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The Valuation of Intangible Assets in the Dental Industry: A Case Study on the Relief from Royalty Method

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Introduction

In recent decades, the role of intangible assets in determining the business value of a company has become central, gradually outrunning that of tangible assets. In an economy increasingly driven by knowledge, reputation, and innovation, elements such as brands, patents, know-how, and customer relationships now account for a dominant share of the value generated by firms, especially in technology-intensive and regulated industries such as dental. Indeed, the dental industry exemplifies an intangible-driven industry in which novel formulations, branded manufacturing processes, and esteemed brand identities redefine market positioning and profitability.

The increased attention to intangible assets raises important issues about how to value them correctly. One approach, gaining prominence due to its practicality and conceptual alignment with market dynamics, is the Relief from Royalty Method. However, despite the wide recognition of the weight of intangibles in value creation, there are still significant methodological gaps in the academic literature regarding their proper valuation. The RFR method, although recognized by international standards (IVS 210, ISO 10668) and frequently employed in valuation practice, is poorly explored in scholarly research, especially in B2B sectors and in non-mass consumption-oriented contexts. Most studies tend to favor approaches such as the Multi-Period Excess Earnings Method, relegating RFRM to a marginal role.

This thesis aims to help fill this gap by offering a documented application of the RFR method to the valuation of an intangible asset in a real and representative context: the brand of an Italian company operating in the dental sector. The case study allows us to analyze a context in which the brand is indeed the main generator of value, but in which the characteristics of the market (B2B, regulated, technical) make it difficult to adopt standardized approaches.

The main objective of the thesis is thus twofold: on one hand, to test the consistency, practicability and limitations of RFRM in a real world and sector specific context; on the other hand, to offer a theoretical and methodological contribution to the academic debate, showing how the use of RFRM can be justified even in areas little explored by the existing literature.

In addition, to strengthen the robustness of the analysis, the work faces two control methodologies alongside the RFRM, the Profit Split Method and the Differential Income Approach, in order to triangulate the results and confirm the robustness of the evaluation. This multidimensional approach allows the contribution of the thesis to be enriched both in terms of application and comparison with existing theory.

Finally, the valuation of intangible assets, and in particular brands, is also becoming increasingly relevant in extraordinary transactions (M&A), where the correct estimation of the fair value of brands and intangibles is crucial to determine the real value of a target company. The thesis, therefore, straddles the line between theory and practice, aiming to offer a useful tool for both the academic community and practitioners.

Chapter 1: Intangible Assets

The evolution of markets has progressively reshaped traditional models of business valuation, shifting the focus from tangible to intangible assets. This exchange has accompanied the overall transformation of an industrial economy to a knowledge-based one; a change characterized by the increasing of global competition, the proliferation of information and communication technologies, and the increase of innovation as a core economic driver (Powell & Snellman, 2004)¹. This reality has caused businesses to change their operations, recognizing innovation and differentiation as core levers for long term competitive advantage.

In today's economy, the trend of businesses deriving value from intangible assets is expected to continue, as firms continue to invest in knowledge-based resources to develop new products and services. As Giuseppe Verdi's character poignantly laments in *Rigoletto*, "*Courtiers, vile, damnable rabble, how much were you paid for my treasure? There's nothing you won't do for my money! But my daughter is beyond any price...*". This statement describes the value of what is truly valuable, it also highlights a real dilemma in business: how to assign economic value to what seems priceless. Although it may be impossible to directly assign value to intangible assets, the reality is that businesses need to develop a process for measuring and incorporating that information into their strategic and financial decisions in a reliable way, particularly in respect of corporate finance and valuation.

This chapter will explore the economic relevance of intangible assets, provide a comprehensive overview of their classification, and examine their growing role in corporate valuation and financial strategies.

¹ Powell, W. W., & Snellman, K. (2004). *The Knowledge Economy*. *Annual Review of Sociology*, 30, 199–220 <https://doi.org/10.1146/annurev.soc.29.010202.100037>

1.1 Definition and economic importance of intangibles

Intangible assets are now a more significant part of business value and performance within today's knowledge-based economy; while in the past economic value was connected to physical assets, such as machinery, property, and raw materials.

In contrast the knowledge-based economy's wholly radical shift from an industrial economy to one based on knowledge includes the priori linking value creation predominantly to non-physical assets: knowledge, innovation, brand equity, customer relationships, and intellectual property.

Drucker P. (1993) was one of the first authors to stress that the key resource in a post-capitalist society will be knowledge (rather than either capital or labour) in his book *"Post-Capitalist Society"*. Likewise, Powell and Snellman (2004) define the knowledge economy as one *"in which the production and exploration of knowledge plays the predominant part in the creation of wealth"*.

Intangible assets are broadly defined as *"an identifiable non-monetary assets without physical form"*² that provide future economic benefits to the owner. This definition is rooted by the International Accounting Standards Board in IAS 38, which establishes three essential conditions for recognition:

1. *Identifiability*, it is important to distinguish it from goodwill. An asset is identifiable if either is separable, capable of being sold, transferred, licensed, rented or exchanged independently, or from deriving contractual or legal rights³;
2. *Control over the resource* implies the power to obtain benefits from the asset and restrict others' access to those benefits. It normally derives from legal rights, in the absence of which control is more difficult to prove.
3. *Existence of future economic benefits* may come in the form of revenues, cost savings, or other measurable advantages.

If a resource controlled by the entity meets the prior definition, it may be presented in the financial reports only if (a) it is highly probable that the asset will provide future economic benefits to the entity, and (b) the entity can reliably assess the costs related to immobilization. This definition is consistent across financial and academic literature, and

² IAS 38, pct. 12,13,17

³ IAS 38, Paragraph 9, p. A1494

further emphasizes that the absence of physicality does not preclude the capacity to generate income or enhance enterprise value.

Bryan, Rafferty, and Wigan (2004) discuss how intangible assets encapsulate firm-specific capabilities and knowledge, which are difficult to replicate and may not be fully captured through traditional accounting systems. Intangible assets are often harder to evaluate because of high degrees of information asymmetry, reduced liquidity, and a lack of standardized market valuation mechanisms.

The key difference between intangible and tangible assets lies in their physicality. Generally, tangible assets are visible, depreciable, and can often be used as collateral. On the other hand, intangible assets are invisible and often inseparable from the identity or operations of the company. Tangible assets used to be the heart of business valuation, but they increasingly declined as the economy progressed from one of industrial to service.

In the today's economy, especially in sectors like technology, pharmaceuticals, media, and finance, intangible assets are often the largest component of enterprise value. This shift is indicative of a deeper systemic change in what creates value in the marketplace: knowledge, creativity, and intellectual capital have replaced factors and land as the resource considered most valuable to a corporation. As Corrado, Haltiwanger and Sichel (2005)⁴ declare, the modern production function must include intangible capital, such as R&D, organizational structure, and brand equity, as integral factors in productivity and growth.

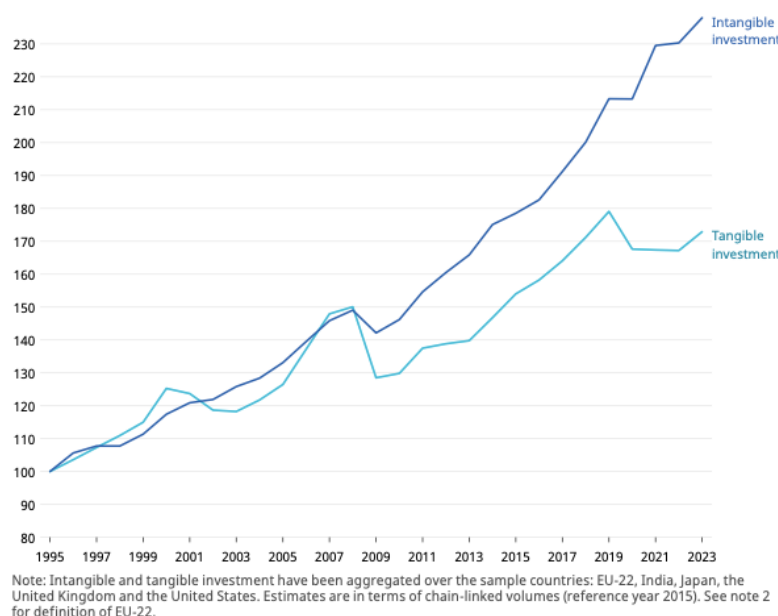
The growing dominance of intangible assets is not only theoretical but strongly supported by data. According to Brand Finance's Global Intangible Finance Tracker (GIFT™) 2024, the value of global intangible assets reached a historic high of \$79.4 trillion, marking a 28% increase from \$61.9 trillion in 2023.

In parallel, the World Intellectual Property Organization (WIPO) reports that investments in intangible assets have grown three times faster than those in tangible assets over the

⁴ Corrado, C., Hulten, C., & Sichel, D. (2005). *Measuring capital and technology: An expanded framework*. In C. Corrado, J. Haltiwanger, & D. Sichel (Eds.), *Measuring capital in the new economy* (pp. 11–46). University of Chicago Press

last 15 years. As of 2023, global investments in intangible capital reached approximately \$6.9 trillion, compared to just \$2.9 trillion in 1995. *Figure 1* demonstrate how, despite multiple crises and interest rates increasing, intangible investment has grown faster than tangible investment between 2008-2023.

Figure 1: Total intangible and tangible investment, 1995-2023, indexed (1995=100)⁵



Source: WIPO – LBS Global INTAN – Invest Database, June 2024.

Moreover, research by Ocean Tomo shows that in 1975, tangible assets accounted for 83% of the market value of S&P 500 companies, while intangible assets made up just 17%. By 2020, this trend had reversed dramatically: intangible assets represented 90% of the S&P 500's market value. This shift underscores the growing disconnect between what is captured by financial statements and what actually drives firm value.

1.2 Economic attributes and properties of intangibles

Intangible assets have a distinct set of economic characteristics that describe their strategic value and financial implications for modern businesses.

In literature, it is commonly agreed that intangible assets have economic attributes that can be *value drivers*, contributing positively to firm performance or *value distractors*,

⁵ Analysis conducted among 26 economies covered in the report, which together accounted for 52% of global GDP in 2023, total intangible investment has consistently outpaced total tangible investment since 2008. (WIPO and Luiss Business School)

which may diminish or compromise that value if improperly managed (Lev, 2001)⁶. It is important to understand the duality of intangibles if we want to extract the maximum value from intangible investment in a largely competitive and innovation-oriented economy.

One of the most important economic characteristic of intangibles is their *scalability*, which is directly connected to the notion of *non-rivalry*. Unlike tangible assets, intangible resources can be used simultaneously across multiple contexts, with no risk of depletion. For instance, a 3M ESPE, a leading producer of dental materials, created Filtek Supreme, a nanocomposite dental restorative material. Once the formulation was perfected and patented, it could be manufactured and distributed globally without diminishing its properties. As of 2022, Filtek products had worldwide sales higher than \$1 billion, showing that an intangible innovation can be scaled simultaneously across several market without risking depletion.

Closely related to the concept of scalability is the idea of *network effects*, a phenomenon particularly important in the digital and technological sectors. When a firm is able to position its intangible assets, such as software platforms or communication standards, as industry norms, the value of these assets grows exponentially with the number of users. A case in point is WhatsApp which thrived on network effects brought on by positive feedback loops created by users, eventually resulting in its sale for \$19 billion by Facebook in 2014. Network effects not only add utility, but they also serve as powerful barriers to entry for competitors and solidify the firm's position in the market (Cantamessa & Montagna, 2015)⁷.

Another important attribute is *partial excludability*. Firms can control access and use of many intangible assets through legal mechanisms like intellectual property rights, but this control is often incomplete. For instance, if a talented employee leaves an organization, he/she may take with him/her valuable tacit knowledge. Similarly, even with patents, the competing firm may experience spillover effects, when competitors find a way to imitate the innovation or otherwise work around its protection. This introduces potential loss of value, and it is important in considering its possible value within the firm's overall

⁶ Lev, B. (2001). *Intangibles: Management, Measurement and Reporting*. Brookings Institution Press

⁷ Cantamessa, M., & Montagna, F. (2015). *Management of Innovation and Product Development*. Springer

objectives, and where its codified and internalized knowledge within organization's processes can help prevent loss.

Recent contributions on literature (Crouzet et al., 2022) elaborate two fundamental economic properties of intangibles: non-rivalry in use and limited excludability. Intangible assets, due to their lack of physical form, require a storage medium (such as software, documentation, or human expertise), enabling their simultaneous use across multiple production processes and enhancing economies of scale and scope. However, establishing and enforcing exclusive property rights over intangibles remains difficult, as they can often be copied or imitated with relative ease. This limited excludability reduces the ability of firms to fully appropriate the returns from their intangible investments. Moreover, the interplay between technological advancements and institutional frameworks significantly impacts how intangibles are stored, protected, and economically leveraged. The rise of intangibles also contributes to explaining broader economic trends such as the slowdown in measured productivity growth, rising income inequality, increased market concentration, and the growing importance of rents in firm valuations. Understanding these dynamics is crucial for effectively managing and maximizing the value of intangible assets in modern firms.

Even though intangible assets are valuable, they also come with some hazards. Their value can be uncertain and is subject to change based on market perception, legal status, and technological obsolescence. Moreover, investments in such intangibles as R&D or branding are speculative, with a huge range of possible outcomes. These sunk costs might not yield the expected return, and the worst-case scenario can additionally be worse, since there may be no residual asset sale value.

Non-tradability is another major obstacle. Standardized price mechanisms and legal frameworks typically do not exist for most intangibles, meaning they are rarely traded in active and liquid markets. Their valuation is complex and can be subjective, which makes it difficult for stakeholders to allocate internal resources, report externally, or set price for a transaction. This issue is particularly pronounced in M&A operations, where under or overestimating intangibles can significantly distort a company's overall enterprise value.

These difficulties are acknowledged by *IAS 38 – Intangible Assets*, which imposes rigorous recognition criteria from an accounting perspective. In order to quantify as an intangible asset, the asset must (1) be identifiable, (2) the firm must have control over it, and (3) it must be able to produce likely future economic benefits. For instance, internally created goodwill or human capital is rarely capitalizable until the firm can demonstrate control or separability requirements or has satisfied testable accounting standards.⁸

In conclusion, while intangible assets can provide unmatched value creation opportunities, they also subject firms to unique risks and managerial challenges. Their economic attributes, such as scalability, network effects, partial excludability, volatility, and non-tradability, warrant tailored governance instruments and sophisticated analytical capabilities in order to reap their full value potential.

