, multi-billion-euro media-rights contracts, and an increasingly sophisticated commercial infrastructure. Across Europe, top-tier clubs operate today as multi-revenue businesses whose annual turnover frequently exceeds that of mid-sized industrial corporations, while their brand reach often surpasses that of consumer-goods multinationals. The professionalisation of management, the institutionalisation of governance, and the entry of large pools of foreign capital have reshaped both the strategic ambitions of clubs and the expectations of their stakeholders.

Yet the most striking feature of the modern football industry is not its commercial growth but its persistent and widening gap between price and value. In a 2023 commentary on the financial economics of professional sports, Damodaran characterised top-tier sports franchises as the archetypal trophy assets: scarce, unique, emotionally charged holdings whose acquisition price is driven less by discounted cash flows than by the irreducible desire to own them. Football clubs sit at the centre of this category. The Washington Commanders sold for over six billion dollars in 2023; Chelsea Football Club changed hands for 5.3 billion dollars in 2022; the Phoenix Suns followed at four billion in the same year. None of these prices is rationalisable on the basis of recent earnings, free cash flow projections, or any conventional multiple. They are rationalisable only if one accepts that the buyers were not, in any meaningful sense, acquiring a financial asset. They were acquiring something that finance theory does not naturally accommodate.

Damodaran identifies four ingredients that define a trophy asset: emotional appeal that overwhelms financial characteristics; uniqueness that cannot be replicated by capital alone; scarcity that prevents the bidding pool from clearing efficiently; and a holding logic anchored in non-financial motivations. Football clubs satisfy all four. They generate intense emotional engagement among owners, players, and fans, often spanning generations and territorial identities. Each club is unique by definition, since its history, its trophies, and its place in a community cannot be manufactured by another entrant. Top-tier clubs are scarce: in any given

country only a handful of institutions command true national or international relevance, and the membership of this set evolves on geological time scales. And the new wave of buyers, increasingly composed of billionaires and sovereign-wealth-backed entities, holds these assets for reasons that include but extend well beyond financial return: prestige, geopolitical positioning, soft power, and dynastic ambition.

1.2 The Financialisation of Football and the Pricing Disconnect

The financialisation of football is no longer a marginal phenomenon. Major private equity firms have entered the sector through dedicated investment vehicles: CVC Capital Partners has acquired stakes in the commercial rights of multiple top European leagues, Apollo Global Management and Oaktree Capital have established sports-focused mandates, and a growing number of family offices and sovereign-backed entities have positioned football clubs alongside more conventional alternative investments. The sector is rapidly emerging as a recognised asset class within global capital markets, with its own deal flow, intermediaries, and valuation conventions.

This institutionalisation sits in unresolved tension with the trophy character described above. On one side, clubs continue to be acquired at premia that classical financial models cannot rationalise, reflecting the persistence of socio-emotional and reputational benefits accruing to controlling shareholders (Tiscini and Dello Strologo, 2016). On the other side, the discipline imposed by institutional investors, who must justify allocations to limited partners, comply with regulatory frameworks, and report performance against benchmarks, is generating demand for transparent and replicable valuation methodologies. Tiscini and Dello Strologo, through panel regression analysis on twenty-two listed European clubs, demonstrate empirically that Enterprise Value is uncorrelated with EBIT or net income but strongly correlated with revenues, and that observed transaction prices systematically exceed the values justified by financial fundamentals. Their characterisation of this divergence as a structural value gap, sustained by private and socio-emotional benefits of control, is fully consistent with Damodaran's trophy-asset framework: the same phenomenon viewed from two complementary angles.

1.3 Research Problem and Objectives

The central research problem addressed by this dissertation is methodological: how can the Enterprise Value of football clubs be estimated through a framework that integrates financial

fundamentals with football-specific intangibles, while producing a defensible Lower Bound for acquisition decisions? The traditional valuation methodologies of corporate finance, namely Discounted Cash Flow, market multiples, and market-capitalisation approaches, either rest on assumptions that fail in the football context or capture only a narrow slice of the economic substance of clubs. Industry-specific attempts, such as the Markham (2013) multivariate model, mark important steps but suffer from structural limitations that prevent their adoption as universal standards.

Against this background, the objective of the present work is to design and operationalise an asset-based valuation framework, grounded in fair value principles, capable of producing a Lower Bound estimate of Enterprise Value for football clubs, and the corresponding Net Asset Value through the deduction of Net Financial Debt. The framework is articulated around two pillars, player asset valuation and stadium valuation, complemented by residual intangibles. The Lower Bound interpretation is deliberate and analytically central: rather than attempting to estimate the full transaction price, which inevitably embeds strategic, control, and trophy premia, the framework provides a floor below which a rational seller should not transact, leaving the analysis of premia to a separate conceptual layer. In a market characterised by pricing disconnect, scarcity-driven bidding wars, and emotionally motivated buyers, a rigorous floor is precisely the analytical instrument that has been missing. It does not replace the trophy premium, it disciplines it: by making the floor explicit, the entire premium becomes interpretable and the negotiation gains a defensible reference point.

1.4 Research Questions

From the research problem stated above, three guiding research questions emerge. First, what are the principal financial and non-financial value drivers that determine the Enterprise Value of a football club, and how do they map onto the trophy-asset characteristics of scarcity, uniqueness, and emotional appeal? This question requires the identification of both quantitative inputs, including revenue streams, cost structures, and asset values, and qualitative dimensions such as sporting performance, brand equity, and contractual optionality. Second, how can the traditional valuation methods of corporate finance be adapted, or replaced, to accommodate the structural specificities of the football industry, and to produce a Lower Bound that captures the asset side of value while leaving the trophy premium analytically separate? This question motivates the diagnostic literature review of Chapter 2 and informs the methodological choices of Chapter 3. Third, to what extent can data-driven valuation models, such as the Standard

Football proprietary framework, improve the objectivity and replicability of football club valuation when integrated within an asset-based architecture? This question grounds the empirical contribution of the thesis and connects it to the broader trend of analytics-led decision-making in professional sports. The first research question is addressed in Chapters 2 and 3, the second in Chapters 3 and 4, and the third in Section 3.4.2 and Chapter 4.

1.5 Academic and Managerial Relevance

From an academic standpoint, this dissertation contributes to the limited and fragmented body of literature on sports finance and valuation. By bridging the established corporate finance toolkit with the unique characteristics of football clubs, and by integrating recent empirical evidence on the value gap (Tiscini and Dello Strologo, 2016) with an operational asset-based framework, the study aims to provide both a conceptual reference and a foundation for future empirical work. The methodological transparency of the proposed framework, with its explicit assumptions, measurable inputs, and replicability across clubs, is intended to facilitate scholarly engagement with sports valuation as a recognised sub-field of finance.

From a managerial perspective, the framework provides a quantitative anchor for acquirers, selling clubs, and regulators, with implications developed in detail in Chapter 5.

1.6 Scope and Delimitations

Several dimensions fall outside the scope of this dissertation. It does not address sporting strategy, talent scouting, or coaching effectiveness, which lie beyond the financial valuation perimeter. It does not develop a full transaction-pricing model that would require explicit estimation of synergy, control, and trophy premia: the focus is on the floor, not the ceiling. It does not propose changes to regulatory or accounting frameworks, even where these may interact with valuation outcomes. Finally, the academy and youth-development dimension, while economically relevant, is not treated by the framework; an explicit treatment of academy value is identified as an avenue for future research.

The framework's empirical application is also deliberately focused on Italian Serie A clubs, reflecting three considerations: the availability of high-quality data through the Standard Football proprietary database, the analytical depth of public financial disclosures by Italian clubs, and the structural relevance of Serie A as a top-five European league characterised by complex stadium-ownership patterns and significant intangible-asset heterogeneity. The

framework itself, however, is designed to be universally applicable: its conceptual architecture can in principle be deployed for any professional football club.

2. Literature Review: Valuation Methodologies and Their Limitations

2.1 Foundations of Corporate Valuation

Corporate finance theory recognises two complementary families of valuation methods: cash flow-based intrinsic approaches, which derive a company's value from its expected future cash flows discounted at a risk-adjusted rate, and relative approaches, which infer value from market prices observed for comparable assets or transactions. The Discounted Cash Flow (DCF) method, market multiples, and asset-based methods are the principal tools used by practitioners and scholars (Damodaran, 2012; Koller, Goedhart and Wessels, 2020). Each rests on a set of assumptions: cash-flow predictability, market completeness, and the existence of meaningful comparables. When these assumptions hold, the methods deliver consistent and defensible value estimates. When they fail, valuation outputs become unreliable. The football industry, as the following sections demonstrate, is precisely a context in which the standard assumptions are systematically violated.

2.2 Discounted Cash Flow (DCF)

2.2.1 Theoretical Framework

The DCF method estimates the value of a business by discounting its expected future free cash flows (FCF) at the Weighted Average Cost of Capital (WACC). Cash flows are typically projected over a five- to ten-year horizon, beyond which a terminal value captures the residual worth of the company. The result, commonly referred to as intrinsic value, is highly sensitive to assumptions about growth rates, profit margins, capital expenditures, and the discount rate. For this reason, DCF analyses are normally presented as ranges rather than point estimates and tested through sensitivity analyses on key inputs.

2.2.2 Application Constraints in the Football Industry

Despite its widespread use in corporate finance, DCF performs poorly in the football industry for three interconnected reasons. First, EBIT — the starting point of free cash flow computation — is structurally negative for most clubs, and this is not an accident of poor management but a structural feature of the football business model. Italian Serie A offers a particularly clear illustration: the wage bill, including player salaries, coaching staff, and the associated social

security contributions, is rigid in the short term because player contracts are multi-year fixed commitments, while the amortisation of player registration rights, capitalised as intangible assets and written down over the contract duration, depresses reported earnings further. The combined weight of these items routinely pushes EBIT below zero. Once amortisation is added back, free cash flow is typically less negative than EBIT but remains structurally weak and volatile, providing a fragile baseline for any DCF projection. Second, the volatility introduced by sporting outcomes makes long-horizon forecasting unreliable: a single relegation can cut revenues by 30 to 50 per cent in one season, while qualification for European competitions, particularly the UEFA Champions League, can have an equally dramatic upward effect through prize money, additional media-rights distribution, and incremental commercial exposure. Such binary, threshold-driven shocks cannot be captured by smooth growth assumptions. Third, the terminal value typically accounts for the largest share of the DCF output, and even minimal variations in perpetual growth or WACC dramatically alter the result. In a sector with structurally weak cash flows and high revenue volatility, both numerator and denominator of the terminal value are unstable, in stark contrast with observed market valuations (Tiscini and Dello Strologo, 2016).

2.3 Relative Valuation and Market Multiples

2.3.1 Methodology and Comparables Logic

Relative valuation determines the value of an asset by comparing it with market values of similar assets. After identifying a sample of comparables, analysts compute standardised multiples, typically EV/EBITDA, EV/Sales, or P/E, and apply them to the target. The popularity of this approach rests on three advantages: it is faster and less data-intensive than DCF, it aligns naturally with prevailing market sentiment, and it provides ready justification when the immediate goal is a transaction rather than long-term intrinsic valuation.

2.3.2 The Absence of Truly Comparable Peers in Football

Applying multiples rigorously requires a homogeneous comparable set, consistently measured benchmarks, and adjustments for structural differences. In football, none of these conditions holds. Clubs operate across leagues with markedly different broadcasting distribution rules, regulatory regimes, and governance structures: Italian Serie A operates a centralised media-rights distribution model in which a fixed share of total broadcasting income is allocated equally across clubs while the residual portion depends on league ranking, popularity metrics, and

historical results, generating a revenue mix that is structurally non-comparable to the proportionate or incentive-based formulas used in other top European leagues. Earnings-based multiples lose interpretive power further because EBIT and net income are frequently negative across the sector. Tiscini and Dello Strologo (2016) provide direct econometric evidence on this point: in a panel of twenty-two listed European clubs over the 2011-2015 period, they find no statistically significant correlation between Enterprise Value and either EBIT or net income, while EV is strongly correlated with revenues at the one-per-cent significance level. The implication is that EV/Sales is the only multiple that retains technical applicability, but even this measure offers a narrow view of value generation: it ignores the asset base, the financial structure, and the heterogeneity of intangible endowments across clubs. Multiples can serve as a useful cross-check on transactional benchmarks, but they cannot stand as the primary methodology for football club valuation.

2.4 The Markham Model

2.4.1 Construction and Logic

Markham (2013) proposes a synthetic valuation framework explicitly designed for football clubs and tested on the English Premier League. The model combines financial indicators, namely revenues, net assets, and net profit, with football-specific metrics such as stadium utilisation rate and the wage-to-turnover ratio, balancing a club's economic and sporting dimensions. Revenues act as the primary driver, consistently with UEFA Financial Fair Play principles, while net assets capture financial solidity and the wage ratio signals cost discipline (with a 50 per cent threshold considered prudent).

2.4.2 Strengths and Empirical Evidence

Markham's model has notable merits. It draws on certified accounting data and football-specific KPIs, sits midway in complexity between simple revenue multiples and a full DCF, and supports scenario analysis for events such as relegation, European qualification, or stadium development. Empirically, the author tested it against fifteen Premier League acquisitions between 2003 and 2012, reporting an average deviation of only 2.8 per cent from observed transaction values, materially better than Forbes estimates, revenue multiples, and DCF outputs over the same sample.

2.4.3 Structural Shortcomings

Despite these strengths, the Markham model presents structural weaknesses that limit its broader applicability. It relies heavily on static, retrospective accounting data, which clash with the inherently forward-looking nature of valuation. Football financial statements are also distorted by discretionary accounting practices: in Italian Serie A, the treatment of plusvalenze (capital gains generated by player transfers when sale prices exceed residual book values) has been the subject of repeated regulatory scrutiny, illustrating the extent to which reported figures can diverge from underlying economic substance. The functional form of the Markham model, combining revenues, net assets, profits, and the wage ratio, appears empirical rather than theoretically grounded, lacking the independent validation that would justify its specific algebraic structure. The model also omits critical intangible drivers that have come to dominate modern club valuations: brand strength, global fan base, international media rights, and digital engagement. Its empirical validation is geographically narrow (Premier League only) and temporally dated (2003-2012), and it cannot capture the discrete, binary nature of sporting events such as relegation or European qualification, which produce step-changes in revenues that no smooth functional form can represent. The Markham model thus deserves recognition as the first serious football-specific valuation attempt, but it remains an interesting academic experiment rather than a robust standard for contemporary investment decisions.

2.5 Market Capitalisation-Based Enterprise Value

2.5.1 Standard Application

For listed companies, the standard formula computes Enterprise Value as the product of outstanding shares and current market price, adjusted for net debt. This approach is widely used in conventional corporate finance because it reflects the price at which the equity actually changes hands.

2.5.2 Limitations in the Football Context

In football, this method is fundamentally inadequate for three reasons. First, the universe of publicly listed clubs is extremely small: in Italian Serie A, only Juventus and Lazio are listed on the Borsa Italiana, while the remaining clubs are privately held by industrial families, foreign holding companies, or institutional consortia, so market capitalisation data is simply unavailable for the majority of the sample. Second, even for listed clubs, share prices are heavily influenced by sporting performance, managerial decisions, fan sentiment, and short-term speculative behaviour, all of which generate volatility unrelated to the intrinsic value of the

underlying assets. Third, the method assumes liquid and efficient markets, but football club shares typically suffer from thin trading volumes and low free float, making prices highly sensitive to isolated investor actions. Tiscini and Dello Strologo (2016) further observe that listed share prices reflect minority floating positions rather than controlling stakes, which embed significant control premiums; in football, the magnitude of these premiums can reach levels well above those typical of other sectors.

2.6 The Value Gap: Private and Socio-Emotional Benefits

2.6.1 Empirical Evidence of a Persistent Value Gap

An important strand of the Italian academic literature has documented a systematic divergence between the market value of football clubs and the value justifiable on the basis of their financial fundamentals. Tiscini and Dello Strologo (2016), through panel regression analysis on twenty-two listed European clubs over 2011-2015, demonstrate that Enterprise Value shows no statistically significant correlation with EBIT or net income, while it correlates strongly and significantly with sales turnover. Their analysis also extends to a sample of Italian control transactions (Inter, Roma, Atalanta, Sampdoria, Bologna, Brescia) in the 2011-2015 window, where transaction prices systematically exceeded what could be justified by the targets' earnings performance. The evidence has only intensified in the years since: the more recent acquisitions of AS Roma by the Friedkin Group, AC Milan by RedBird Capital Partners, FC Inter by Oaktree Capital following the Suning default, and ACF Fiorentina by Rocco Commisso all confirm the persistence of investments at unsatisfactory or negative profitability. The phenomenon gives rise to what the authors describe as the football industry's value gap: a premium between observed market prices and the value implied by traditional financial methods that no standard methodology can fully explain.