1.3 Classification of Intangibles

The need for further understanding of intangibles suggests that we should look at the various classification schemes that we can find in the literature. Just like the definitions, there is no universal agreed-upon taxonomy. Numerous scholars and organizations have attempted to categorize intangibles in varied ways; and often based on different perspectives related to legal, economic or functional characteristics.

One well-known framework is that of Grüber (2014)⁹, who classified intangibles into two main approaches:

- Legal classification, and
- Economic classification

This distinction allows us to have a multiple perspective when studying intangibles because it shows us the enforceability and the value creation aspect of them.

1.3.1 Legal classification

The legal classification approach focuses on the existence and applicability of legal rights associated with intangibles. Under this framework, assets are grouped based on whether they are protected by law, regulation, or contract.

⁸ IASB (2021). *IAS 38 – Intangible Assets*

⁹ Grüber, S., (2014), *“Intangible Values in Financial Accounting and Reporting: An Analysis from the Perspective of Financial Analysts”*, Springer, p. 45

The classification developed by Von Keitz, Dawo, Hepers, and Velte (2014) identifies three principal categories of intangible assets, as shown in *figure 2*.

Figure 2: Legal classification of intangibles

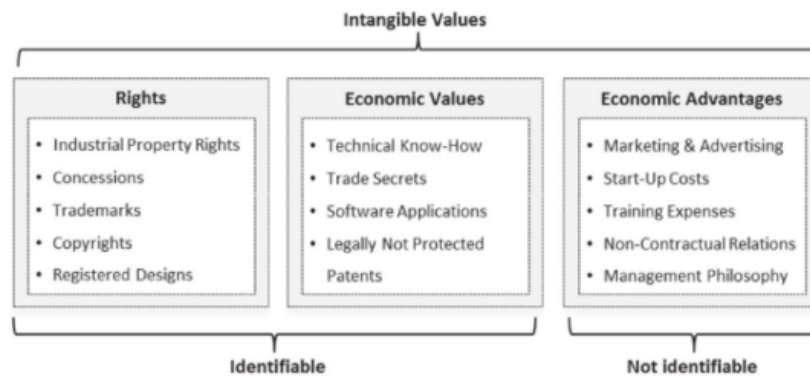


Figure 2: Von Keitz, Dawo, Hepers and Velte (2014)

1. **Rights-based intangibles:** these are intangible assets for which economic benefits are secured through legal or contractual rights. Owners of such assets can exclude third parties from usage, thus ensuring exclusivity of economic returns. Examples include patents, trademarks, licenses, registered designs, copyrights and usage right over intellectual property or infrastructure. These assets are often recognized in financial statements when meeting the criteria of IAS 38.
2. **Legally unprotected economic intangibles:** this category encompasses assets that, while identifiable and measurable, lack legal protection or enforceable exclusivity. As a result, they cannot prevent others from utilizing them. Typical examples include technical know-how, unpatented inventions, trade secrets and internally developed software. These assets can still create value, but they are more vulnerable to imitation or knowledge spillover effects.
3. **Embedded economic advantages:** unlike the previous categories, these intangibles are not independently identifiable from the entity. They are deeply embedded in the company's operations and are difficult to separate or assign value to directly. Examples include corporate culture, employee training, start-up and R&D expenditures, marketing investments, customer loyalty, and informal supplier or client relationships. Due to their non-separability, these intangibles often do not

qualify for recognition under current accounting standards, despite their strategic importance.

This layered legal classification framework is supported by other institutions such as the OECD (2017, 2022), which emphasizes the distinction between legally and non-legally protected intangibles, particularly in the context of transfer pricing and tax regulation.

1.3.2 Economic classification

The economic classification of intangibles focuses on the functional role that these assets play within the organization. Specifically, the intent is to identify how the intangibles contribute to the creation, maintenance, and enhancement of economic value in a firm, regardless of their legal state.

There are a number of classifications used throughout economic literature, but perhaps the most common, having been operationalized and used in empirical studies, is to build the tripartite classification of human capital, relational (or external) capital, and organizational (or structural) capital.

This taxonomy was originally popularized by Edvinsson and Malone (1997)¹⁰ in their book on intellectual capital, which continues to be one of the most referenced models for understanding the structure of intangible assets from a managerial and strategic perspective. Grüber (2014) points out that the three categories consistently emerge, from the different understanding of intangibles, because of their strong links to value-making and business performance.

1. *Human capital* refers to the knowledge, skills, creativity, and problem-solving capacity of an organization's workforce; including both formal and informal training and experience-based know-how. According to Sveiby (1997), it reflects "*the capacity to act in a variety of situations to create both tangible and intangible assets*". The economic value of human capital lies in the employees' ability to innovate, adapt, and deliver outcomes that drive competitive advantage.

¹⁰ Edvinsson, L., & Malone, M. S. (1997). *Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower*. Harper Business.

However, a key limitation is that human capital does not belong to the firm, as a matter of fact employees are mobile, and valuable knowledge may exit the company. For this reason, it is rarely capitalized unless it is converted into organizational knowledge systems or legally protected through contracts.

2. *Relational (or external) Capital* is all the resources from an organization's relationships with customers, suppliers, regulators, and other external stakeholders. It is brand value, customer loyalty, stakeholder trust, access to distribution channels, strategic alliances, and corporate reputation. Abhayawansa (2010) defined the relational capital as "*all the resources linked to a firm's relationships with external stakeholders including perceptions held about the firm*". This type of intangible asset is often a key differentiator, especially in in-service industries, and it represents significant competitive advantage and revenue stability. Brands like Apple or Nike carry immense relational value which promotes customer retention and enables them to charge premium prices.
3. *Organizational (or structural) Capital* refers to the non-human infrastructure of the firm-processes, databases, IT systems, intellectual property, business models, and the firm's culture or philosophy. As Petrash (1996) describes, it is "*the knowledge that has been captured and institutionalized within the structure, processes, and culture of an organization*". Unlike human capital, organizational capital remains with the firm even if key employees leave, provided the knowledge has been codified. This makes it a reliable source of long-term value and strategic consistency, which is why many companies invest heavily in ERP systems, research and development departments, or patented technologies precisely because these assets increase in value over time and can be scaled up.

Diefenbach (2006) provides a more comprehensive and fine-grained categorization of intangible resources following a similar model. His categorization model distinguishes categories based on the nature, transferability and social context of intangible assets, and includes six distinct classes (as shown in *Figure 3*):

1. Human capital
2. Social capital

3. Cultural capital
4. Statutory capital (linked to roles and authority)
5. Information-legal capital (e.g. intellectual property, contracts)
6. Embedded capital (knowledge codified in technology or organizational routines)

Figure 3: The categorial system of intangible

Category	Human capital	Social capital	Cultural capital	Statutory capital	Inform. and legal capital	Embedded capital
Linked to a particular individual	Yes	Yes	No	No	No	No
Located in two or more individuals	No	Yes	Yes	Yes	No	No
Transferability	No	No	No	Yes	Yes	No
Carrier	Individual	Individuals ("interpersonal system")	Society, community ("suprapersonal system")	Role, position	Physical medium, legal entity	Structures, organisations, things
Definition	Tacit knowledge and individual competence for organising oneself and for (inter-)acting within or with one's environment	Interpersonal relations and the aspects resulting from such relations for which there is no external reason (e.g. contractual or legal claim, social position)	Official and informal norms, values and rules of a particular community (dyad, family, peer group, organisation, society, nation, people, mankind)	Statutory capital describes person-independent positions in a social system and exclusive possibilities and responsibilities arising from or linked to such a position or role	Any explicit meaning of something that can be identified and demarcated individually without being necessarily internalised, shared or understood by one or more individuals	Non-separable explicit knowledge embedded either in immaterial structures and processes or material goods ("artefacts").

Source: T. Diefenbach. Oxford Brookes University, Oxford, UK

This system is particularly valuable for clarifying overlaps among categories and distinguishing between personal, collective, and institutional intangibles, thus offering a complementary lens to the classic intellectual capital model.

While Diefenbach does not explicitly use the terms “economic” or “legal” classification, his framework is fully aligned with the economic approach that emphasizes how intangible resources function and interact within organizations to generate value. Moreover, elements such as information-legal capital intersect with the legal dimension, reinforcing the idea that real-world intangibles often span across classification boundaries.

Overall, both the tripartite intellectual capital model and Diefenbach’s six-party system highlight the need to move beyond simple accounting definitions. In today’s knowledge-intensive and digitalized economy, firms must understand, measure, and manage intangibles not only as abstract categories, but as dynamic and strategic resources embedded in people, relationships, and organizational systems.

1.3.3 The IAS 38 Framework and international comparison: IAS 38 vs US GAAP

The International Accounting Standards Board (IASB) issued *IAS 38* in April 2001, with the objective of establishing clear rules for the accounting treatment of intangible assets not specifically addresses by other standards. The standard requires entities to recognize an asset when specific criteria are met. According to IAS 38, an asset is defined as a resource that:

- i. Is controlled by an entity as a result of past events, and
- ii. Is expected to provide future economic benefits.

An intangible asset is specifically labeled as an identifiable non-monetary asset without physical substance. Although IAS 38 includes many possible examples of intangible assets (see paragraph 9 of the standard), some of the items considered in those examples may not quantify for recognition; as noted in paragraph 1.1.

For an intangible to be recognized, the entity must demonstrate not only that it meets the definition, but also it satisfies the recognition criteria. Specifically, IAS 38 states that *an intangible asset shall be recognized if, and only if:*

- a. *It is probable that the expected future economic benefits that are attributable to the asset will flow to the entity; and*
- b. *The cost of the asset can be measured reliably.*¹¹

The assessment of future economic benefits should be based on reasonable and supportable assumptions, reflecting management's best estimate of the economic conditions that will exist over the asset's future useful life.

When an intangible asset is acquired independently (rather than as part of a business combination), the purchase price will usually indicate the expected flow of economic benefits associated with the underlying intangible asset, even if timing or amount is uncertain. The acquisition cost is usually reliably measurable, particularly when the transaction involves cash or other monetary assets. The total cost is either the cash paid, or the cash equivalent determined at the date of acquisition, plus any directly attributable costs incurred to bring the intangible asset to the intended use condition

¹¹ International Accounting Standards Board (IASB). (2023). *International Accounting Standard 38: Intangible assets*. IFRS Foundation. Retrieved from <https://www.ifrs.org>

Under *IFRS 3 – Business Combinations*, if an intangible asset is acquired as a part of a business combination, it must be recognized at fair value on the acquisition date. This fair value reflects the market's expectations regarding the asset's ability to generate future economic benefits (thus satisfying the first recognition criterion). Additionally, if the asset is separable or arises from contractual or legal rights, the cost can be measured reliably (satisfying the second criterion). The acquirer is required to recognize such intangibles separately from goodwill, regardless of whether the acquiree had previously recognized them. This may involve evaluation *in-process research and development process* to see the accordance with the definition and recognition requirements of IAS 38.

Moreover, IAS 38 explicitly prohibits the recognition of internally generated goodwill, this is because it does not represent an identifiable resource controlled by the entity, and its cost cannot be measured reliably. Similarly, determining whether internally generated intangible assets meet the recognition criteria is often complex, mainly due to:

- Difficulties in identifying whether and when an identifiable asset has been created, and
- Inability to distinguish the cost of creating the asset from the cost of maintaining or enhancing as a whole.

To facilitate recognition, IAS 38 separates the creation of internally generate intangibles into two stages: the *research phase* and the *development phase*. If an entity is not able to distinguish the phases, the expenditure on the project must be treated as if it were incurred in the research phase only, as it is not possible to demonstrate the asset's ability to generate probable future economic benefits.

An intangible asset arising from development shall, on the other hand, be recognized only if all the following six conditions are met:

- a. Demonstration of the technical feasibility of completing the asset for use or sale;
- b. Intention to complete and use or sell the asset;
- c. Ability to use or sell the asset;
- d. Evidence of probable future economic benefits;
- e. Availability of adequate technical, financial and other resources to complete the development;

- f. Ability to reliably measure the expenditures attributable to the asset during its development.

However, IAS 38 does not allow recognition of internally generated brands, mastheads, publishing titles, customer lists, or similar items. These expenditures cannot be clearly separated from the broader costs of developing the overall business and therefore fail to meet the asset recognition criteria.

In order to provide a wider scope of regulatory perspectives, it is worthwhile to provide a brief comparison of IAS 38 to other international frameworks, especially with US GAAP. While IAS 38, under IFRS, allows the capitalization of development costs (as opposed to research costs), US GAAP (ASC 350) generally requires all research and development costs to be expensed when incurred, unless it is obtained in a transaction, such as a business combination. Another difference, among many, is the revaluation model: IAS 38 allows an entity to revalue its intangible asset to fair value if an active market exists, whereas US GAAP strictly prohibits revaluation and only allows the cost model.

These differences have meaningful consequences on cross-border financial comparability. In other words, the firm that can report under IFRS potentially could report more intangible asset dollars on its balance sheet than equivalent firms which report under US GAAP, simply due to differences in recognition and measurement policies. Because of these variances, analysts, investors, and M&A professionals working in a global context need to care about the differences in reporting and the accounting for the same firms with significant intangible assets.

1.4 The strategic significance of intangibles in business valuation

As previously discussed in this chapter, the increasing centrality of intangible assets in today's business environment stands in contrast with the restrictive nature of existing accounting frameworks. Despite the substantial economic impact of intangibles, especially brands, accounting standards like IAS 38 prohibit the recognition of internally generated intangible assets unless strict criteria are met.

Consequently, many assets that drive long-term corporate value remain absent from financial statements. This regulatory gap accentuates the need for alternative approaches to accurately assess a company's value. This becomes particularly relevant in strategic corporate contexts such as mergers and acquisitions, where the lack of formal recognition of intangible assets could obscure critical insights in purchase price allocation and fair value determination.