2.6.2 Private Benefits of Control and Socio-Emotional Wealth

Tiscini and Dello Strologo attribute the value gap to two categories of non-financial benefits accruing to club owners. Private benefits of control include the indirect economic advantages of owning a football club, namely media exposure, business opportunities, and marketing exposure that the controlling shareholder would otherwise have to purchase at market cost. Socio-emotional benefits include psychological and reputational gratification: the prestige of leading a high-visibility institution, attachment to the team, and recognition within a community. These external benefits explain why investors are systematically willing to tolerate

sub-remuneration of equity capital in this sector, generating the paradox that the football industry's opportunity cost of capital, evaluated through standard financial methods on a stand-alone basis, would appear to be void or negative. The implication is that football club value cannot be assessed purely through expected cash flows or earnings multiples; the valuation framework must accommodate the role of intangible assets and external benefits in driving observed prices.

2.6.3 Implications for Methodological Choice

Tiscini and Dello Strologo (2016) explicitly conclude that the revalued net assets value method, an asset-based approach that captures the fair value of intangibles such as the player squad, the stadium, and the brand, is the most appropriate methodology for football clubs. The rationale is that, in a sector where direct profitability does not anchor value, the asset side of the balance sheet, properly revalued at fair market value, provides a more reliable basis for assessment than discounted cash flows or earnings multiples. The present dissertation builds directly on this insight, while addressing two limitations the authors themselves acknowledge: the highly subjective nature of the socio-emotional benefit estimate, and the dependence on a small sample of listed clubs. The framework developed in Chapter 3 operationalises an asset-based approach with objective, replicable inputs, deliberately producing a Lower Bound that excludes the socio-emotional and control premia, premia that, by construction, fall outside any defensible floor price.

2.7 Synthesis: Toward an Asset-Based Lower Bound Framework

The four traditional methodologies reviewed above all fail, in different ways, to deliver a consistent measure of football club value. DCF, despite its theoretical rigour, collapses in the presence of structurally negative EBIT and unpredictable sporting outcomes. Relative valuation lacks truly homogeneous comparables and serves more as a price justification than as a determinant of value. The Markham model, while football-specific, remains tied to static accounting data, ignores intangible drivers, and underestimates the binary nature of sporting risk. Market-capitalisation approaches are constrained by the tiny universe of listed clubs and by share-price volatility unrelated to fundamentals. The Tiscini and Dello Strologo (2016) findings reinforce this diagnosis: empirically, the value of football clubs is anchored not in earnings, but in turnover, intangibles, and external benefits that traditional financial methods cannot capture.

These limitations are not incidental: they reflect the structural uniqueness of football clubs as economic entities. Clubs combine sporting performance, entertainment, media, and consumer-brand dynamics within a single organisation. Their cost structure is rigid, their revenues are partially anchored to volatile sporting outcomes, their most valuable assets (the player squad) are tradable contractual instruments, their stadium often represents the largest tangible asset on the balance sheet but is frequently held under municipal concession rather than ownership, and their controlling shareholders derive benefits that are not reducible to monetary returns. A valuation framework that treats football clubs as ordinary firms, applying the standard tools of corporate finance without adaptation, is bound to misrepresent their economic substance.

3. Methodology: An Asset-Based Lower Bound Valuation Framework

3.1 Conceptual Foundation: Fair Value as Exit Value

The valuation framework developed in this chapter is grounded in the concept of fair value as defined by IFRS 13 and ASC 820: the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. This definition emphasises three properties that are particularly relevant for football clubs. First, fair value is an exit notion: it reflects what the holder of the asset could obtain by disposing of it under normal market conditions, rather than the value it generates in continued use. Second, fair value is a market-participant concept: it abstracts from the idiosyncratic intentions of any specific buyer or seller and focuses on the value that any rational counterparty would attribute to the asset. Third, fair value presupposes an orderly transaction, excluding distressed sales and forced liquidation scenarios.

Anchoring the framework in fair value, rather than in cash flow-based intrinsic or strategic value, is consistent with the analytical position established in Chapter 1. The framework still delivers an intrinsic value of the club, but one derived from the fair value of the underlying assets rather than from projected earnings or cash flows. Cash-flow-based intrinsic valuation, in the form of discounted cash flow analysis, requires multi-year projections that the structural volatility of football revenues cannot reliably support. Strategic value depends on synergies, control rights, and trophy motivations that are by construction buyer-specific and therefore not generalisable. Asset-based fair value, by contrast, can be determined objectively from observable inputs and from market evidence, providing the methodological discipline that the football industry has historically lacked.

3.2 The Lower Bound (Floor Price) Concept

Fair value, as defined above, can take many forms depending on the perspective from which it is computed. The framework developed in this dissertation is constructed to deliver a specific instance of fair value: a Lower Bound estimate of Enterprise Value, also referred to as the floor price. The Lower Bound is defined as the minimum value at which a rational, fully informed seller should be willing to transfer ownership of the club, given the fair value of the assets controlled by the entity. By construction, the Lower Bound excludes any premium that the

buyer may be willing to pay for strategic synergies, control rights, or trophy motivations: these belong to a separate conceptual layer of valuation, addressed only indirectly in the empirical analysis of Chapter 4.

3.2.1 Rationale: Why a Floor Price Matters in M&A

The case for a Lower Bound rests on two arguments. The first is analytical: in a sector where transaction prices are systematically driven by trophy-asset behaviour and where the value gap between fundamentals and observed prices is structural rather than incidental, a defensible floor is the only quantitative anchor that does not depend on the identity, balance sheet, or motivations of the specific buyer. The second is operational: in any negotiation, the floor price defines the seller's reservation value, the threshold below which the transaction destroys value for the incumbent owner. Without an explicit floor, the seller is exposed to underpricing, particularly when bidding pools are thin and the counterparty is a sophisticated institutional acquirer. The Lower Bound thus performs in football M&A the role of a reservation value in standard auction and bargaining theory: it does not by itself determine the outcome, but it sets the boundary below which the rational decision is to refuse to transact.

3.3 The Two-Pillar Architecture of Enterprise Value

The Lower Bound Enterprise Value is constructed as the algebraic sum of three asset-side components: the fair value of the player squad (Pillar 1), the fair value of the stadium (Pillar 2), and the residual fair value of other intangible and tangible assets. Net Asset Value is then derived from Enterprise Value through the deduction of Net Financial Debt. Formally:

$$\begin{aligned} \text{EV} &= \text{Pillar 1 (Players)} + \text{Pillar 2 (Stadium)} + \text{Other Assets} \\ \text{NAV} &= \text{EV} - \text{Net Debt} \end{aligned}$$

The two-pillar structure reflects the empirical observation that, for the vast majority of professional football clubs, the player squad and the stadium represent the two dominant components of asset-side value. The player squad embodies the human capital that generates sporting performance and, through performance, the revenues that sustain the club's economic activity; it is also a tradable asset with an active secondary market that provides regular price signals. The stadium, where present in club ownership, is typically the largest tangible asset on the balance sheet and the principal vehicle through which fan engagement is monetised. Other intangibles (commercial contracts, broadcasting agreements, image rights) and tangible assets (training grounds, equipment) are smaller in magnitude and are treated at carrying value or at

fair value where reliable estimates are available. The distinction between EV and NAV is preserved throughout: EV captures the asset side of value, independent of capital structure, while NAV represents the residual claim accruing to equity holders after the deduction of net financial debt.

3.4 Pillar 1 — Player Asset Valuation

3.4.1 Theoretical Foundation

The player asset is, simultaneously, a productive resource and a contractual instrument. As a productive resource, the player generates an income stream for the club through his contribution to sporting performance, which translates into broadcasting income, prize money, commercial revenues, and matchday revenues. As a contractual instrument, the player commits the club to a stream of salary payments over the duration of the contract and confers, on the club, the right to transfer the player to a third party during the open transfer windows. The fair value of the player asset must therefore reflect three distinct economic components: the present value of the revenues he is expected to generate, the present value of the contractual costs he imposes, and the value of the embedded optionality that the contract creates.

Formally, the fair value of the player asset is decomposed as:

$$\text{Player Value} = PV(\text{Potential Benefits}) - PV(\text{Potential Costs}) + \text{Option Value}$$

This decomposition is not merely a notational convenience. Each of the three components has a distinct economic nature and a distinct risk profile, and these differences carry direct implications for how each must be discounted. Conventional valuation approaches collapse the first two components into a single net cash flow, which is then discounted at a uniform rate, typically the cost of capital. The framework developed in this section rejects this approach. Benefits and costs differ structurally in their risk characteristics: benefits are uncertain and exposed to the volatility of sporting and commercial outcomes, while costs are contractually committed obligations that the club must honour regardless of performance. Treating them as a single net flow obscures this asymmetry and produces systematic mispricing of the underlying asset. The argument is developed in full in Section 3.4.5.

3.4.2 The Standard Football Value Model — Overview

The framework draws on a proprietary engine developed by Standard Football, which produces three player-level inputs required by the financial layer described in the subsequent sections.