Recent global data show a profound shift in the asset structure of corporations. As of 2024, intangible assets reached an all-time high value of \$79.4 trillion, a 28% increase from the prior year.¹² In the United States, intangible assets now account for approximately 90% of the market value of firms listed on the S&P 500, according to the World Intellectual Property Organization (WIPO, 2023).

This transformation is not exclusive to the U.S. In Europe, countries like Denmark, Ireland, and the Netherlands exhibit similar trends due to strong innovation-focused sectors, such as pharmaceuticals, biotechnology, and renewables. Italy, too, is seeing tangible signs of this evolution; recent studies from national valuation bodies¹³ confirm a steady increase in intangible investment, particularly in the chemical and dental industries, where brand and product identity are decisive assets.

In these sectors, brand equity plays a multifaceted role: it acts not only as a marketing tool but also as a marker of clinical reliability, regulatory compliance, and product innovation. According to Brand Finance (2023), brand value accounts for a significant share of the enterprise of firms, often exceeding 30% - 40% of total firm value in the case of leading consumer health companies.

Nevertheless, as Bănuță and Gădoi (2023) observed, while brand value created internally is definitely relevant, it still does not meet the criteria for recognition in IAS 38 due to the difficulty in asserting identifiability, control, and reliability of cost. In this light, not only does the lack of recognition of internally generated brand value limit disclosure on the balance sheet, it also complicates corporate valuation. This restriction is potentially severe not only in the M&A context, but in the ongoing consideration of such values by stakeholder constituents (e.g., investors, creditors, analysts, etc.). While

¹² Brand Finance. October 2024, <https://brandfinance.com>

¹³ Cerved; WIPO, 2023

the standards do not highlight the explicit recognition of intangible current values, or even obtaining their fair value, understanding what those fair values are is paramount to making informed decisions or strategic plans. Again, this underscores the need for credible valuations models, which can support a better diagnosis of the true accounting representation versus economic reality.

Among intangible assets, brand equity is arguably the most influential. It affects not only market share and profitability but also valuation multiples in corporate finance. Companies like Apple, Amazon, and Nike derive a significant portion of their enterprise value from branding, as shown in *figure 4*.

Figure 4: The world’s top 10 most valuable brands 2023



Source: Brand Finance Global 500 2023 Report

Even in less consumer-facing sectors like B2B, dental or chemical markets, brands often act as proxies for clinical safety, regulatory compliance, or product innovation. Internally developed brands, however, continue to remain invisible in accounting books unless acquired externally, often appearing as part of goodwill in business combinations.

The importance of brand value in these industries is confirmed by recent rankings from Brand Finance, which annually assesses the most valuable chemical brands globally. As shown in *figure 5*, the top brands such as BASF, SABIC, and Linde reach brand valuations well above \$4 billion, with BASF leading at \$9.25 billion in 2024. These data illustrate how brand equity is a strategic economic asst even in highly technical sectors.

Figure 5: Top 10 Most Valuable Chemical Brands in 2024

2024	2023	Logo	Name	Country	2024	2023	2024
1 	1		BASF		\$9,250M	\$8,360M	AAA-
2 	2		SABIC		\$4,893M	\$4,719M	AAA-
3 	5		Linde		\$4,704M	\$4,138M	AA+
4 	4		Dow		\$4,521M	\$4,268M	AA+
5 	3		LG Chem		\$4,212M	\$4,526M	AAA-
6 	7		Rongsheng Petrochemical		\$3,060M	\$2,561M	AA-
7 	6		LyondellBasell		\$3,028M	\$2,838M	AA-
8 	9		Shin-Etsu		\$2,364M	\$2,244M	AA
9 	10		Nutrien		\$2,220M	\$2,104M	AA-
10 	8		Corteva		\$2,036M	\$2,305M	AA

Source: Brand Finance – Chemicals 50, 2024

These values demonstrate the market's recognition of branding as a source of differentiation, reputation and customer loyalty, even in complex sectors, like chemicals and pharmaceuticals. As chapter 2 will further explore.

To overcome the reporting limitations, several valuation techniques have gained traction. As detailed in the academic literature and professional standards (ANEVAR, 2022; IVSC, 2021)¹⁴, methods such as the Royalty Relief Method, Multi Period Excess Earnings Method, and Replacement Cost Approach provide a structured way to estimate the fair value of intangible assets. These approaches are essential in transaction scenarios such as mergers, divisions, or consolidations, where the real economic value must be considered. These methods are also embedded in international standards like IVS 210, which reinforce that brand, technology, customer lists, and other intangibles often contribute substantially to a company's overall value, even when not recognized on the balance sheet.

In addition, for Bănuță & Gădoiu, 2023 the estimation of intangible assets is crucial in the context of business reorganizations and consolidated group accounts. Regardless if

¹⁴ ANEVAR, Asociația Națională a Evaluatorilor Autorizați din România, and IVSC, International Valuation Standards Council

the net asset approach or the global valuation approach is used, assessors will frequently have to estimate the fair value of intangible items presented in the financial statements which are typically excluded, thus to those situations, have downstream in the form of share value, exchange ratios and the realization of goodwill. This further reinforces that we should understand and communicate the value of the intangible assets even if it is not being realized in order to provide support transparency, comparability and strategic clarity.

The limitations in current accounting recognition, while grounded in prudence and objectivity, should not preclude the development of better tools for economic valuation. As stated in the IVSC's 2021 position paper, *“only a small percentage of intangible assets are recognized on balance sheets, typically via acquisition from a third-party transaction. Many have noted this severe disconnect between market values and book values.”* This disconnect impacts not only reporting quality but also capital allocation, investor relations, and the integrity of strategic evaluations.

In conclusion, intangible assets, in this case particularly brands, are no longer peripheral. They are central to business value, competitiveness, and stakeholder confidence. Understanding their nature, estimating their worth, and integrating them into valuation models are no longer optional: they are essential. The next chapter will explore the most relevant valuation methodologies, focusing in particular on brand valuation, which will be the object of our empirical analysis. In an era increasingly driven by innovation, reputation, and knowledge, measuring the immeasurable is not a luxury, but a necessity.

Chapter 2: Valuation of Intangible Assets

In many modern enterprises, the true value of the company lies not in its tangible assets, but in the power and potential of its intangible resources. This is especially evident in certain categories of firms where physical infrastructure is either minimal or entirely absent, and yet their market valuation remains substantial.

Typical examples include¹⁵:

- companies that no longer operate but retain ownership of highly reputable or historic brands;
- start-ups in regulated sectors – such as telecommunications or pharmaceuticals – that have acquired strategic licenses or patents but have not yet commenced commercial operations;
- and entities that control rights to valuable natural resources, like mining or energy concessions, without having initiated extraction or production activities.

In these scenarios, the value of the company is predominantly anchored in a specific intangible asset, be it a trademark, a license, a patent, or proprietary know-how.

The valuation of such firms requires a targeted approach that moves beyond conventional metrics based on cash flows from tangible operations. In these cases, the most appropriate strategy is often an asset-based valuation, with a focus on isolating and measuring the contribution of the core intangible asset. This approach allows analysts and stakeholders to assess the fair value of the company based primarily on the underlying intangible that represents its main economic potential.

The objective of this chapter is to present a structured overview of the principal methodologies used to value intangible assets, including cost, income, real options and market-based approaches. Each method offers specific advantages depending on the type of asset, its stage of development, the availability of market data, and the purpose of the valuation.

¹⁵ Vulpiani M. (2014) *“Special cases of business valuation”* pg.449

2.1 Valuation Methods for Intangible Assets: A General Overview

The valuation of intangibles presents unique challenges due to their lack of physical substance, limited market comparables, and often firm-specific nature. According to IVS (2021) and Salinas (2009), the classification into market, income and cost approaches is widely accepted in both academic and professional practice and aligns with IFRS 13's fair value framework (IFRS Foundation). To which we can also add a more theoretical one, but less used: real options approach. For each of these methods there are theoretical foundations, practical applications and limitations, that we will analyze in the following paragraphs.

The market approach identifies the value of an intangible asset by referencing prices and other information from transactions occurring in the market with similar assets. This method is based on the premise that market sales of similar assets in the recent past, in active markets, are the best indicators of fair value. Adjustments are made for differences in asset characteristics that may include, but are not limited to, functionality, contractual arrangements, location, or industry. However, the information and usage of this method to intangibles is often problematic; many of them are unique, and truly comparable market data do not exist. As noted by Salinas (2009) and Paugam et al. (2016), the scarcity of observable and comparable transactions, especially for unique assets like brands or proprietary technologies, limits the method's reliability. WIPO (2023) similarly highlights that intangible assets are rarely traded in active markets, which further constrains the market's approach applicability.

The income approach is based on the principal that the value of an asset is equal to the present value of the future economic benefits it is expected to generate. This method is well established in valuation literature (Hitchner, 2022; Bini, 2011) and supported by professional guidelines (IVSC, 2021), making it a preferred method for valuing intellectual property and brands in licensing, M&A, and financial reporting contexts (WIPO, 2017). Techniques within the income approach include the Relief from Royalty Method (RFRM), the Multi-Period Excess Earnings Method (MPEEM), and the Profit Split Method (PSM). These methods are particularly useful when there is a clear connection between the asset and identifiable revenues streams. For instance, the value of a patented drug may be estimated by forecasting future cash flows from expected sales, adjusted for taxes, obsolescence, and market risk. The income approach is often favored

for its ability to incorporate both quantitative and qualitative data about the strategic value of the asset, its competitive position, and its legal protection. According to WIPO (World IP Report 2023), income-based techniques are currently the most commonly applied in the valuation of intellectual property, especially in the context of licensing, acquisitions, and dispute resolution.

The cost approach values an intangible asset by calculating the current cost to reproduce or replace the asset, less any depreciation or functional obsolescence. This method is particularly relevant when market or income-based data is not available, or when valuing early-stage assets, internal development projects, or support functions such as software systems and databases. Under the cost approach, it is assumed a rational investor would not spend more for an asset than the cost to replicate it. Although its logic appears to be simple, this method ignores any characteristics or qualities of the asset that are likely to result in future economic benefits and undervalues assets that have distinctly strategic attributes or strong market recognition. As a result, the cost approach is typically used as a secondary or corroborative approach alongside with income or market methods.

Valuation professionals are often limited by the available market approach to value intangible assets, as there are usually a limited number of comparable transactions and disclosure is constrained into public financial statements. This makes it challenging to determine that assets in the benchmark group are sufficiently comparable in terms of their risk profile, cash flow potential, and legal protections. Therefore, valuers primarily use income-based methods, especially in transactions or strategic environment, because they are flexible and reflect the economic reality of the asset under review. Cost-based methods are often used to value tangible assets, and sometimes are used for the valuation of intangible assets when other methods are impractical, such as in internal accounting and regulatory exercises.

In summary, there are some important factors to be considered when determining the appropriate method for valuing an intangible asset: characteristics of the asset, purpose of the valuation, reliability of data, and regulatory or strategic context. With intangibles becoming increasingly important to corporate value, a developed understanding of these methods is crucial for analysts, auditors, and decision makers.

2.2 Market Approach

The market approach is a valuation method grounded in the principle of comparability: it determines the fair value of an intangible asset by referencing actual transaction process of similar assets in the marketplace. This method relies on identifying recent transactions or active listings involving comparable assets and then adjusting these for differences to enhance comparability. The underlying assumption is that a rational buyer would not pay more for a given asset than what others have paid for similar assets offering equivalent utility.

The primary process within the market approach is somewhat of a sale comparison method, where transaction information is collected, adjusted, and analyzed to identify multiples, or benchmarks, to price the subject asset. Adjustments are made to transaction values to customize comparisons to the subject asset for differences in size, legal rights, market access, technological readiness, useful life, and exclusivity.

To apply the market approach effectively, practitioners typically follow these steps:

1. Research: find recent and relevant transactions involving comparable intangible assets, better if verified by independent and observable sources.
2. Analysis: examine the characteristics of the transaction, including timing, economic context, legal framework, and asset-specific attributes.
3. Adjustments: modify transaction prices to reflect differences in factors such as utility, legal restrictions, market conditions, and asset lifecycle.
4. Valuation: conclude the fair value by applying adjusted pricing multiples to the relevant value driver (e.g., revenues, EBIT, or usage metrics).

As outlined in the literature, the market approach is most effective when adequate observable market data is available, allowing valuation to be based on actual transactions between independent parties. According to ScienceDirect (2024)¹⁶, this methodology is a preferred approach whenever assets have active trading markets or comparable licensing deals (it is the case of software platforms, broadcasting licenses, or contracts with content producers), but much less typically applies to proprietary technology, proprietary

¹⁶ ScienceDirect. (2024). *Market approach*. Retrieved from <https://www.sciencedirect.com/topics/computer-science/market-approach>

software developed in-house or internally generated brands with no benchmarks for comparison.

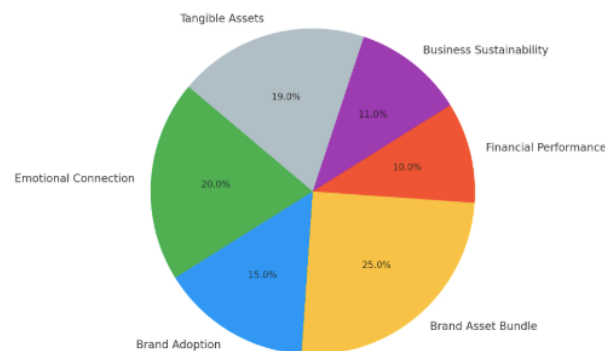
In our specific case, a company operating in the dental sector, licensing agreements for patent-protected formulations or production technologies may provide valuable benchmarks, but the uniqueness of R&D processes and collaborative synergies that are firm-specific often require modifications or additional valuation approaches.

In many real-world cases, even if transaction data is available, it is preferred to use market methods in combination with income-based methods. For instance, royalty rates derived from arm's-length licensing agreements can serve as a proxy input in income approaches such as the Relief from Royalty method; these hybrid practices reflect a pragmatic response to the limitations of the standalone market approach and are endorsed by valuation standards such as EVS 210 and IVS 105

An interesting real-world example of the application of the market approach to intangible asset valuation is found in the experience of Vista Metals Corporation. In 2023, Vista Metals Corporation, a specialty aluminum manufacturer based in the U.S., completed an evaluation of its intangible assets, specifically their brand equity and reputation, using a systematic approach aligned with ISO 10668 and the market method. By analyzing comparable transactions and market data, Vista determined that 81% of the total value of the business could be attributed to intangible factors such as emotional buy-in from the stakeholders, buy-in of the brand, and longevity of the business. The company used market-based multiples and made qualitative adjustments based on five categories: connection with employees and customers, adoption of brand, bundle of brand assets, business financial impact, and longevity of organization. Even though not all of the data was derived from identical transactions, comparable metrics allowed the company to provide empirical support for the value of intangible assets in a concrete and strategic way. The report influenced their internal strategic planning, provided higher transparency with stakeholders, and established the brand as a value driver, with possible implications for future transactions.

The pie chart below (*Figure 6*) summarizes the contribution of each category to Vista Metals' overall value, illustrating the dominant role of intangibles even in industrial sectors traditionally associated with tangible capital.

Figure 6: Vista Metals – Intangible Asset Contribution to Total Value (2023)



Source: Own elaboration based on Vista Metals case study

Despite its conceptual soundness, the practical application of the market approach to intangibles is often limited. Intangibles are, by their nature, heterogeneous and context-dependent, thereof their uniqueness, legal conditions, and lack of standardized marketplaces pose significant obstacles. As noted by the WIPO (2022) and International Valuation Standards Council (IVSC), intangible assets rarely independently transacted, and data on comparable transactions is either confidential or too infrequent to be statistically robust.

In conclusion, while the market approach offers an objective framework grounded in observable data, its application to intangible assets is often restricted by the scarcity of suitable comparables. For this reason, it is typically reserved for specific contexts where active markets exist or used as a supporting method to triangulate fair value alongside income or cost-based models.

2.3 Income Approach

The income approach is a commonly used, theoretically robust method of valuing intangibles, especially if the asset is expected to provide identifiable streams of future economic benefits. The approach estimates the value of the asset by determining the present value of the expected future cash flows obtained by the asset's use, ownership, or licensing. This method is especially relevant when valuing intangible assets like brands, patents, software, or customer relationships. These intangibles may lack a market standard or cost basis, but there is a strong link to revenues. According to WIPO (2017) and industry guidelines, the income approach is favored in both strategic business

contexts and financial reporting, due to its flexibility and direct economic linkage. At its core, the income approach is based on the principle that the value of an asset is equal to the present worth of its future earnings. Among the various methodologies available under this approach, the Discount Cash Flow (DCF) method is the most prominent.

Its application typically includes the following steps:

1. Projection of future cash flows: forecasting the total revenues generated by the asset and its historical income. This requires an understanding of the asset's role in the business model, historical performance, and market conditions. Cash flow may result from higher pricing power (as with strong brands), increased sales volume (as with customer data), or reduced operating costs (as with proprietary technologies)
2. Estimation of operating costs: deducting expenses necessary to generate those benefits. These usually exclude financing costs like interest and debt repayment, focusing instead on operational expenditures such as personnel, marketing, maintenance, and R&D where relevant.
3. Calculation of net cash flows: determining net cash flows by subtracting taxes and operational costs from projected income. Non-cash charges (e.g., depreciation) are added back, and capital expenditures and net working capital are subtracted.
4. Discount rate determination: discounting cash flows using a rate that reflects the time value of money and the risk associated with the forecast. Discount rates can be derived using models like the Capital Asset Pricing Model (CAPM) or by adapting the company's WACC, adjusted for asset-specific risk factors such as market volatility, legal protection, and of course a higher risk associated with the intrinsic nature of intangibles.
5. Terminal value estimation: for assets with long or indefinite useful lives (e.g. brands) a terminal value may be calculated, often using a perpetual growth model. This value reflects the continuing benefits expected beyond the forecast horizon and it is discounted back to present value.
6. Asset valuation: the present value of the cash flows and terminal value combined provides an estimate of the intangible's fair value. Where applicable, contributory

asset charges (CACs) may be subtracted to account for supporting assets like trademarks, workforce, or infrastructure.

Several methods fall under the income approach umbrella, each suitable for different asset types and availability of data:

- Relief from Royalty Method used especially for trademarks and patents, this method estimates the value by calculating avoided royalty payments the firm would otherwise incur if it licensed the asset instead of owning it.
- Multi-Period Excess Earnings Method, typically applied to core intangible assets like customer relationships or proprietary technology, this method attributes residual cash flows after accounting for returns on all other contributory assets.
- Profit Split Method, frequently used in transfer pricing, this method allocates profits among related assets or entities based on their respective contributions to value creation.

The income approach has several distinct advantages that make it a widely used approach to the valuation of intangible assets. First, it reflects the logic of the usual business decision concerning investment selection by focusing on expected economic returns, thus providing a familiar and pragmatic framework by which to assess value. Moreover, its flexibility makes it appropriate for evaluating different types of intangible assets and across different industry sectors. In addition, it also has the advantage of being able to explicitly consider risk via discounting documents which also allows for sensitivity analysis and consideration of future scenarios.

Nonetheless, the approach is not without challenges; a reliable valuation requires access to comprehensive and accurate data to support future cash flow projections, as well-reasoned assumptions about the asset's economic life and growth prospects. In addition, determining an appropriate discount rate is often complex and relies heavily on the analyst's judgment, which introduces a degree of subjectivity that can significantly affect the final valuation outcome.

Given these characteristics, the income approach is particularly suitable in circumstances where the intangible asset is expected to generate measurable income, and where sufficient historical or forecasted financial information is available. As highlighted in professional practice literature, such as *MPI (2015)* and the *ICAEW London Presentation*

(2018), this approach is frequently employed by valuation professionals in the context of mergers and acquisitions, financial reporting in accordance with IFRS 13 or ASC 820, and for impairment testing under IAS 36.

2.3.1 Relief from Royalty Method

The Relief from Royalty Method (RFRM) is a widely accepted approach for valuing intangible assets, particularly intellectual property (IP) such as trademarks, brands, patented and unpatented technologies (know-how). As detailed in Salinas (2009), the RFRM is especially suited to brand valuation as it reflects real-world licensing practices. The method is also endorsed in IVSC's IVS 210 and ISO 10668 for its conceptual clarity and use of market-based inputs. The primary aspect is that the value of an intangible asset corresponds to the hypothetical royalties a business would have to pay if it did not own the asset but licensed it from a third party.

Under this approach, the value of a brand (or similar intangible) is based on the market rates that would apply if a comparable brand were licensed. A royalty fee, typically expressed as a percentage of revenue or profit, would be paid by the licensee to the licensor for the right to use the brand. The anticipated royalty payments over the brand's useful economic life, or in perpetuity for assets with indefinite lives, are then discounted to their present value, net of tax.

Revenue-based royalties are most commonly used, as revenues are usually more readily available and less influenced by company-specific financial structures such as debt financing or operating costs. This provides a consistent, observable, and comparable basis for valuation across different companies and industries.

This method involves the following steps:

1. **Benchmark Royalty Rates:** conducting market research to identify royalty rates applied in similar licensing agreements within the same industry and for assets of similar quality. Public databases, market transactions, and published licensing deals are common sources.
2. **Adjust for Brand-Specific Factors:** avoiding using average royalty rates; instead, adjust benchmarks based on strategic positioning, brand strength,

geographic area, and other qualitative and quantitative metrics. For examples, a luxury brand like Bulgari may command a RR (royalty rate) higher than a mass-market brand like Zara.

3. Select an Appropriate Royalty Rate: based on the benchmarking analysis, determine a reasonable royalty rate that reflects the brand's specific characteristics and market positioning.
4. Apply to Brand-Related Revenues: calculating the hypothetical royalty payments by applying the selected royalty rate to projected revenues directly attributable to the brand.
5. Tax adjustment: since actual royalty payments would be tax-deductible, apply the relevant tax rate to determine the after-tax savings (i.e., post-tax royalty savings).
6. Discount to Present Value: using a suitable discount rate (often WACC), discounted the post-tax royalty savings to arrive at the present value of the brand.

The generic formula for the Relief from Royalty Method is:

$$Fair\ Value = \sum_1^n \left[\frac{(Revenue \times Royalty\ rate) \times (1 - Tax\ rate)}{(1 + CoC)^n} \right]^{17}$$

An additional factor to consider in this method is the tax amortization benefit (TAB); when an acquired intangible is capitalized on the balance sheet, it can often be amortized for tax purposes, resulting in annual deductions. These deductions reduce taxable income, generating tax savings for the acquiring company; in valuation practice, this benefit is often included in the total value of the intangible asset.

¹⁷ Where n denotes each period in the projection horizon, and CoC is the cost of capital of intangible, which requires an higher value compared to WACC or cost of equity.

This method is frequently applied in industries where branding significantly influences consumer behavior and pricing. A practical example is Luxottica, which licenses high-end fashion brands like Gucci and Bulgari for its eyewear lines. The royalties paid to these brands represent a cost of using their market power and recognition, and similar hypothetical payments can be used to estimate the brands' standalone value.

The RFRM offers several notable strengths; according to Rubio et al. (2016), the RFRM is not only transparent but also compliant with fair value accounting standards, making it highly defensible for reporting and transaction purposes. Moreover, it is particularly effective for the standalone valuation of brands and other intangible assets that generate direct revenue streams.

However, this method also presents some limits. One of the primary challenges is the availability and reliability of comparable royalty rate data: often, licensing agreements are private and industry-specific benchmarks may not be readily accessible or transparent. Furthermore, the method requires careful benchmarking and thoughtful adjustments to reflect the unique characteristics of the asset being valued. Additionally, the valuation outcome is highly sensitive to the assumptions made regarding future revenues, selected royalty rates, tax impacts, and discount rates.

In conclusion, while the Relief from Royalty Method provides a practical and theoretically grounded framework for valuing intangible assets, its effective implementation depends heavily on the quality of data, the validity of assumptions, and the judgment applied in adjusting market comparables.

2.3.2 Multi Period Excess-Earnings Method

The Multi-Period Excess Earnings Method (MPEEM) is a widely recognized approach for valuing intangible assets particularly when these assets are central to a company's value creation. As explained by Bini (2011), MPEEM is particularly useful for core assets like customer relationships where direct income attribution is more complex, and market-based inputs are unavailable. IVSC (2021) also identifies this method as appropriate for situations requiring contributory asset charges.

MPEEM is based on the income approach, focusing on the future economic benefits attributable to a specific intangible asset. The method involves projecting the future cash flows that the intangible asset is expected to generate and then deducting the returns attributable to other contributory assets involved in producing those cash flows. The residual cash flows deemed "excess earnings," are then discounted to their present value using an appropriate discount rate that reflects the risk associated with the intangible asset.¹⁸

In particular this method involves the following four steps:

1. Revenue Forecasting: estimating the expected future sale revenues attributable to the single tangible or intangible asset, considering factors like historical results and market trends.
2. Expense Estimation: determining the operating expenses directly associated with the single asset.
3. Contributory Asset Charges (CACs): identifying and deducting the economic returns attributable to other assets that support the generation of revenues, such as net working capital, fixed assets and assembled workforce.

A key component of MPEEM is the estimation of Contributory Asset Charges, which reflect the contribution of other assets, being tangible or intangible, to the generation of income. This adjustment isolates the income attributable specifically to the asset being valued. The assets typically considered include debt-free net working capital, fixed asset, and intangible assets (e.g., trademarks, internally developed software, trade name, non-competition agreements, assembled workforce)¹⁹

For each of these, two types of charges are estimated:

- Return on: the return an investor would require for an investment in the asset (i.e., opportunity cost);

¹⁸ Alpha Valuations. SARB, *Legal and Statutory Valuation*. Retrieved from <https://www.alphavaluations.com/>

¹⁹ Vulpiani M. (2014). *"Special cases of business valuation"* pg.466

- Return of: the economic loss due to asset consumption over time (i.e., depreciation or amortization).

The theoretical foundation of this approach assumes that each project “leases” the assets it needs from a hypothetical third party and compensates the owner of each asset with a fair market return, both on and of the asset.

4. Discounting Cash Flows: applying a discount rate to the excess earnings to calculate their present value, reflecting the time value of money and the risk profile of the intangible asset.

One of the most critical challenges in the valuation of intangible assets using MPEEM is the accurate determination of the asset’s Remaining Useful Life. This estimate must take into account various legal, functional, and economic considerations, including:

- The expected use of the asset by the entity;
- The useful life of other related assets;
- Legal, contractual, or regulatory restrictions (including provisions for renewals);
- Risks of physical, functional, technological, or economic obsolescence;
- The level of maintenance or reinvestment required to maintain future benefits;
- The estimated future economic benefits to be derived from the asset.

Some types of intangibles, like customer relationships or customer base, present unique challenges in valuation, making them difficult to be valued using methods such as Relief from Royalty, especially when they are not contractually regulated or when no observable royalty benchmarks are available. For example, even if a company reports the number of customers on its balance sheet, quantifying the economic value of that base requires deeper modeling. In such cases, MPEEM becomes one of the few applicable methods, as it allows the analyst to infer the value from the net economic benefits contributed by those customers over time.

To estimate the Remaining Useful Life of intangible assets like customer relationships, analysts often use attrition analysis, particularly when the relationships are not contractually bound. This analysis assesses the longevity of the customer base by defining an attrition rate (i.e., rate of decay or turnover), which serves as the basis for projecting

future revenue contributions. The goal is to develop a revenue survivorship curve, which reflects the proportion of revenues expected to be retained over time.