The first input is an effectiveness score, a normalised measure of the player's contribution to his team that combines technical performance, role-specific output, availability, and experience. The second input is the expected club rank, a projection of the competitive level at which the player is most likely to perform over the relevant horizon, conditional on his profile. The third input is the exit fee, a market-consistent estimate of the price at which the player could be transferred under normal market conditions, adjusted for age, role, and recent performance trajectory. The financial layer that follows treats these three inputs as exogenous and develops the valuation logic that translates them into a fair value of the player asset.

3.4.3 Potential Benefits — Financial Justification

Potential Benefits represent the present value of the incremental revenues attributable to the player over the fair contract duration estimated for him. The economic intuition is direct: each player in a squad contributes to the production of sporting performance, and sporting performance translates into the revenue streams analysed in Chapter 2. The benefit attributable to a specific player is computed as the share of the target club's revenues that can reasonably be assigned to him, on the basis of his relative effectiveness within the squad and his actual contribution to playing time. The target club is the relevant reference because the valuation is constructed from the perspective of a potential acquirer assessing the revenues the player would generate within his prospective new environment; this orientation is what makes the framework operational for transfer pricing and acquisition analysis. A player with a high effectiveness score who plays the majority of available minutes contributes more than an equivalent player who is rarely deployed, even if their per-minute productivity is comparable. What matters, financially, is that the per-period benefit assigned to each player is an estimate of the cash flow he is expected to generate, and that this estimate is treated, for valuation purposes, as a stochastic and risk-bearing cash flow.

The discounting of these cash flows requires careful justification. The framework adopts a baseline discount rate of eight per cent, calibrated to the riskiness of the benefits stream itself rather than to a generic cost of capital. The cash flows captured by Potential Benefits are residual claims on the club's revenues, contingent on sporting performance, fan engagement, and macroeconomic conditions, and they accrue to the owner only after contractual costs have been honoured; their risk profile is therefore equity-like in economic substance and requires a discount rate above the risk-free rate. Damodaran (2012) reports cost-of-equity figures for the broader entertainment and recreational services industry within the range of seven to ten per

cent, which serve as an upper-bound proxy for the risk that ownership of a single club asset would entail. The eight per cent baseline sits at the midpoint of this interval, a defensible starting point for a sector whose risk characteristics combine consumer entertainment with sporting competition.

The second part of the rationale, and the one that distinguishes this framework from conventional approaches, concerns the role of idiosyncratic risk. Standard asset pricing theory, anchored in the Capital Asset Pricing Model, holds that investors require compensation only for systematic risk, since idiosyncratic risk can be eliminated through diversification. This assumption fails decisively in the case of football clubs. Owners of professional football clubs are not diversified investors holding a marginal position in a broad portfolio: they are concentrated holders of an illiquid, single-asset exposure, frequently representing a substantial share of their personal or corporate wealth. The trophy-asset framing introduced in Chapter 1 makes this point explicitly: clubs are acquired and held for reasons that include but extend beyond financial return, and their owners are by construction unable to diversify away the risks specific to the asset they hold. In the corporate finance literature, this situation is precisely the one in which total risk, rather than systematic risk alone, becomes the relevant pricing input (Damodaran, 2012, on undiversified investors and total beta). The same logic applies, with greater force, to the human capital embedded in the squad: an owner negotiating the acquisition or disposal of a club, or a player within it, internalises the full distribution of outcomes specific to that asset, including the idiosyncratic component.

The idiosyncratic component is far from negligible in football. The cash flows generated by a player depend on factors that are intrinsically tied to his individual condition: physical health and injury history, mental health, relationship with the coaching staff and team-mates, family events, motivation, and integration in the tactical setup. None of these factors can be hedged or diversified away by the club's owner. They are, in the language of asset pricing, sources of pure idiosyncratic volatility, and they materially affect the realised income stream that the player generates. A valuation framework that ignores this dimension would systematically overvalue the squad in good-state realisations and underprice it in bad-state realisations, and would deliver discount rates that fail to compensate the owner for the risks he actually bears.

The framework captures the idiosyncratic component through a macro-volatility adjustment applied to the eight per cent baseline. For each player, the volatility of his performance over the most recent eighteen months is computed across all game contexts, not only within the matches in which he occupied his nominal role. This broader measurement captures the player's

exposure to the variety of tactical and situational conditions that arise in modern football and avoids the bias of conditioning on his preferred role. The player's volatility is then compared with the median volatility of his squad over the same window. A player whose performance is more volatile than the squad median carries higher idiosyncratic risk and is assigned a positive adjustment to the discount rate; conversely, a player whose performance is more stable than the squad median is assigned a negative adjustment. The size of the adjustment is bounded through a smooth functional form, ensuring that extreme volatility readings do not produce disproportionate movements in the discount rate. The economic effect is intuitive: more volatile players are penalised in their valuation, more consistent players are rewarded, and the framework prices a risk dimension that conventional approaches systematically ignore. The same logic applies symmetrically in negotiation: an acquirer offering for a club, or for a player within it, internalises this volatility through the same channel; a disciplined valuation must reflect it explicitly rather than leave it to subjective judgement. The empirical distribution of the resulting discount rates across the Serie A sample is reported in Appendix C.

Once the discount rate is determined, the present value of Potential Benefits is computed as a finite annuity over the fair contract duration, with the per-period benefit treated as a constant cash flow over the relevant horizon. The fair contract duration is not the residual length of the player's current contract but an estimate produced by the Standard Football engine on the basis of historical contract-renegotiation patterns conditional on player age, and it represents the expected horizon over which the player is likely to generate revenues for the club, whether under the present contract or under realistic renewal terms. Anchoring the annuity to the fair duration rather than to the residual legal term avoids the artificial cliff-effect that would arise from treating contract expiry as an absolute boundary, and reflects the empirical regularity that valuable players are typically renewed before the contract reaches its formal end.

3.4.4 Potential Costs — Financial Justification

Potential Costs represent the present value of the salary obligations the club has committed to over the fair contract duration estimated for the player. Their economic nature differs sharply from that of Potential Benefits. Salaries are not contingent claims: they are contractually fixed payments that the club must honour as long as the contract is in force, regardless of the player's performance, the team's results, or macroeconomic conditions. In the language of corporate finance, salary obligations are debt-like cash flows: their payment profile is stable, their risk class is dominated by the credit standing of the obligor (the club itself) rather than by the

operating uncertainty of the activity, and their default probability is low for any club that operates as a going concern.

This characterisation has a direct implication for the discount rate. A debt-like obligation should be discounted at a rate that reflects its risk profile, not at the cost of equity capital that applies to residual claims. The framework adopts the risk-free rate as the appropriate benchmark, consistent with the treatment of contractually committed cash flows in the broader corporate finance literature. The risk-free rate represents the time value of money for an obligation whose payment is virtually certain over the relevant horizon; applying it to salary obligations is equivalent to recognising that the seller of a player asset is offloading a stream of payments whose riskiness is comparable to that of a high-grade corporate bond rather than to that of an equity claim. In the empirical application, the risk-free rate is set at 2.50 per cent, consistent with the standard assumption adopted in corporate valuation practice for long-dated, contractually committed Eurozone cash flows.

Two additional considerations enter the construction of Potential Costs. First, the framework does not rely on individual salaries reported in player contracts, which are heterogeneous in disclosure quality, frequently expressed on a net basis, and difficult to verify across clubs. Instead, it derives a fair salary cap at the club level, computed as the share of the club's revenues that can sustainably be allocated to wage expenditure, calibrated against industry benchmarks for the wage-to-revenue ratio. The fair salary cap is then attributed to individual players in proportion to their effectiveness within the squad, in symmetric construction with the revenue-attribution logic that underpins Potential Benefits. The result is an internally consistent allocation in which both the revenue contribution and the salary cost imputed to each player are anchored in the same effectiveness-weighted decomposition of club-level magnitudes. Second, salary obligations are computed as a finite annuity over the fair contract duration, ensuring temporal consistency with the Potential Benefits annuity.

3.4.5 The Case for Separate Discounting of Benefits and Costs

The decision to discount Potential Benefits and Potential Costs at distinct rates, rather than netting them and applying a single rate, is not a departure from established corporate finance theory but a faithful application of one of its most respected analytical tools. The principle of separate discounting by risk class is the central insight of the Adjusted Present Value framework introduced by Myers (1974), which disaggregates the cash flows of a firm into components of distinct risk character and applies to each the appropriate discount rate. The framework

developed in this dissertation is, in essence, an APV-style application to the football player asset: the asset is decomposed into an equity-like component (Benefits, exposed to performance and idiosyncratic risk borne by undiversified owners) and a debt-like component (Costs, contractually committed and dominated by club credit risk), each is priced with the discount rate appropriate to its risk class, and the resulting present values are combined into the asset valuation. Conventional DCF practice, by collapsing the two streams into a single net flow at a uniform rate, implicitly assumes a risk symmetry that does not hold for football player assets and produces systematic mispricing. The separate-discounting choice avoids this distortion by aligning the analytical treatment of each cash flow stream with its underlying economic nature.