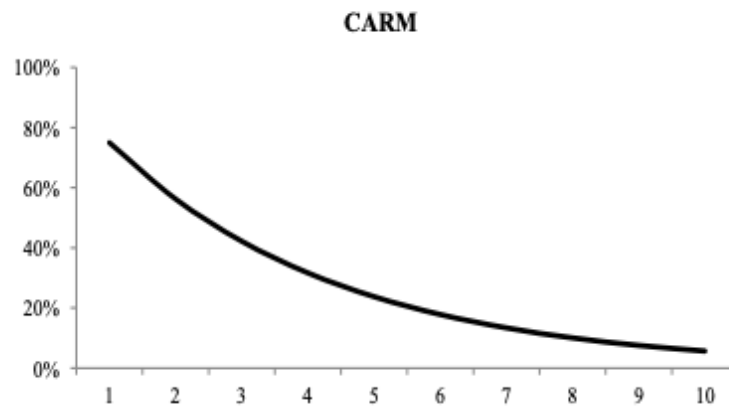
According to Bini (2011), there are three primary methods used to build such curves:

1. Constant Attrition Rate Method (CARM) assumes a constant percentage of decay for each year of the intangible asset RUL. This is the most commonly used approach due to its simplicity and two advantages:
 - It can be directly applied when an average attrition rate is known;
 - The resulting survivor curve implies that the average customer life equals the average remaining customer life.

A survivorship curve is modeled as:

$$S_t = e^{(-t/v)^{20}}$$

Figure 7: Life table Survival Curve – Constant Attrition Rate Method



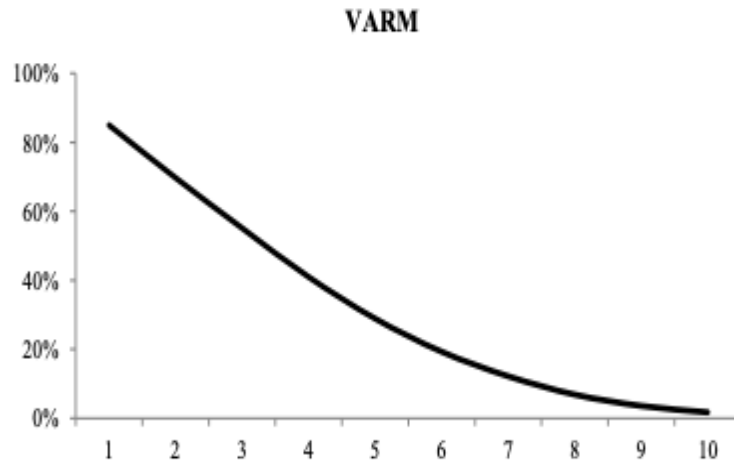
Source: Special Cases of Business Valuation (Vulpiani 2014)

2. Variable Attrition Rate Method (VARM) allows for a varying attrition rate over time, usually increasing with customer tenure. It is more flexible and often more realistic, but at the same time it demands a more complex modeling process and

²⁰ S_t= survival rate at t age;
t= customer relationship age;
v = exponential curve factor, calculated as: -1/ln (1-AR)
AR = attrition rate
1-AR = retention rate

richer historical datasets. Moreover, it lacks sensitivity to non-recurring past events.

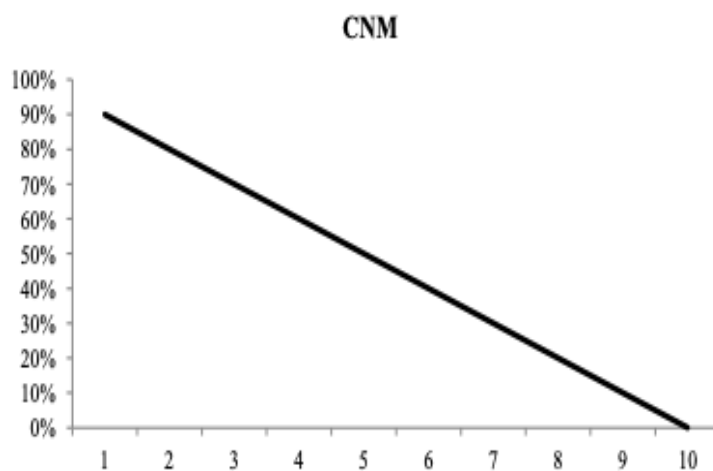
Figure 8: Life table Survival curve – Variable Attrition Rate Method



Source: Special Cases of Business Valuation (Vulpiani 2014)

3. Constant Number Method (CNM), a fixed number of is assumed to be lost each year, rather than a fixed percentage. Even if this model is the simplest, it is often less representative of real-world scenarios.

Figure 9: Life table Survival curve – Constant Number Method



Source: Special Cases of Business Valuation (Vulpiani 2014)

2.3.3 Profit Split Method

The Profit Split Method (PSM) is one of the transactional profit methods provided by the OECD Transfer Pricing Guidelines, and it is the only one based on a two-sided analysis. According to Chand & Wagh (2014), the PSM is particularly relevant in post-BEPS environments where multiple entities contribute to value creation, especially involving unique intangibles. Its use is further supported in complex licensing and joint R&D context. It aims to divide net profits from controlled transactions between associated firms, approximating what would occur under free market conditions (arm's length).

Historically, this method was excluded from the 1979 Guidelines, but it was recognized as valid by 1995 for those cases where traditional methods were not applicable. This approach is especially relevant for complex transactions with high integration between associated companies or with unique contributions, such as high-value intangibles. In the context of intangibles valuation, PSM differs from traditional approaches in its ability to reflect complex situations in which the intangible contribution of the entities involved are not easily comparable. This method is particularly useful in intangibles-intensive industries, such as pharmaceutical, technology, and media.

The application of PSM involves two main approaches: contribution analysis, which distributes profit according to functions, risks and assets, and residual analysis, which first allocates a remuneration for routine activities and then divides the residual according to relative contributions. Several tools support these approaches: internal data (e.g., accounting), allocation keys (e.g., costs of assets), theoretical bargaining models (e.g. Shapley value), discounted cash flows, rules of thumb (e.g., 75%-25% in licensing), or expert surveys.

However, this method is little used due to several practical difficulties, including limited access to financial data of foreign affiliates, lack of comparables, complexity in accounting normalization, and currency differences. These critical issues hinder the effective application of PSM in multilateral contexts.

Chand and Wagh (2014) devote special attention to the analysis of the PSM in the context of the OECD BEPS (Base Erosion and Profit Shifting) project, focusing in particular on Actions 8, 10 and 13.

- Action 8 clarifies that returns from intangibles should be allocated to the entity that performs the significant functions of developing, maintaining, and protecting them, not just on the basis of legal ownership.
- Action 10 promotes PSM as a consistent method for reflecting value creation along global value chains.
- Action 13 introduces country-by-country reporting, which, while not sufficient for full PSM analysis, is a useful preliminary risk assessment tool and can provide indicators for possible deeper analysis.

In conclusion, PSM, especially in presence of unique intangibles, is a robust method consistent with the goal of aligning taxable profits with actual economic value creation. In the current post-BEPS regulatory environment, the authorization and increasing use of PSM may represent a significant development for the tax valuation of intangibles, especially in the multinational context.

2.4 Real Option Approach

The Real Options Approach (ROA) applies financial option valuation techniques to real-world investment decisions, particularly useful for valuing intangible assets that provide managerial flexibility under uncertainty. As discussed by Vulpiani (2014), this method is appropriate when valuing intangibles under uncertainty, especially R&D, patents, or licenses that confer strategic optionality. Salinas (2009) also notes its relevance for high-risk projects where managerial flexibility significantly affects value.

In financial markets, an option provides the holder the right, but not the obligation, to buy or sell an asset at a predetermined price before a specified date. Similarly, intangible assets often grant firms the right to exploit future business opportunities without the obligation to do so. For example, a patent offers the exclusive right to develop a new product, akin to a call option on the underlying technology.

Applying ROA involves identifying the key parameters analogous to those in financial options, as shown in *Figure 10*. By quantifying these parameters, firms can apply option pricing models to estimate the value of intangible asset under uncertainty.

Figure 10: Intangible Asset (Real Option) Parameters vs financial option parameters

Financial Options	Variable	Real Options
Stock Price	S	<i>PV of Project's operating asset to be acquired</i>
Exercise Price	X	<i>Expenditure required to acquire the project assets</i>
Time to Expiration	t	<i>Length of time the decision may be deferred</i>
Risk-free Rate of Return	r_f	<i>Time value of the Money</i>
Variance of Stock Return	σ^2	<i>Riskiness of the Project Assets</i>

Source: Special Cases of Business Valuation (Vulpiani 2014)

Two primary models are employed in ROA:

1. Black-Scholes Model (BSM) provides a closed-form solution for valuing European-style options, assuming continuous trading and constant volatility. It calculates the option value based on the parameters mentioned above. This model offers analytical simplicity, but at the same time the assumptions of constant volatility and the inability to model early exercise limit its applicability to certain intangible assets.
2. Binomial Option Pricing Model (BOPM) constructs a discrete-time tree to model possible paths the asset's value can take over time. At each node, the model considers the option to continue, expand, or abandon the project, allowing for a more flexible analysis of managerial decisions. BOPM accommodates varying assumptions about volatility, time steps, and the possibility of early exercise, making it more suitable for valuing complex intangible assets with multiple decision points.

Real Option Approach is particularly beneficial for valuing intangible assets that involve significant uncertainty and managerial flexibility, provide strategic options for future growth or market entry or are not easily valued using traditional discounted cash flow methods. For instance, an R&D project may have immediate cash flows but offers the

option to develop a profitable product in the future; this method captures the value of this potential, guiding investment decisions under uncertainty.

While ROA offers a robust and theoretically sound framework for valuing intangible assets, it has some limitations. One of the primary challenges lies in the estimation of key parameters (e.g., volatility, the present value of expected cash flows, and investment costs) which can be particularly difficult to assess accurately in the context of intangible assets due to limited or uncertain data. Additionally, ROA models, including the Black-Scholes and Binomial approaches, are often mathematically sophisticated and require a solid understanding of financial modeling, making them less accessible to practitioners without specialized expertise. Furthermore, these models rest on several assumptions typical of financial theory, such as market efficiency and rational investor behavior, which may not fully reflect the dynamics of real-world corporate environments.

Despite these constraints, ROA remains a valuable tool for capturing the strategic value embedded in intangible assets, especially in cases where traditional valuation methods, such as discounted cash flow or relief-from-royalty approaches, fail to account for managerial flexibility and future growth opportunities.

2.5 Brand Valuation

Brand valuation has evolved significantly over the past decades, and today it constitutes a critical element in both financial reporting and strategic decision-making. The most recognized approaches for valuing brands fall under three main categories: the cost approach, the market approach, and the income approach (IVSC, 2021). Each of these is grounded in a specific logic of value, but as multiple studies and valuation guidelines suggest, the income approach is widely considered the most reliable and conceptually coherent technique for valuation in both regulated and innovation-driven industries (Salinas, 2009; Rubio et al., 2016; WIPO, 2023). Particularly when it comes to brand valuation, the RFRM becomes the most quoted, due to the fact that it is based on a multidimensional approach touching on market and income aspects.

2.5.1 Brand as a marketing intangible: nature, control, and identification

Under the class of intangibles, the brand can be identified as a marketing intangible, meaning it is an intangible resource whose value is based on its ability to generate

additional value in income through pricing power, loyalty of customers, lower costs of acquisition and market shares. The brand is usually easily associated with the company by virtue of legal rights (trademarks, name, logo), but Bini (2011) argues that the brand value cannot be solely based on the formal elements of registration.

The true value of the brand comes from being a Primary Income Generating Asset (PIGA): it is more than just an identifiable sign, rather it is an asset that can offer better and independent income from competitors. This comes from market perception, positioning in the market, and other elements both competing and complementary, such as: reputation, perceived quality, distribution, and relationships with customers. Thus, the brand may be thought of as a sum of intangible players, due to a joint effect of attraction (commercial magnetism).

According to IAS 38, an intangible asset can be recognized separately when it meets the following criteria: identifiability, separability and measurability in fair value. Generally, with a brand these thresholds can be easy to satisfy especially where the company definitely owns it and, in the case of brands, one can reconstruct flows of income (on brand-specific cash-flows based on RFRM for example). Yet it is worth noting from Bini's literature it is important to assess the brand within its operations context: for example, in B2B (Business To Business) industrial sectors, such as dental, the brand is typically subordinate to customer relationships, but still functions as an important lever as part of the marketing function and value as an asset, reducing contracting costs and assisting in retention.

2.5.2 Indefinite Brand Life and Its Economic Valuation

An additional aspect to be considered in brand valuation is its economic useful life. Although legally the brand can have an indefinite life (being renewable), when valuing it is necessary to estimate its remaining life based on the brands' actual ability to generate value over time.

As shown in *Figure 11*, only net tangible assets are considered to have a “revolving perspective”, while all other intangible assets (customers, technology and brand) are associated with an estimated finite economic life.

Figure 11: Income Generating Capacity of Intangible Assets

Time Horizon	Asset Category	Attributed Income Driver	Estimated Useful Life
0–7 years	Existing customer base	Customer Relationships → Goodwill	~7 years
0–5 years	Existing technology	Current Technology → Goodwill	~5 years
0–∞	Brand	Brand (marketing intangible)	Indefinite life (<i>economically estimable</i>)
Rolling horizon	Net tangible assets (working capital, PPE)	Not attributed to any specific intangible	Ongoing / revolving

Source: Bini, M. (2011), *Valuing Intangibles*, Figure 8.2, p. 122 (adapted).

This has important implications for the choice of valuation method:

- In a purchase price allocation (PPA) perspective, the allocation of value between goodwill and other intangibles depends on whether separate flows and useful lives can be estimated;
- In impairment testing processes, if flows or life cannot be assigned, the asset should be included in goodwill or not recorded at all;
- In the Relief from Royalty method, the projected life (RUL) directly affects the value of the brand: even if the asset has an indefinite life, the model requires a conservative estimate of the time horizon over which royalty savings can be calculated.

In this context Bini highlights how the estimated useful life is a critical point for the correct attribution of fair value. The brand must be valued taking into account corporate strategy (e.g., whether rebranding is planned), product life cycle, competition, and distribution channel structure. In the absence of firm data, the valuation is based on subjective assumptions, but supported by empirical evidence, industry benchmarks and professional practice.

2.5.3 Brand Valuation Methodologies

The cost approach, which attempts to value a brand based on the historical expenditures required to build it, is generally considered unsuitable for market-facing assets like brands. Salinas (2009) notes that cost-based valuations fail to capture the true economic utility of a brand because they ignore consumer perception, customer loyalty, and the premium pricing power that brands confer. Brands are not merely the result of accumulated costs; they are financial assets capable of generating future profits well beyond their historical investments. Accordingly, IVS 210 recommends using the cost approach only when market or income methods are not feasible, which is rarely the case for established brands (IVSC, 2021).

In contrast, the market approach seeks to derive brand value from comparable market transactions or licensing deals. Despite being appealing, this approach is most limited by the lack of transparency and that brands themselves are inherently unique. Salinas (2009) notes that licensing contracts are typically confidential, and even when disclosed, the contract rarely has sufficient contextual information, such as market positioning, strength of the brand, exclusivity terms, to allow for reliable adjustments. Additionally, the OECD (2017) states that the majority of royalty benchmarks used in transfer pricing cannot meet the comparability standard for reliable brand valuation. Paugam et al. (2016) make the more straightforward observation that the heterogeneity of brand attributes renders it almost impossible to identify like-for-like assets, particularly in more heterogeneous sectors such as chemicals and health care.

The income approach overcomes these limitations by directly linking the value of the brand to its capacity to generate future economic benefits. It estimates the present value of future income attributable to the brand, reflecting both the firm's internal performance and market expectations. This approach is endorsed by valuation bodies such as the IVSC, WIPO, and ISO, and aligns with the fair value principles of IFRS 13 (IFRS Foundation, 2023). According to Salinas (2009), the income approach provides a forward-looking, investor-oriented measure of brand value, making it the most appropriate method in both acquisition contexts and impairment testing.

Among income-based techniques, the Relief from Royalty Method (RFRM) is widely recognized as one of the most practical and standardized methodology for valuing brands; confirmed also by professional practice. As illustrated in the following matrix (*Figure 12*), developed by Globalview Advisors (2018), the Relief from Royalty Method is particularly associated with the valuation of brands and trademarks.

Figure 12: Commonly Used Valuation Methods

	Royalty Savings	Cost Savings	Premium Pricing	Multi-Period Excess Earnings
Brands / Trademarks	•		•	•
Know How		•		•
Patents	•	•		•

Source: Globalview Advisors, ICAEW Intangible Asset Valuation Presentation (2018)

It is based on the premise that a company should be “relieved” from paying royalties for the use of its own brand. As noted in Salinas (2009), the RFRM reflects the market behavior of licensing and is well-suited to the way brands create value: through revenue generation, pricing power, and customer retention. Furthermore, Rubio et al. (2016) underline that RFRM aligns closely with the observable market data required by IFRS 13, making it a compliant and auditable method in financial reporting.

One of the key advantages of RFRM is its simplicity and transparency. Unlike more complex models such as the Multi-Period Excess Earnings Method (MPEEM), which requires the allocation of residual cash flows and the subtraction of contributory asset charges, the RFRM isolates the brand’s contribution to revenue in a more direct and understandable way. This makes RFRM especially attractive in practical contexts such as M&A, licensing analysis, and fair value measurement in accordance with IFRS 3²¹. This method also allows for the incorporation of Tax Amortization Benefits (TAB), which further enhances its suitability in buyer-seller negotiations and PPA exercises.

In contrast, while the MPEEM may be more accurate for valuing core intangibles like customer relationships or proprietary technologies, it introduces a high level of subjectivity, especially in estimating the useful life of assets and contributory returns (IVSC, 2021; Paugam et al., 2016). Therefore, for standalone brand valuation, particularly in sectors such as pharmaceuticals, dental care, and consumer chemicals,

²¹ IFRS Foundation, 2023.

where brand reputation influences regulatory perception and product differentiation, the RFRM emerges as the most effective and standardized method.

In conclusion, the income approach, and specifically the Relief from Royalty Method, represents the most theoretically grounded and practically validated model for brand valuation. It captures the economic substance of branding, aligns with international valuation standards (IVS 210, ISO 10668), and satisfies the informational needs of both financial reporting and strategic decision-making. Its dominance in empirical practice, combined with regulatory compliance and methodological clarity, makes it the preferred technique in contexts where brand value is both material and measurable.

2.5.4 Operational conclusions

Inclusion of brand among valuable intangibles requires a thorough consideration of its composition, function and economic life. As shown in Bini's work, the mere presence of a registered trademark is not enough: it is necessary to demonstrate that the brand generates differential economic flows and that it can be separated from other business activities. In this sense, the RFRM method is particularly effective, as it quantifies the value of the brand based on the royalty savings that the firm would avoid paying if it did not own the trademark. Within a PPA or fair value measurement rationale, this methodology allows for a faithful representation of the brand's contribution to the company's results, supported by both legal grounds (rights of use) and economic evidence (ability to generate income).

Chapter 3: Business Case DreamTeam

Brand valuation is very useful in the context of merger and acquisition transactions; the valuation of intangible assets is a crucial step in determining the actual value of a company, particularly when competitive advantage is tied to elements as difficult to replicate as the brand.

This chapter focuses on a real-world case study of an Italian company, operating in the production and marketing of dental devices and materials, a highly regulated field in which brand reliability is a key driver in purchasing decisions by clinics, dental technicians and healthcare professionals. The company under analysis, which for reasons of confidentiality will be referred to by a fictitious name DreamTeam, is characterized by a strong international presence, with sales and distribution subsidiaries located on all continents, and a significant export volume. The product portfolio includes impression materials, laboratory silicones, disinfectants and prophylaxis accessories, positioning itself as a brand recognized for technical reliability and innovation.

Brand valuation is very important in this context: not only it is the distinguishing element in target markets, but it is also the main strategic asset capable of generating future cash flows, thanks to customer loyalty, established reputation, and the ability to apply premium pricing on certain product segments.

It is precisely for this reason, that the valuation method chosen to estimate the value of the brand is the Relief from Royalty Method (RFRM), as explained in previous chapters according to the present literature. This method, which belongs to the family of income approaches, is perfectly suited to cases where the intangible to be valued is a well-established commercial brand, for which there are comparable market data and revenue streams directly attributable to the asset in question.

The main scope of this chapter is therefore twofold: on one hand, to apply the RFR method in a concrete way to determine the value of the target company's brand; on the other hand, to provide a useful operational example, to demonstrate how, in real M&A contexts, brand valuation can meaningfully affect the determination of the company's overall fair value. To support the analysis, key steps in valuation will be illustrated, from

revenue projection to royalty rate selection to discounting the tax benefit (Tax Amortization Benefit) and estimating the final value.

3.1 Overview of the target company and its industry context

In order to fully understand the strategic relevance of the brand under evaluation and justify the application of the Relief from Royalty Method, it is necessary to analyze the operating context in which the target company is embedded. In this section, a framework of the company and the dental industry is proposed, highlighting the competitive dynamics, economic characteristics and the key role played by intangible assets. The rationale behind the methodological choice will also be explained, supported by theoretical references and industry benchmarks. In particular, the positioning of the brand in the target market and why it is the distinctive and driving element of the company's economic-financial performance will be explored.

3.1.1 Company Description: history, products and market

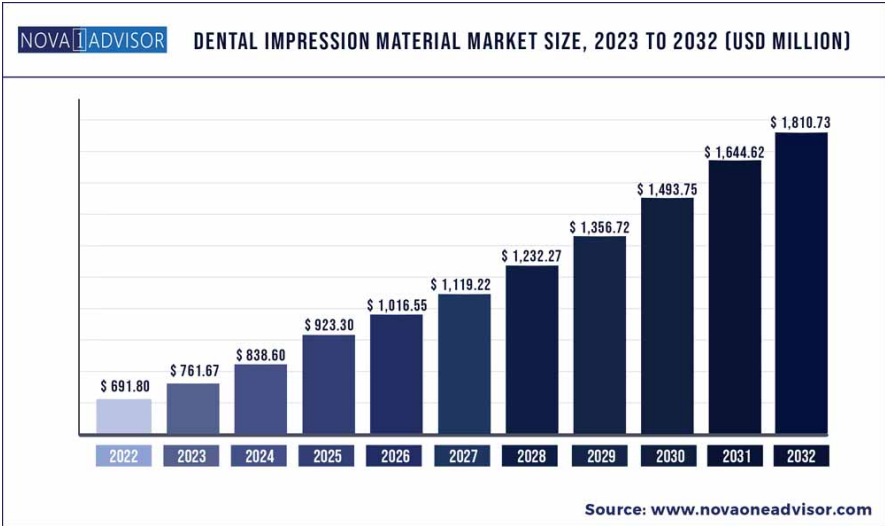
DreamTeam is an Italian company that has been in business for almost 40 years, being an international reference in the production and distribution of materials for the dental sector, in addition to its range of products for the industrial and wellness sectors. The main division is dental, with the homonymous DreamTeam brand representing the company's strength, with a full range of materials and solutions for dental offices and laboratories. Top products include alginates, addition and condensation silicones, dental plasters, and automated mixing equipment; including also solutions for hygiene and disinfection, occlusal registration instruments, and materials for temporary restorations. DreamTeam operates in a highly competitive global market characterized by a growing demand for high-quality materials and solutions for the dental and industrial sectors. The company's ability to offer products that are reliable, innovative, and conform to international standards has enabled it to consolidate its position in its target markets, including Russia, Brazil, China, Japan, Canada, and the United States; boasting a network of more than 1,000 business partners in 120 countries, with subsidiaries in Germany, the United States and Poland, and local representations in numerous other markets.

3.1.2 Industry analysis and Competitive Positioning

The dental materials industry, particularly the impression materials one, has experienced significant growth in recent years, driven by factors such as increased demand for dental treatment, the adoption of advanced technologies, and a growing focus on oral health.

According to a report by Nova One Advisor (2023), the global dental impression materials market was valued at \$691.8 million in 2022 and is expected to reach approximately \$1.810,73 million by 2032, with a compound annual growth rate (CAGR) of 10,1% during the 2023-2032 forecast period (*Figure 13*). This is particularly due to increased income in developing countries, such as China, India, and Brazil, which will give the world economy a bump.

Figure 13: Dental Impression Material Market Size (2023 to 2032)



Source: Nova One Advisor, 2023

In Italy, the dental industry has shown remarkable resilience and bouncebackability post-pandemic. According to a study by Key-Stone, carried out on 339 companies, with total sales estimated at more than 2.31 billion euros (75% of the overall Italian market), and presented in September 2024 at the annual meeting of UNIDI²², the Italian dental industry exceeded forecasts, with a + 2% increase over the already excellent 2022 results more than €1.3 billion at ex-factory values.

²² Unione Nazionale Industrie Dentarie Italiane

Exports see a + 3% increase, breaking through 900 million, weighting 64% of the sector. In absolute terms, the production sector looks very virtuous, with a growth rate (from 2011 to 2023) exceeding 5%, more than three times the rate of GDP development.

The 2020-2023 projection, as can be seen in *Figure 14*, was for a total cumulative amount of about 6,14 billion. Despite the decline in 2020, the result for the four-year period was 6,35 billion, recovering and, indeed, growing more than projected. This was possible due both to inflation, which caused an increase in product prices and consequently in-patient benefits, and due to physiological post-pandemic recovery of all unperformed interventions, but also due to an increase in demand at the structural level.

Figure 14: Expected and Actual Business Evolution



Source: Key-Stone for UNIDI (2023)

In 2023, services, and in particular custom digital processing, would continue to increase their weight, thanks to both the technological development of dental practices and the aesthetic demands of patients. As of 2020, inflation had a major impact on the development of the consumables business (+ 14% in 2023 compared to 2019), which, net of price increases, would still not have recovered from pre-Covid projections. This data is indicative of a likely future slowdown in performance demand.

It is in this context that DreamTeam, among the leading companies in the industry, along with 3M, Scott's Dental Supply, Keystone Dental Group, Kerr Corporation, and Dentsply Sirona, is positioned. Europe continues to dominate the market with the largest revenue shares of 40 %, right after we find North America, while Asian countries will be subject to the fastest growth CAGR of 11,9 %.

3.1.3 Strategic Relevance of the Brand and Rational Behind the choice of the RFRM

The brand examined is an important strategic asset; a unique factor differentiating the dentist material industry. The company's established and respected brand comes from over forty years of history, during which the company has established product lines based outstanding quality and innovation.

The trademark, which coincides with the company name itself, constitutes not only an element of recognition in the market, but also a real generator of value. As shown in the company's financial statements for the past few years, the share of revenues directly attributable to the brand in total revenues has remained stable and significant (*Figure 15*), with minimal variations that are representative of its strength and durability in a competitive environment like the dental sector.

Figure 15: Relevance of the Brand

	2021	2022	2023
Revenues BrandType Dream Team	88.388.000	97.369.000	96.627.000
Total Revenues	103.594.812	112.809.831	111.512.641
% Brand R / Total R	85,3%	86,3%	86,7%

Source: Own Elaboration (2025)

It was precisely this centrality of the brand that motivated the decision to focus the valuation analysis on the brand, since, in a potential acquisition perspective, the enterprise value of the company cannot disregard the economic contribution that this intangible asset is able to guarantee.

In Italy, accounting regulations, particularly IAS 38, prevent the capitalization of internally generated brands in the financial statements. However, if such brands are the subject of an acquisition, their recognition as intangible assets at fair value is permitted under IFRS 3. In this context, it becomes crucial to have a reliable, transparent valuation supported by internationally recognized methodologies.

Therefore, the Relief from Royalty Method, belonging to the income approach family and recognized by the International Valuation Standards Council (IVSC) standard IVS 210 as one of the most appropriate methodologies for the valuation of trademarks, patents and other commercial intangibles, was adopted to estimate the value of the brand. The pivotal principle of RFRM is simple but powerful: estimate the present value of the streams that the company saves as the owner of the brand, assuming that it must instead pay a license fee to a third party to use it (IVSC, 2021).

The academic and professional literature agrees that the RFRM has a high adherence to the actual functioning of markets. According to Bini (2011), the method is particularly suitable for valuing distinctive assets, for which there are comparable royalty rates and directly linkable income streams. Hitchner (2022), in his landmark text on business valuation, also points out that RFRM is one of the most widely used methods in professional practice because of its logical structure, transparency, and ease of communication to decision makers. Similarly, Aggarwal (2025) notes how RFRM, while not the only possible approach, is often preferred for brands precisely because it combines methodological consistency and the availability of market data (royalty comparables).