3.4.6 Option Value — Financial Justification

A player under contract is more than a stream of net cash flows: he is also a tradable asset whose owner holds the right, but not the obligation, to dispose of him during designated transfer windows. This optionality has economic value beyond the discounted net cash flows captured in the previous sections, and a valuation framework that ignores it underestimates the player asset. The framework therefore incorporates an Option Value component, computed within the real options paradigm.

The mapping is constructed as follows. The underlying asset is the player's expected future transfer value, proxied by the exit fee produced by the Standard Football engine and assumed to follow a geometric Brownian motion over the relevant horizon. The strike price is the value foregone by selling the player, equal to the maximum between zero and the present value of net sporting contributions (Benefits minus Costs); a rational club exercises the option to sell only when the transfer market repays it more than what the player would generate by remaining in the squad. The maturity is the residual duration of the player's contract, beyond which the option expires worthless because the player leaves on a free transfer. The volatility input is derived from the historical volatility of the player's performance, consistent with the same eighteen-month window used in the construction of the discount rate for Benefits.

The option is not American: it cannot be exercised continuously, because the regulatory framework permits player transfers only during designated windows, typically the summer and winter sessions defined by FIFA and applied by national federations. It is therefore a Bermuda option, exercisable on a discrete set of dates over the life of the contract. The framework prices the option through a binomial lattice constructed in the spirit of Cox, Ross and Rubinstein (1979), with up and down movements calibrated to the volatility input, risk-neutral probabilities

derived from the prevailing risk-free rate, and backward induction performed at each node to determine the optimal exercise decision. Exercise is permitted only at nodes corresponding to open transfer windows; at all other nodes, the option holder must continue. The output is the present value of the option, expressed in fair-value terms and added to the net present value of cash flows to obtain the player's overall valuation.

3.4.7 Net Present Value Composition

Combining the three components developed in the preceding sections, the fair value of an individual player asset is computed as:

$$Player\ Value = \max[PV(Benefits) - PV(Costs) + Option\ Value, 0]$$

The non-negativity constraint requires a careful justification, because contractual costs are inherited by the buyer in any control transaction and should, in principle, reduce the equity value of the asset. The framework retains the floor at zero for two reasons. First, the player asset embeds an option to retain rather than to sell, so the rational seller's choice in the presence of a negative net contract value is to hold the player to contract expiry rather than to transact at a loss. Second, empirically, the floor is never binding: across the 600-player Serie A sample, no player exhibits a raw NPV below zero before the constraint is applied. The constraint therefore functions as a non-arbitrage condition with no quantitative effect on the results.

3.4.8 Aggregation at the Squad Level

The first pillar of Enterprise Value, the aggregate fair value of the player squad, is obtained by summing the individual player valuations across all members of the squad as defined by the registration list at the valuation date. The aggregation is linear and does not include explicit adjustments for intra-squad correlations, on the assumption that the cross-effects of player synergies are already partially captured by the effectiveness scores produced by the Standard Football engine. Loaned players are included or excluded depending on the legal and economic substance of the loan agreement: where the registration rights remain with the club, the player is included at his fair value; where the rights are assigned to the receiving club for the duration of the loan, the player is excluded from the aggregation. Youth-academy players who have not yet been promoted to the first team are not modelled within Pillar 1: their option-like value is real but is not captured by the present framework. An explicit treatment of academy value is identified in Chapter 5 as an avenue for future research.

3.5 Pillar 2 — Stadium Valuation

The second pillar of the Lower Bound captures the fair value of the stadium, where the club holds ownership rights or comparable economic control. Stadiums are highly heterogeneous assets with limited active secondary-market trading, which makes a market-based valuation approach impractical for the vast majority of cases. The framework therefore adopts the Depreciated Replacement Cost (DRC) methodology, recognised by the International Valuation Standards (IVSC, 2022) and consistent with IFRS 13 fair-value hierarchy as a Level 3 input when observable market evidence is unavailable.

3.5.1 Rationale for the Depreciated Replacement Cost Approach

In lack of an active market, under the DRC approach the fair value of the stadium is proxied as the cost that a market participant would incur to construct an equivalent asset at the valuation date. The approach is appropriate when the asset is specialised, when active secondary markets do not exist, and when the valuation must reflect the asset as a continuing component of a going concern, all of which apply to football stadiums. The DRC methodology is also consistent with the asset-based logic of the Lower Bound: it produces a value that depends on observable cost benchmarks rather than on speculative cash-flow projections.

3.5.2 Seat Replacement Cost and Land Value

The replacement cost component is estimated by applying a per-seat construction benchmark to the stadium's total capacity. The per-seat benchmark is derived from recent stadium construction and renovation projects in comparable European markets, adjusted for the specific quality tier and architectural features of the asset under consideration. To this construction component is added the fair value of the land on which the stadium is built, estimated through the local real estate market data appropriate to the geographic location. Land value is a non-trivial component of the total: stadiums located in central or commercially valuable urban areas command materially higher land values than equivalent facilities in peripheral or low-density locations.

3.5.3 Utilisation Coefficient

The utilisation coefficient is the most economically substantive adjustment in the stadium pillar, and its rationale deserves explicit articulation. A stadium, in the abstract, is a fixed physical asset with a defined seating capacity; in practice, however, two stadiums of identical capacity

and construction quality may generate radically different streams of value depending on the strength of the supporting fanbase and the geographic context in which they operate. The utilisation coefficient captures this dimension of value by scaling the construction-cost-based valuation by the share of capacity that is effectively monetised through home-team support over a representative period.

The economic logic is direct. A stadium generates value through the cash flows it can sustainably produce: ticket sales, hospitality, ancillary services, and the indirect effects of fan engagement on commercial and broadcasting revenues. These cash flows are a function not of the stadium's nominal capacity but of its effective utilisation by the home-team supporter base. Treating the Allianz Stadium of Juventus and the Mapei Stadium of Sassuolo as equivalent on the basis of their construction characteristics alone would ignore a structural asymmetry that has direct value implications: the Allianz Stadium is consistently filled by Juventus supporters, who form a national and international fanbase that converts into recurring matchday revenues, hospitality demand, and sponsorship leverage. The Mapei Stadium, by contrast, is frequently filled to a substantial extent by visiting supporters travelling from larger fanbases, with home-team attendance that is structurally lower and whose monetisation potential is correspondingly weaker. A rational acquirer evaluating either asset must internalise this difference: the construction cost of the asset is comparable, but the cash-generating capacity is not, and the fair value of the stadium for the acquiring entity must reflect the latter, not the former.

The utilisation coefficient operationalises this principle. It is constructed as the ratio of average home-team attendance to total stadium capacity over a representative observation window, deliberately measured net of visiting supporters in order to isolate the contribution of the home fanbase. The geographic dimension enters indirectly through this measurement: clubs based in densely populated metropolitan areas or in regions with strong historical attachment to the team typically display higher utilisation ratios, while clubs based in smaller cities or in regions where the local fanbase is dispersed display lower ratios. The framework does not impose a separate geographic adjustment because the utilisation coefficient already absorbs this dimension through its empirical construction. The result is a stadium valuation that prices the asset for what it economically is in the hands of the specific club, rather than for what it could theoretically be in some idealised configuration.

3.6 Other Assets

Beyond the player squad and the stadium, football clubs hold a residual set of assets that contribute to their economic value: cash and cash equivalents, financial receivables, training-ground and youth-academy infrastructure, equipment, and a heterogeneous set of intangibles including brand and trademark rights, image rights, sponsorship contracts, and broadcasting rights agreements at the club level. The framework treats these items at carrying value as reported in the most recent audited financial statements, on the principle of conservatism that animates the Lower Bound construction. Cash enters at face value; tangible assets other than the stadium enter at book value, on the assumption that their fair value does not materially exceed depreciated historical cost. Brand value is recognised at carrying amount rather than estimated through dedicated brand-valuation methodologies (relief-from-royalty, excess-earnings), because such methodologies require revenue projections that the volatility of the football industry makes unreliable and because a positively estimated brand premium would erode the floor-price interpretation. Broadcasting and sponsorship intangibles are similarly retained at carrying value, since their cash-flow contribution is already partially internalised in the revenues forecasted for Pillar 1, and an explicit revaluation at fair value would risk double counting.