Finally, it is important to emphasize that the choice of RFRM is not only theoretically justified, but also practically sustainable, given the possibility of finding reliable data on royalty rates for similar brands in the dental industry, and the direct correlation between the brand and a stable and traceable component of corporate revenues.

3.2 Application of the Relief from Royalty Method: *DreamTeam* Case

DreamTeam is currently the subject of interest in an acquisition transaction. The central operating asset, as well as the main generator of economic value, is the brand, which can be identified as the “Primary Income Generating Asset - PIGA.”

This section will explain the process of brand valuation through the application of the Relief from Royalty Method. The analysis first involves a projection of the revenues attributable to the brand over the remaining useful life of the asset, considering also the possibility for a brand to be perpetual. Then, the most appropriate royalty rate will be selected, thanks to literature and benchmark analysis: reflecting the specificities of the brand, the reference sector and the geographical context.

For discounting the hypothetical cash flows, the WACC will be used as a basis, appropriately adjusted with a risk premium, in order to take into account, the higher riskiness and uncertainty associated with intangible assets. To complete the analysis, the Tax Amortization benefit (TAB) will also be calculated, so that the full benefit of brand ownership will be included in the estimated value.

3.2.1 Brand Revenues and Determination of its Residual Useful Life

The first step required in applying the Relief from Royalty Method (RFRM) is to determine the prospective brand revenues, those generated directly by the brand that later will be used to calculate royalty-saving flows. To ensure the reliability of the short-term projections, historical revenues from the period 2021-2024 were used as a baseline. The brand's revenues performance over these years has been quite stable, with a minor contraction in 2023, followed by a moderate rebound in 2024. The actual values are illustrated in *Figure 16*²³.

Figure 16: Actual Revenues and CAGR

BrandType	2020	2021	2022	2023	2024	CAGR 3Y	check formula CAGR
DreamTeam	71.020	88.388	97.369	96.627	97.717	3,4%	3,4%

Soruce: DreamTeam Elaboration (2025)

To estimate the future revenues for the forecast period (2025-2042), the Compound Annual Growth Rate (CAGR) of the previous three years was applied. The CAGR, widely used in financial forecasting, reflects the average compounded annual growth rate over defined period:

$$CAGR = \left(\frac{V_f}{V_i} \right)^{1/n} - 1$$

where:

- Vf = final value (brand revenues in 2024)
- Vi = initial value (brand revenues in 2021)
- n = number of years (3 years in this case)

²³ Value expressed in \$/000, as they were converted by the company for foreign dealings and calculation of CAGR

The computed CAGR is 3,4%, which we applied uniformly for revenue projections from 2025 to 2042.

Although this CAGR is lower than one of 7,4% reported by The Business Research Company (2024) for the global dental services market, it is considered reasonable because of:

- the non-retail, B2B nature of DreamTeam's business focus (targeting clinics, labs, and dental professionals);
- DreamTeam's established market presence within mature geographical areas like Europe;
- DreamTeam is not examining aggressive market expansion to pursue and therefore is positioned for steady rate of return, rather than an exponential growth model.

This caution forecast recognizes the more mature trajectory of the brand and avoids inflating any future valuations based on unrealistic projections of revenue growth.

Although the brand under valuation shows a strong market positioning and historical recognition, it does not fully meet the rigorous conditions for assuming an indefinite useful life as defined by IAS 38. According to paragraph 90 of IAS 38, an intangible asset shall be regarded as having an indefinite useful life only if there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows. This usually applies only to long-established and globally recognized brands with sustainable market dominance that require minimal ongoing investment. In the case of DreamTeam, although the brand is well established, its continued value depends on technological innovation, commercial relationships, and active market presence, factors that introduce long-term uncertainty.

For this reason, and following both valuation literature (Bini, 2011; Hitchner, 2022) and Italian tax regulation (TUIR, art.103), this approach assumes a finite residual life (RUL) of 18 years. While IAS 38 does not impose a specific time frame, the 18-year horizon reflects the maximum amortization period allowed for trademarks under Italian Fiscal Law and is commonly adopted in professional valuation practice when indefinite life cannot be justified easily.

Consequently, the forecast of revenues extends over 18 years with no terminal value (Figure 17). This approach is consistent with the principle of prudence in valuation and avoids speculative assumptions about perpetual brand performance.

Figure 17: Projecting Future revenues

DreamTeam (EUR)	0	1	2	3	4	5	6	7	8
	2024 (A)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)	2032 (F)
Revenues	97.717.000	101.039.378	104.474.717	108.026.857	111.699.770	115.497.563	119.424.480	123.484.912	127.683.399
Growth rate (CAGR)	3,40%								

DreamTeam (EUR)	9	10	11	12	13	14	15	16	17	18
	2033 (F)	2034 (F)	2035 (F)	2036 (F)	2037 (F)	2038 (F)	2039 (F)	2040 (F)	2041 (F)	2042 (F)
Revenues	132.024.635	136.513.472	141.154.930	145.954.198	150.916.641	156.047.806	161.353.432	166.839.448	172.511.990	178.377.397
Growth rate (CAGR)	3,40%									

Source: Own Elaboration (2025)

3.2.2 Determination of Royalty Rate

Once using the RFRM, choosing the royalty rate is perhaps the most important phase. The royalty rate determines the true size of the hypothetical royalty savings, and thus the present value of the economic benefit associated with brand ownership. The International Valuation Standards (IVS 210), as well as academic sources (Smith, 2011), and professional valuation sources (Hitchner) highlight that the benchmark royalty rate should be the price a licensee would reasonably have to pay to use the brand under comparable market conditions.

It is commonplace for practitioners to rely on market-based benchmarks (e.g. royalty rate databases or similar license transactions). However, empirical benchmarks are often limited due to opaqueness and context barriers. To overcome these barriers, a structured and brand-specific approach is encouraged that draws on both external circumstantial market criteria as well as intrinsic brand criteria.

In this study we will adopt the valuation approach developed by Mauro Bini who followed the methodology presented by Battersby and Grimes (2005). The Bini method provides a defensible and fully tailored estimate of the royalty rate by applying qualitative scores to

a determined series of criteria and converts qualitative brand strength into a quantitative royalty rate that is consistent with market-derived rates.

The Bini's model assumes a market-based royalty range between 2,5% and 9%, which is consistent with industry benchmarks in the medical and dental device sectors. This range is supported by Battersby and Grimes (2005, pp.55-70), who report typical trademark licensing royalties in these industries within this interval, depending on product exclusivity, brand strength, and market conditions.

The final score is determined by assessing 10 variables grouped into Market Factors and Brand-specific Factors. Each one is rated on a scale from 1 (low) to 5 (high), and the total score ranges from 10 to 50. A score of 25 represents the median, corresponding to the lowest rate of the royalty range.

The following linear formulation is used for the final result:

$$RR = 2,5\% + \left(\frac{9\% - 2,5\%}{25} \right) \times (Y - 25)$$

The DreamTeam brand was evaluated in the context of this qualitative model. The assessment required consideration of the competitive environment (*Figure 18*) and the inherent characteristics of the brand and provided the following scores (*Figure 19*).

Figure 18: Market Factors Score for DreamTeam

Market Factors	Score					Intensity
	1	2	3	4	5	
Market Growth			X			Increasing growth in dental B2B market
Substitutability		X				Low substitutability due to clinical specificity and switching costs
Competitive Intensity			X			Moderate intensity with few dominant players in the professional space
Total	2 6					
Cumulative Score Market Factors						8

Source: Own elaboration (2025)

Figure 19: Brand-Specific Factors for DreamTeam

Brand Specific Factors	Score				
	1	2	3	4	5
Brand Image				X	
Customer Loyalty				X	
History/Longevity					X
Premium Price				X	
Market Share				X	
Brand Extension Potential			X		
Share of Voice			X		
TOTAL			6	16	5
Cumulative Score Specific Factors					27
Cumulative Score Market Factors					8
Cumulative Total Score					35
Royalty Rate					5,10%

Source: Own elaboration (2025)

As we can see, by applying the formula the Royalty Rate is about 5,10%, reflecting a strong brand with professional credibility, deep-seated client relationships, and high product specialization, while keeping moderate visibility outside the B2B channel.

While the royalty rate of 5,10 % was derived through a structured scoring model consistent with Bini's scoring methodology, it could be helpful to verify that the International Framework is also consistent with the actual market and with the variable royalty benchmarks relative to actual licensing transactions and industry studies.

To do that, a secondary analysis was conducted based on empirical data drawn from several reputable sources (RoyaltySource, ktMINE, and RoyaltyRange) and incorporated with contribution of some leading valuation texts (Smith, 2011; Salinas, 2009). As seen in the comprehensive results in *Figure 20* below, in the chemical-medical and healthcare B2B market, royalty rates typically fall within these approximate ranges:

Figure 20: Royalty Rate Benchmark Ranges by Source

Source	Range Royalty %	Industry
<i>Bini (2011)</i>	2% - 7%	Med an Industrial Intangibles
<i>Hitchner</i>	3 % - 6 %	Healthcare, Life Sciences, medTech
<i>Royalty Range</i>	3,5 % - 7 %	Trademark licenses, Europe and USA
<i>Markables (M&A)</i>	2,5 % - 5 %	Dental/medical Brands

Source: Own elaboration (2025)

This material supports a market-consistent royalty range in a range between 2,5 % and 7%, with an average of 4,5%. More specifically, the highest rates are associated with global consumer brands, with a wide recognition and a diversified portfolio. On the other hand, the lowest ratios are applied to emerging or niche business, with limited transferability or scalability.

Given DreamTeam's profile, with a dynamic brand, and a worldwide strong footprint (EU, USA, LATAM and also in the Asian Countries), a higher royalty rate reflects the brand's reliability yielding a premium price relative to other less established B2B alternatives, while essentially retaining its footing within a clinical and technical domain.

3.2.3 After-Tax Royalty Savings and Discounting Assumptions

In the context of the application of the RFRM, once the forecast of the revenues has been made and the RR (5,10%) applied, the following step is to calculate the net cash flows from this theoretical saving, called after-tax royalty savings, and discount them. This step requires attention to two key dimensions: the determination of the adjusted discount rate, or cost of capital and the tax treatment of royalties.

Since DreamTeam, is an unlisted company, it is not possible to derive a beta directly from the market. It is therefore standard practice to construct an indirect WACC from an analysis of comparable companies (i.e., listed entities active in the same industry and with similar ratios). The selected peers, Coltene Holding AG, Dentsply Sirona Inc, Zimmer Biomet Holdings Inc., and Envista Holdings Corporation are all active in the dental and medical sectors, with a primary focus on the production and distribution of dental materials and equipment (*Figure 21, from the LSEG Workspace Platform, ex- Refinitiv*).

These companies share key characteristics with DreamTeam, including a strong presence in B2B markets, technical specialization, and a diversified product offering with the dental care value chain. Their operational profiles and risk structure are sufficiently aligned to allow a meaningful comparison in terms of financial metrics.

Figure 21: Beta Analysis

COMPANY - EUR	Levered beta	D/E ratio	Tax rate	Unlevered beta	Debt	Equity
COLTENE HOLDING AG	0,64	0,37	22,47%	0,50	40.000.000	108.796.000
DENTSPLAY SIRONA INC	0,95	1,10	19,00%	0,50	2.135.000.000	1.943.000.000
ENVISTA HOLDINGS CORP	1,00	0,48	12,00%	0,71	1.394.300.000	2.934.800.000
ZIMMER BIOMET	0,74	0,5	17,00%	0,52	6.204.600.000	12.476.000.000
Average	0,83	0,61		0,56		

Source: Own Elaboration (2025)

It appears that the average beta levered is 0.83, the unlevered beta was then calculated to eliminate the effect of leverage, using the Hamada's formula, resulting in an average unlevered beta of 0.56, coherent with the dental sector, characterized by a low volatility.

$$\beta_U = \frac{\beta_L}{1 + (1 - t) * D/E}$$

Consequently, CAPM was applied to calculate the cost of equity (see *Figure 22*), applying the 10-year German Bund as the risk-free rate and using a Market Risk Premium of 5,64% calculated using country-specific MRPs sourced from Damodaran. The MRPs were weighted based on the company's revenue distribution across its key markets, ensuring that the composite MRP reflects the geographic exposure of the business²⁴.

Figure 22: Cost of Equity

WACC		Source
DreamTeam		
Cost of Equity (Ke)		
Risk free rate	2,65%	10 year German Bund, 2024
Beta unlevered	0,56	As estimated by Panel of Comparables (average industry Beta)
D/E	0,61	As estimated by Panel of Comparables (average industry D/E)
Beta relevered	0,82	
Tax rate Beta relevered	24,0%	Only IRES
Market risk premium	5,6%	
Size Premium	0,0%	
Ke	7,3%	

Source: Own Elaboration (2025)

²⁴ Damodaran, <https://pages.stern.nyu.edu/~adamodar/>

To estimate the cost of debt (K_d) applicable to the valuation of DreamTeam, a market-based approach was adopted. The pre-tax cost of debt was calculated by combining the risk-free rate with a credit spread derived from the company's financial structure. Specifically, the Interest Coverage ratio (ICR) methodology was used, in line with corporate valuation practice (Damodaran), whereby the credit risk of a firm is assumed from its ability to cover interest payments with operating profits (*Figure 23*). Based on this ratio and referencing the credit spread table, the company corresponds to a synthetic rating of Aaa/AAA, associated with a spread of 0,63%.

Figure 23: ICR Calculation

<i>If interest coverage ratio is</i>			
>	$\leq$ to	Rating is	Spread is
-100000	0,199999	D2/D	15,12%
0,2	0,649999	C2/C	11,34%
0,65	0,799999	Ca2/CC	8,64%
0,8	1,249999	Caa/CCC	8,20%
1,25	1,499999	B3/B-	5,15%
1,5	1,749999	B2/B	4,21%
1,75	1,999999	B1/B+	3,51%
2	2,249999	Ba2/BB	2,40%
2,25	2,499999	Ba1/BB+	2,00%
2,5	2,999999	Baa2/BBB	1,56%
3	4,249999	A3/A-	1,22%
4,25	5,499999	A2/A	1,08%
5,5	6,499999	A1/A+	0,98%
6,5	8,499999	Aa2/AA	0,78%
8,50	100000	Aaa/AAA	0,63%

EBIT	26.000.000
Oneri Finanziari	2.953.000
ICR	8,8

spread	0,63%
--------	-------

Source: Own Elaboration (2025)

Assuming a risk-free rate of 2,65%, based on the 10-year German Bund yield at the valuation date, a pre-tax cost of debt of 3,28% is concluded. In line with valuation practice and with financial theory, the cost of debt must be adjusted for tax deductibility. Interest expenses are generally tax-deductible; therefore, the effective cost of debt must be expressed net of tax savings. The after-tax cost of debt is then calculated, applying the Italian corporate income tax rate of 24% (IRES) to the assumed pre-tax value (*Figure 24*).