3.7 Net Debt and the Equity Bridge from EV to NAV

The Enterprise Value computed in Pillars 1, 2 and 3.6 represents the fair value of the asset side of the club, independent of how those assets are financed. The transition from EV to Net Asset Value, the residual claim accruing to equity holders, is achieved through the deduction of Net Financial Debt, computed as total financial debt (short-term plus long-term, including deferred transfer payables for player acquisitions) less cash and cash equivalents as reported in the most recent audited financial statements. Where a club's Net Financial Debt exceeds its Enterprise Value, a recovery-rate adjustment is applied: the fair value of debt is capped at the asset value, reflecting the limited-liability principle that creditors cannot recover more than the underlying assets in liquidation. The Adjusted NAV is therefore floored at zero by construction, and is computed as EV minus the minimum of Net Debt and EV. This treatment is material for two clubs in the empirical sample (AS Roma and Genoa CFC) and is documented explicitly in Chapter 4.

3.8 Enterprise Value Determination Formula

Combining the components developed in the preceding sections, the Lower Bound framework delivers two parallel measures: an Enterprise Value computed on the asset side, and a Net Asset Value obtained through the equity bridge:

$$EV(LB) = \text{Pillar 1 (Players)} + \text{Pillar 2 (Stadium)} + \text{Other Assets}$$

$$NAV(LB) = EV(LB) - \text{Net Debt}$$

$$\text{Adjusted NAV}(LB) = EV(LB) - \text{MIN}(\text{Net Debt}, EV(LB))$$

Each component is calibrated according to the principles articulated in this chapter: Pillar 1 through the player asset NPV with separate discounting and Bermuda option valuation; Pillar 2 through DRC adjusted by the utilisation coefficient; Other Assets capturing cash and other assets at carrying value; and Net Debt at carrying amount from the most recent audited financial statements, with the recovery-rate adjustment applied where debt exceeds asset value. The Lower Bound EV defines the floor below which a rational, fully informed seller should not transact, leaving the trophy premium and any strategic considerations to a separate layer of analysis. The corresponding NAV represents the residual equity claim consistent with the same asset-based logic.

3.9 Data Sources and Sample Construction

3.9.1 Standard Football Database

The player-level inputs to the framework are sourced from the proprietary database maintained by Standard Football, which integrates technical performance data, contractual information, and market-consistent transfer-fee estimates for a broad universe of professional football players. The database is updated continuously and undergoes regular quality-control procedures designed to ensure consistency across leagues, seasons, and player profiles.

3.9.2 Public Financial Disclosures

Club-level financial inputs, including balance-sheet items, intangibles, and liabilities, are sourced from publicly available financial statements.

3.10 Methodological Limitations and Assumptions

The framework rests on a set of simplifying assumptions whose limitations should be acknowledged before the empirical application is presented. Player-level revenue attribution relies on a weight-in-club logic that, while economically defensible, abstracts from the non-

linear effects of squad chemistry, positional substitution, and tactical complementarities. The discount rate for Benefits is calibrated through a smooth functional form whose specification, while bounded and economically interpretable, remains a modelling choice rather than the result of structural estimation. The Bermuda option pricing assumes geometric Brownian motion for the underlying transfer value, an assumption that is standard in the real-options literature but that abstracts from jumps and regime shifts that occasionally characterise the transfer market. The stadium pillar relies on per-seat construction benchmarks whose appropriate calibration may vary across countries and across stadium types, and the utilisation coefficient is computed over a representative window whose choice can affect the resulting valuation. These assumptions define the scope within which the empirical results of Chapter 4 should be interpreted.

4. Empirical Analysis

4.1 Sample and Data Construction

The framework is applied to the universe of clubs participating in Italian Serie A in the 2025/26 season, comprising twenty teams. The valuation date is set at the start of the 2025/26 season, with player-level inputs sourced from the Standard Football proprietary database (April 2026 release) and club-level financial inputs sourced from the most recently audited financial statements (FY2024 closing). Stadium-related inputs draw on construction-cost benchmarks for European stadium projects, on land-value data published by the Italian Agenzia delle Entrate (OMI database, second half of 2025), and on attendance figures from the 2024/25 season.

Three clubs in the sample (Calcio Como 1907, Pisa Sporting Club, US Cremonese) were promoted from Serie B and present a structural data inconsistency: their FY2024 financial statements reflect Serie B operations rather than the higher revenue base of Serie A. The framework treats these clubs without ad-hoc adjustments for transparency, but flags the resulting EV/Revenue multiples as not directly comparable to the rest of the sample. Two clubs (AS Roma and Genoa CFC) report negative reported NAV at the valuation date, owing to financial debt that exceeds the recoverable asset base; for these clubs, the framework applies an Adjusted NAV correction that caps the deduction of debt at the value of recoverable assets, consistent with the limited-liability principle. Table 1 summarises the composition of the sample.

Table 1 — Sample composition. Italian Serie A clubs at the start of the 2025/26 season, with key descriptive statistics.

Item	Value
Number of clubs	20
Season covered	2025/26
Financial reporting reference	FY2024 (audited)
Player-level data source	Standard Football database (Apr 2026)
Stadium ownership (full or shared)	6 clubs
Stadium operated under municipal concession or no control	14 clubs
Listed clubs (Borsa Italiana)	2 (Juventus, Lazio)
Newly promoted from Serie B	3 (Como, Cremonese, Pisa)
Clubs flagged for Adjusted NAV correction	2 (Roma, Genoa)
Aggregate Player FV (€M)	6,924
Aggregate Stadium FV (€M)	2,530
Aggregate Other Assets (€M)	107
Aggregate Lower Bound EV (€M)	9,561
Aggregate Net Financial Debt (€M)	3,848
Aggregate Adjusted NAV (€M)	6,054

4.2 Lower Bound Enterprise Value: Cross-Club Results

Application of the framework to the Serie A sample produces an aggregate Lower Bound Enterprise Value of approximately 9.56 billion euros, distributed across the twenty clubs as reported in Table 2. The decomposition of the aggregate value reveals the structural role of the two pillars: the player squad accounts for 72 per cent of total EV (€6,924M), while the stadium pillar accounts for 26 per cent (€2,530M), and other assets contribute the residual 1 per cent. This composition is consistent with the methodological position of Chapter 3, which identifies players and stadiums as the two dominant components of asset-side value in football clubs. Descriptive statistics of individual player fair values across the 600-player Serie A sample are reported in Appendix C.

Table 2 — Lower Bound Enterprise Value by club, decomposed by pillar (€M). Sorted by total EV.

#	Club	Players FV	Stadium FV	Other	EV	Net Debt	Adj. NAV
1	Juventus FC	910.3	721.4	17.4	1,649.0	445.9	1,203.1
2	AC Milan	821.7	556.1	38.3	1,416.1	294.0	1,122.1
3	FC Internazionale Milano	847.1	545.4	10.4	1,402.9	619.7	783.2
4	Atalanta Bergamasca Calcio	548.4	411.0	1.1	960.4	148.8	811.6
5	SSC Napoli	525.9	0.0	5.1	531.0	32.0	499.0
6	AS Roma	500.0	0.0	1.5	501.4	650.3	0.0
7	Udinese Calcio	258.7	234.4	2.9	496.1	148.9	347.2
8	SS Lazio	442.3	0.0	5.2	447.4	286.3	161.1
9	Bologna FC 1909	329.8	0.0	1.6	331.4	122.0	209.4
10	ACF Fiorentina	293.8	0.0	1.9	295.7	43.0	252.7
11	Calcio Como 1907	273.3	0.0	0.8	274.1	38.8	235.3
12	Torino FC	202.9	0.0	2.6	205.5	126.3	79.2
13	US Sassuolo Calcio	132.7	61.7	4.6	199.0	140.7	58.3
14	Parma Calcio 1913	158.6	0.0	3.0	161.6	79.9	81.7
15	US Lecce	159.6	0.0	0.3	159.9	52.5	107.4
16	Hellas Verona FC	152.1	0.0	1.6	153.6	151.0	2.6
17	Genoa CFC	115.8	0.0	6.4	122.2	314.2	0.0
18	Cagliari Calcio	107.3	0.0	1.7	108.9	101.4	7.5
19	Pisa Sporting Club	79.3	0.0	0.2	79.5	33.1	46.4
20	US Cremonese	64.1	0.0	0.8	64.9	19.3	45.6
	TOTAL	6,923.5	2,530.0	107.2	9,560.8	3,848.1	6,053.6

The cross-club distribution exhibits three patterns that the framework was designed to surface, and that the trophy-asset framing of Chapter 1 anticipated. First, the three highest valuations (Juventus, AC Milan, FC Internazionale Milano) all combine a substantial Player FV with a non-zero Stadium FV: stadium ownership is the structural feature that separates the top tier from the rest of the sample. Even Atalanta, which ranks fourth, illustrates the same principle on a smaller scale, with a fully owned Gewiss Stadium that contributes 41.0 per cent of the club's EV. Second, several historically prestigious clubs with strong squads but no stadium control

(SSC Napoli, AS Roma, SS Lazio, ACF Fiorentina) produce EV figures materially below those of the top three, despite Player FVs that are comparable on a normalised basis. The framework prices stadium ownership as a structural asset advantage, in line with the economic logic developed in Chapter 3.

Third, the utilisation coefficient produces the expected differentiation between clubs with similar nominal stadium capacities but different fanbase intensities. The most striking comparison is between the Allianz Stadium of Juventus, whose utilisation coefficient is 96.9 per cent (40,237 average attendance against a 41,507 capacity), and the Mapei Stadium of US Sassuolo, whose utilisation coefficient is 25.9 per cent (5,569 average attendance against a 21,525 capacity). The two stadiums have comparable per-seat construction characteristics, but the gap in fanbase intensity translates into a Stadium FV of €721M for Juventus versus €62M for Sassuolo. This is the empirical manifestation of the principle articulated in Section 3.5.3: the same physical asset, in the hands of two clubs with different fanbase profiles, generates different streams of economic value, and the framework prices this asymmetry explicitly rather than abstracting from it.

4.3 Consistency Check: Transaction Backtest

4.3.1 Sample of Transactions

The empirical plausibility of the Lower Bound interpretation is examined through a backtest against eight Serie A control transactions executed between 2019 and 2025. The sample includes transactions for which both the deal value and the equity stake acquired are publicly disclosed, allowing the construction of an implied 100 per cent transaction value as the deal value divided by the stake percentage. For each transaction, the implied 100 per cent value at the time of the deal is compared with the current Lower Bound EV produced by the framework at the 2025/26 valuation date. The Inter–Brookfield 2024 transaction is excluded on the grounds of structural ambiguity (deal executed at the parent-fund level). Table 3 reports the full backtest.

4.3.2 Comparison of Current Lower Bound and Historical Transaction Prices

Table 3 — Transaction backtest. For each control transaction, the current (2025/26) Lower Bound EV is compared with the implied 100% transaction value at the deal date.

Club	Buyer / Owner	Year	Deal (€M)	Stake	Implied 100% (€M)	Model EV (€M)	Multiple EV / Imp.
Hellas Verona FC	Presidio Investors	2025	150	100%	150.0	153.6	1.02x
Udinese Calcio	Guggenheim Partners	2025	200	100%	200.0	496.1	2.48x

Club	Buyer / Owner	Year	Deal (€M)	Stake	Implied 100% (€M)	Model EV (€M)	Multiple EV / Imp.
Genoa CFC	Dan Şucu	2024	40	77%	51.9	122.2	2.35x
AC Milan	RedBird Capital Partners	2022	1,200	100%	1,200.0	1,416.1	1.18x
Atalanta Bergamasca Calcio	La Dea S.r.l.	2022	350	55%	636.4	960.4	1.51x
Parma Calcio 1913	Krause Group	2020	100	90%	111.1	161.6	1.45x
AS Roma	The Friedkin Group	2020	590	89%	661.6	501.4	0.76x
ACF Fiorentina	Columbia Soccer Ventures	2019	160	100%	160.0	295.7	1.85x

The backtest does not constitute a formal test of the Lower Bound hypothesis at the deal date, which would require reconstructing the framework at each historical valuation point with contemporaneous inputs for player squads, stadium parameters, and balance-sheet items. It is, instead, a consistency check between the current Lower Bound estimate and the historical transaction record. In seven of the eight transactions in the sample (87.5 per cent), the current Lower Bound EV lies above the implied 100 per cent transaction value, with multiples ranging from 1.02x (Hellas Verona, 2025) to 2.48x (Udinese, 2025); the average ratio is 1.58x and the median 1.48x. A multiple above 1.0x does not imply a positive trophy premium at the deal date: since the multiple compares the current floor with the historical price, any value greater than one is consistent with subsequent value creation between the deal date and the valuation date, or with transactions executed below the contemporaneous floor (corresponding to a non-positive trophy premium at the deal date itself), or with a combination of the two. The Hellas Verona transaction (1.02x, 2025) sits essentially at the current floor, with the small gap absorbed by twelve months of value evolution. The Milan transaction (1.18x, 2022) is consistent with three years of value creation under the new ownership, or with a contemporaneous price slightly below the 2022 floor, or with both. The higher multiples for older deals (Atalanta 1.51x in 2022 and Fiorentina 1.85x in 2019) are dominated by the value creation channel, with Atalanta's Champions League qualification and stadium completion, and Fiorentina's value growth over seven years, explaining most of the gap. The Genoa CFC (2.35x, 2024) and Udinese (2.48x, 2025) transactions, where the gap cannot be absorbed by the short time elapsed since the deal, point instead to sub-floor pricing driven by the immediate liquidity needs of the seller. A formal validation against contemporaneous floor estimates is identified in Chapter 5 as a direction for further empirical work.

4.3.3 Interpretation of the Premium and the Single Counter-Example

Only one transaction produces a multiple below 1.0x: the AS Roma acquisition by The Friedkin Group in 2020, with a multiple of 0.76x. This single counter-example is structurally informative and does not undermine the Lower Bound interpretation. Three factors explain the gap. First, AS Roma does not own the Stadio Olimpico, treated as zero contribution to Pillar 2; a buyer with a credible stadium development plan, as the Friedkin Group has subsequently pursued, may rationally pay a premium that the asset-based framework does not capture, because the value is contingent on a future investment not yet realised. Second, the AS Roma brand carries a global recognition that the framework recognises at carrying value rather than at estimated brand-equity fair value; this conservatism, defended in Section 3.6 as consistent with the floor-price interpretation, here produces a modest understatement. Third, the six-year window between the transaction and the valuation date has been one of significant value erosion, with persistent losses and a debt position that exceeds the recoverable asset base (the club is the principal beneficiary of the Adjusted NAV correction in the sample). The Roma case therefore illustrates the boundary conditions of the framework rather than a generic failure, and points to the explicit treatment of stadium development plans and brand value as the principal directions for future refinement.

The eight-transaction sample is too small to support formal statistical inference, and the evidence should be read as illustrative case-study material. Nevertheless, the consistency of the floor result across transactions of different vintage, size, and buyer profile provides a credible foundation for further empirical work with broader samples and cross-league applications.

5. Discussion

5.1 Theoretical Contributions

The dissertation contributes to the sports finance literature on three distinct fronts. The first is the operationalisation of an asset-based Lower Bound framework that delivers a defensible floor price for football clubs and that can be applied at scale across a league. Earlier asset-based proposals, including the revalued net assets value approach endorsed by Tiscini and Dello Strologo (2016), articulate the rationale for the asset side but leave the practical estimation of intangibles, in particular brand value and socio-emotional benefits, unresolved. The framework developed here resolves this gap by anchoring the valuation in two pillars whose inputs are observable or derivable from a transparent computational engine, and by deliberately excluding the trophy and socio-emotional premia from the floor itself.

The second contribution is the financial defence of separate discounting for benefits and costs in the player asset valuation. The decision to discount cash flows by risk class, rather than netting them and discounting the residual at a single rate, follows the logic of the Adjusted Present Value framework of Myers (1974) and applies it to the football industry for the first time in an explicit form. The argument that owners of football clubs are non-diversified investors whose pricing kernel must reflect total rather than systematic risk extends Damodaran's treatment of undiversified-investor valuation to the football context.

The third contribution is the integration of the trophy-asset framing of Damodaran (2023) with the value-gap evidence of the Italian academic literature. The Lower Bound framework provides the analytical layer that operationalises the distinction between the floor and the premium, enabling the two to be measured, interpreted, and negotiated separately.

5.2 Managerial and Investment Implications

5.2.1 For Acquirers and Investors

Institutional acquirers facing the prospect of a club acquisition can use the Lower Bound EV as a quantitative anchor in two distinct phases of the deal process. In due diligence, the floor provides a benchmark against which the seller's asking price can be evaluated: a price materially below the Lower Bound is either an opportunity, when the discount reflects information asymmetry the buyer can resolve, or a warning, when it signals undisclosed

liabilities or asset impairment. In negotiation, the floor isolates the component of value that does not depend on buyer-specific synergies or trophy motivations, allowing the institutional buyer to negotiate the premium component separately and on the basis of disclosed strategic rationale rather than implicit pricing concessions.

5.2.2 For Selling Clubs and Owners

From the seller's perspective, the Lower Bound defines the reservation value below which the transaction destroys economic value for the incumbent owner. This is particularly relevant for old-guard owners, typically industrial families or holding companies for which the club is a long-standing patrimonial asset rather than a trophy holding, who may otherwise be exposed to underpricing in a market increasingly dominated by sophisticated institutional acquirers. The framework also provides the basis for governance discussions within ownership groups: by making the asset-anchored value explicit, the framework supports decisions on capital injections, debt restructuring, and minority-interest transactions that would otherwise rely on opaque or contested valuation conventions.

5.2.3 For Regulators and Governance Bodies

Regulators and league authorities can use the Lower Bound EV as a transparency benchmark in financial sustainability monitoring and licensing assessment. Transactions whose pricing departs materially from the Lower Bound, in either direction, deserve closer scrutiny: prices substantially above the floor may signal trophy-motivated bidding wars whose subsequent debt-servicing capacity should be tested; prices substantially below the floor may indicate distressed sales whose downstream effects on creditors, employees, and competitive balance warrant attention.

5.3 Limitations of the Proposed Framework

Several limitations emerged from the empirical application. The conservative treatment of brand value at carrying amount, while methodologically consistent with the Lower Bound interpretation, produces a known understatement of fair value for clubs whose brand has substantial economic substance independent of the squad and the stadium; the AS Roma backtest result is the clearest illustration. The single-snapshot nature of the valuation does not capture the dynamic re-pricing across seasons, particularly in response to sporting outcomes and transfer-market activity; an explicit time-series extension is left to future research. The

eight-transaction backtest sample is too small to support formal statistical inference, and the empirical evidence should be read as illustrative case-study material rather than as definitive empirical confirmation. Finally, the framework as currently specified does not model the academy and youth-development dimension; for clubs whose academy generates material value through the systematic production of marketable players, this omission produces a known understatement of fair value that an explicit option-based treatment would address.

5.4 Avenues for Future Research

The most immediate extension is the application to other top European leagues, with appropriate recalibration of the wage-to-revenue ratio, stadium per-seat benchmarks, and league-specific rules governing broadcasting distribution. A directly related extension is the reconstruction of the framework at historical deal dates using contemporaneous inputs, enabling a strict test of the Lower Bound hypothesis rather than the consistency check adopted in Section 4.3; cross-league applications would further extend the empirical base. A further extension is the explicit modelling of the academy as a standalone pillar, building on real-options theory to capture the optionality embedded in youth-player development. A more ambitious extension is the integration of the asset-based framework with private-equity sports investment models that combine the floor with explicit projections of trophy-premium decomposition, making the trophy component analytically visible rather than treating it as an unobserved residual.

6. Conclusions

This dissertation began with an observation: the modern football industry is characterised by a persistent and widening gap between the prices at which clubs change hands and the values that conventional financial methods are able to justify. The trophy-asset framing of Damodaran (2023) and the value-gap evidence of the Italian academic literature converge on a diagnosis: football clubs are scarce, unique, emotionally charged holdings whose acquisition is driven by motivations that include but extend beyond financial return. In a market dominated by trophy-motivated bidders and increasingly populated by sophisticated institutional capital, the analytical instrument that has been missing is a defensible floor: a quantitative anchor against which the trophy premium can be measured, interpreted, and negotiated.

The framework developed in this work delivers such a floor. The Lower Bound Enterprise Value, constructed as the algebraic sum of player asset fair values, stadium fair value via depreciated replacement cost, and residual intangibles, provides an asset-anchored estimate of value that abstracts deliberately from synergies, control premia, and socio-emotional benefits. The corresponding Net Asset Value is obtained through the deduction of Net Financial Debt, with a recovery-rate adjustment that caps the deduction at the asset value where debt exceeds EV. The methodological choices that distinguish the framework from conventional approaches — separate discounting of benefits and costs by risk class, the macro-volatility adjustment that prices the idiosyncratic risk borne by undiversified club owners, and the Bermuda option pricing of the transfer-window flexibility embedded in player contracts — follow established corporate finance theory and apply it disciplinedly to a context in which standard tools have historically failed.

The empirical application to the Italian Serie A produces results that confirm the floor-price interpretation of the framework. The aggregate Lower Bound Enterprise Value of approximately 9.6 billion euros across the twenty Serie A clubs reflects the structural advantage conferred by stadium ownership, the heterogeneity of fanbase intensity captured through the utilisation coefficient, and the disparities in player-asset endowments that the Standard Football engine quantifies at the player level. The transaction backtest confirms the floor hypothesis in seven of the eight historical control transactions analysed, with multiples of model EV over implied transaction value ranging from 1.02x to 2.48x, an average of 1.58x, and a median of 1.48x. The single counter-example (AS Roma 0.76x) is informative rather than disconfirming: it identifies the boundary conditions of the framework, namely the conservative treatment of

brand value and the absence of stadium ownership, and points to the directions in which the methodology can be refined.

The contribution of the dissertation is therefore both methodological and interpretive: an asset-based Lower Bound that earlier proposals had articulated only at a conceptual level, and the first explicit application of Adjusted Present Value logic to football player valuation, integrated with the trophy-asset framing that makes the floor and the premium analytically separable.

The Lower Bound framework developed here does not claim to deliver the full transaction price, and it does not aspire to replace the negotiation and the strategic judgement that any deal ultimately requires. It claims, more modestly but more defensibly, to provide the floor: a quantitative anchor that disciplines the conversation, that protects the rational seller from underpricing, and that gives the institutional acquirer a starting point from which the trophy premium can be evaluated rather than absorbed implicitly into the price. In the trophy-asset economy of modern football, the floor is the analytical instrument that has been missing. Building it, and showing that it works, is the contribution this dissertation has sought to make.

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Appendices

Appendix A — Stadium Valuation: Detailed Inputs and Calculations

Club	Stadium	Ownership	Capacity	Util. (α)	C(seat) €	Land Value €M	Stadium FV €M
Juventus FC	Allianz Stadium	Direct (2011)	41,507	96.9%	17,500	17.8	721.4
FC Internazionale Milano	San Siro (50%)	JV — San Siro SpA (2025)	75,817	92.5%	15,000	42.0	545.4
AC Milan	San Siro (50%)	JV — San Siro SpA (2025)	75,817	94.3%	15,000	42.0	556.1
Atalanta Bergamasca Calcio	Gewiss Stadium	Stadio Atalanta Srl (2017)	24,000	94.5%	17,500	15.0	411.0
Udinese Calcio	Bluenergy Stadium	Surface rights 99y (2013)	25,144	86.8%	10,000	18.7	234.4
US Sassuolo Calcio	Mapei Stadium	Mapei SpA (2013)	21,525	25.9%	10,000	23.3	61.7
TOTAL (6 clubs)			263,810			158.8	2,530.0

Appendix B — Transaction Backtest: Detailed Results

Club	Buyer	Year	Deal €M	Stake	Implied 100% €M	Model EV (2026) €M	Multiple
Hellas Verona FC	Presidio Investors	2025	150.0	100.0%	150.0	153.6	1.02x
Udinese Calcio	Guggenheim Partners	2025	200.0	100.0%	200.0	496.1	2.48x
Genoa CFC	Dan Şucu	2024	40.0	77.0%	51.9	122.2	2.35x
AC Milan	RedBird Capital Partners	2022	1,200.0	100.0%	1,200.0	1,416.1	1.18x
Atalanta Bergamasca Calcio	La Dea S.r.l.	2022	350.0	55.0%	636.4	960.4	1.51x
Parma Calcio 1913	Krause Group	2020	100.0	90.0%	111.1	161.6	1.45x
AS Roma	The Friedkin Group	2020	590.0	89.2%	661.6	501.4	0.76x
ACF Fiorentina	Columbia Soccer Ventures	2019	160.0	100.0%	160.0	295.7	1.85x

Appendix C — Player-Level Descriptive Statistics (Serie A)

Table C.1 — Distribution of the discount rate applied to Potential Benefits across the 600-player Serie A sample.

Statistic	Value
Count	600
Mean	8.09%
Median	8.00%
Standard Deviation	0.83 pp
Minimum	6.52%
Maximum	10.00%
Q1 (25th percentile)	7.41%
Q3 (75th percentile)	8.74%
Interquartile Range	1.32 pp
Skewness	0.35
Kurtosis	−0.85
Players above 8% baseline	297 (49.5%)
Players at 8% baseline	6 (1.0%)
Players below 8% baseline	297 (49.5%)

Table C.2 — Distribution of individual player fair values across the 600-player Serie A sample.

Statistic	Value (€M)
Count	600
Mean	11.19
Median	6.18
Standard Deviation	14.53
Variance	210.99
Minimum	0.00
Maximum	108.42
Range	108.42
Sum	6,714.32
Q1 (25th percentile)	1.40
Q3 (75th percentile)	14.74
Interquartile Range	13.34
Skewness	2.39
Kurtosis	7.65
Coefficient of Variation	1.30