Figure 24: Cost of Debt Determination

Cost of Debt (Kd)	
Kd before tax	3,28%
Kd Tax rate	24,0%
Kd after tax	2,49%

Source: Own Elaboration (2025)

This adjusted value of 2,49% represents the actual economic cost of debt for the company and it is used in the computation of the Weighted Average Cost of Capital (WACC).

The WACC represents the average of return required by both the equity and debt investors, weighted by their respective contributions to the firm's capital structure. For the case of DreamTeam, the WACC was determined by combining the cost of equity (Ke), resulting in a final value of 7,3% with the cost of debt after-tax of 2,49%. Based on the company's capital structure, comprising 62,1% equity and 37,9% debt, the final WACC is estimated at 5,45% (*Figure 25*). This rate reflects the blended cost of capital appropriate for discounting the firm's future cash flows in valuation models, ensuring consistency with market-based return expectations and the firm's specific risk profile.

Figure 25: WACC Computation

Ke	7,3%
Cost of Debt (Kd)	
Kd before tax	3,28%
Kd Tax rate	24,0%
Kd after tax	2,49%
Financial Structure	
Weight of Equity	62,1%
Weight of Debt	37,9%
WACC	=+C13*C21+C18*C22
WACC	5,45%

Source: Own Elaboration (2025)

However, when valuing an intangible asset with a standalone value, like a brand, the company's WACC is not sufficient. During the accomplishment of the WACC, Vulpiani (2020) and the IVS standards reiterated that intangibles assets, whilst gaining a valuation, are necessarily subject to higher systemic and specific risks compared to the company as

a whole. According to Reilly and Schweih (1999), a commonly accepted range for such adjustments is between + 2% and + 6% depending on the type of intangible asset and its risk profile. The International Valuation Standards (IVS 210, IVSC 2021) also acknowledge that brand valuation may require a premium to reflect their exposure to competitive dynamics, obsolescence risk, and lack of observable transactions. Professional valuation firms such as Duff & Phelps regularly adopt similar ranges when performing purchase price allocations or impairment tests.

For the case of DreamTeam, applying the upper of 6% would likely overstate the risk, as the brand presents several elements of stability:

- It operates in a highly specialized B2B market, where reputation is built on technical reliability rather than consumer marketing volatility;
- The company has over 40-year operating history and well-established customer relationships;
- The brand is recognized in multiple international markets and is not subject to rapid obsolescence;
- Although is not actively licensed, it benefits from consistent market presence and long-term business continuity.

Considering these factors, a more moderate specific risk premium of 4% is applied. This value remains within the defensible range proposed in valuation literature while better reflecting the brand's underlying risk-return profile. It strikes a balance between the intangible nature of the asset and the structural resilience shown by DreamTeam in its historical performance and market positioning.

Thus, the Cost of Capital for Intangibles is 9,45%.

To assess the impact of changes in the discount rate on the valuation of the DreamTeam brand, a sensitivity analysis was carried out by varying the WACC across four different scenarios. The base case applies a WACC of 5.45%, representing the company's unadjusted weighted average cost of capital, without any additional spread for intangible-specific risk. Three additional scenarios were developed by applying a +3%, +4%, and +5% spread, resulting in WACC values of 8.45%, 9.45%, and 10.45%, respectively.

These scenarios are aligned with industry valuation practices (IVSC, 2021; Reilly & Schweih, 1999), where a risk premium is often applied to reflect the uncertainty and non-transferability associated with intangible assets. The objective is to test how sensitive the brand's fair value is to plausible variations in discount rate assumptions (*Figure 26*).

Figure 26: Scenario Analysis – WACC

Scenario	WACC	Brand Value (€)
Base case	5.45%	62.576.183
+3% Spread	8.45%	49.162.008
+4% Spread	9.45%	45.633.885
+5% Spread	10.45%	42.477.772

Source: Own Elaboration (2025)

As shown in the results, the fair value of the brand decreases progressively as the WACC increases, reflecting the higher required return associated with perceived risk. The variation between the lowest and highest scenarios exceeds 20 million, highlighting the importance of a justified and documented choice of discount rate.

This analysis supports the application of a moderate spread (e.g., 4%) as a realistic assumption, considering the brand's characteristics, historical stability, and absence of licensing activity.

Next to find the economically relevant cash flows, the theoretical royalties must be adjusted for the relevant effective taxation. The RFRM is based on the premise that if the company had to incur a royalty payment to a third party that cost would be tax deductible. With respect to the Italian context, both IRES (24,0%) and IRAP (3,9%) contribute to the company's overall corporate tax burden. While IRAP has a separate tax base and does not typically allow deductions for many operating expenses, including interest and in some cases royalties, recent interpretations and valuation practice recommend considering the full statutory rate (27.9%) when estimating the tax shield generated by royalty savings, in order to reflect the aggregate effective tax benefit.

As stated in the main theoretical references (Bini, Hitchner) and confirmed by the IVS Standards, it is therefore more accurately to use the combined corporate tax rate to capture

the overall tax advantage the company would realize by avoiding third-party royalty payments. In the model, the formula for each year is:

$$\text{Royalty Saving} = \text{Revenues} * \text{Royalty Rate} * (1 - \text{Tax rate})$$

This formula is applied year by year over the explicit period from 2025 to 2042, and the after-tax royalty savings are discounted using the cost of capital for intangibles (9,45%) to obtain their present value. For each year, the discount factor is calculated based on the respective discount period. (Figure 27).

Figure 27: Valuation of Brand before applying the TAB Factor

DreamTeam (EUR)	0	1	2	3	4	5	6	7	8
	2024 (A)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)	2032 (F)
Revenues	97.717.000	101.039.378	104.474.717	108.026.857	111.699.770	115.497.563	119.424.480	123.484.912	127.683.399
Royalty Rate		5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%
Royalty Savings		5.153.008	5.328.211	5.509.370	5.696.688	5.890.376	6.090.648	6.297.731	6.511.853
(Taxes)		(1.437.689)	(1.486.571)	(1.537.114)	(1.589.376)	(1.643.415)	(1.699.291)	(1.757.067)	(1.816.807)
After-Tax Royalty Savings		3.715.319	3.841.640	3.972.256	4.107.312	4.246.961	4.391.358	4.540.664	4.695.046
Discount period		1,0	2,0	3,0	4,0	5,0	6,0	7,0	8,0
Discount factor		0,91	0,83	0,76	0,70	0,64	0,58	0,53	0,49
PV of After-Tax Royalty Savings		3.394.583	3.206.988	3.029.760	2.862.326	2.704.145	2.554.706	2.413.525	2.280.146
Estimation of Brand Value (EUR)									
Cumulated PV of After-Tax Royalty Savings		39.348.506							

DreamTeam (EUR)	0	9	10	11	12	13	14	15	16	17	18
	2024 (A)	2033 (F)	2034 (F)	2035 (F)	2036 (F)	2037 (F)	2038 (F)	2039 (F)	2040 (F)	2041 (F)	2042 (F)
Revenues	97.717.000	132.024.635	136.513.472	141.154.930	145.954.198	150.916.641	156.047.806	161.353.432	166.839.448	172.511.990	178.377.397
Royalty Rate		5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%	5,1%
Royalty Savings		6.733.256	6.962.187	7.198.901	7.443.664	7.696.749	7.958.438	8.229.025	8.508.812	8.798.111	9.097.247
(Taxes)		(1.878.579)	(1.942.450)	(2.008.494)	(2.076.782)	(2.147.393)	(2.220.404)	(2.295.898)	(2.373.959)	(2.454.673)	(2.538.132)
After-Tax Royalty Savings		4.854.678	5.019.737	5.190.408	5.366.882	5.549.356	5.738.034	5.933.127	6.134.853	6.343.438	6.559.115
Discount period		9,0	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0
Discount factor		0,44	0,41	0,37	0,34	0,31	0,28	0,26	0,24	0,22	0,20
PV of After-Tax Royalty Savings		2.154.138	2.035.094	1.922.628	1.816.378	1.715.999	1.621.168	1.531.577	1.446.937	1.366.975	1.291.432
Estimation of Brand Value (EUR)											
Cumulated PV of After-Tax Royalty Savings		39.348.506									

Source: Own Elaboration (2025)

3.2.4 TAB Factor and Fair Value of DreamTeam Brand

The last and final phase of the RFRM is to quantify the Tax Amortization Benefit (TAB), which is a necessary calculation that addresses tax advantages associated with amortizing the value of the brand for corporate income tax purposes. Although this adjustment is not factorable to the intrinsic economic value of the brand, it is intended to account for

realizable economic benefits available to the acquiring or owning entity under the tax laws at the time of valuation.

Article 103 of the Italian Consolidated Income Tax Act (TUIR) states that intangible assets, including trademarks and brands, may be amortized on a straight-line basis for a period not exceeding 18 years. In this valuation, the Residual Useful Life (RUL) for tax purposes (for amortization) has been set at 18 years, in alignment with the forecast period used for projecting royalty savings. This ensures consistency between the economic and fiscal treatment of the brand and it avoids any mismatch in value recognition across time.

The use of an 18-year RUL is also justified by the long-standing market presence of the DreamTeam brand, its established reputation, and the industry-specific characteristics. In professional valuation practice, especially in the context of purchase price allocations (PPA) or impairment testing, such alignment between economic life and fiscal amortization is commonly adopted, especially when supported by historical performance and market continuity.

The TAB factor used in this model was determined by discounting a fiscal annuity over 18 years using the cost of capital relevant to the intangible asset (9,45%) and applying a corporate income tax rate of 27,9%. This calculation yielded a multiplier of 1.16, or every euro of brand value creates a present value fiscal benefit of an additional 16 cents.

Figure 28 presents the final output of the valuation analysis carried out under the RFRM, including the application of the Tax Amortization Benefit, over the 18-year fiscal amortization period.

Figure 28: Brand Valuation RFRM

Estimation of Brand Value (EUR)	
Cumulated PV of After-Tax Royalty Savings	39.348.506
TAB factor	1,16
Growth rate (CAGR)	3,40%
Tax rate	27,90%
WACC	9,45%
Fair Value of Brand	45.639.022

Source: Own Elaboration (2025)

As shown in the previous figure, the value of DreamTeam's brand is estimated to be €45.639.022, representing the full economic contribution of the brand to the business, adjusted for the fiscal benefits realizable in a transaction context.

In the situation of a potential operation of M&A, this valuation brings a significant strategic weight. For a prospective buyer, the brand represents not only a stream of recurring revenue but also a source of competitive differentiation and market resilience. The ability to justify a transaction premium (a price above the mere enterprise value) is highly dependent on the presence of intangible assets, especially if they are documented and appraised by a third party. In addition, can be used as a measurement in negotiations and it can improve the quality of financial reporting required under IFRS 3, adding justification to the segregation of intangibles from residual goodwill.

3.3 Control Methodologies

To validate the consistency and accuracy of the Relief from Royalty Method used in the valuation of DreamTeam's brand, this thesis relies on two complementary control approaches: Profit Split Method and Differential Income Approach (better known as With/Without Method). These techniques act not as a replacement but merely as validation for triangulating the value that has been established through the primary valuation method. It is a recognized and accepted practice in both academic research and professional valuation standards to apply a method other than the primary one in order to check. The International Valuation Standards Committee (IVSC, 2021) recommends the triangulation of value reports by applying alternative valuation approaches as a way to strengthen the reliability of the valuation, especially in regard to intangible assets like brands.

The Profit Split Method offers a heuristic benchmark by estimating the brand's contribution to earnings, while the With/Without method isolates the incremental economic benefit of the brand by modeling two realistic scenarios of business performance. The convergence between these independent approaches reinforces the reliability of the brand valuation derived through the RFRM.

3.3.1 Profit Split Method

To reinforce the methodological validity of the Relief from Royalty Method, this thesis introduces the application of the Profit Split Method (PSM), using the well-known heuristic of the “25% Rule.”

The 25% Rule, while not often considered as a standalone valuation tool, is commonly applied in transfer pricing as well as in litigation contexts when attempting to arrive at an estimation for the contribution of identifiable intangible assets, especially trademarks and patents, to the overall net profit of an organization. In this thesis, we apply the 25% Rule to further validate the brand value estimated through the RFRM, as an alternative to arrive at a reasonable royalty rate from an alternative methodology.

The logic behind the 25% Rule is straightforward, but extremely powerful. It is based on the fact that in licensing agreements in a variety of industries, the licensor typically receives approximately 25% of the licensee's EBIT for their use of an intangible asset. This is generally assumed to represent the share of the economic value of the asset being exploited by the licensee. In the context of business valuation, it could be adapted to a situation where the entity holding the intangible is also the operator, by determining what share of its EBIT would hypothetically be allocated to the brand if it was licensed rather than owned.

In the DreamTeam case study, this concept was applied with an EBIT of € 23.403.000, associated with brand-attributable operations. Applying the 25% Rule, the estimated intangible income attributable to the brand amounts to € 5.850.750. This value was then considered in relation to total revenues of € 112.000.000, this data corresponds to the consolidated revenues reported by DreamTeam in its 2024 financial statements, which represent the most recent and reliable accounting data at the time of valuation.

The implied royalty rate of 5,22% is very close to the 5,10% royalty rate used in the primary RFRM valuation. The close proximity between the implied royalty rate provided by the Profit Split Method to the royalty rate used in the RFRM provides a useful cross-verification of values. On the one hand, the RFRM uses observable market comparables to derive royalty railings based on the concept of avoiding royalty fees on brand use, whereas the PSM has derived the implied royalty fee based purely on an analysis of profit

levels on the basis of multiple pieces of internally generated information. This alignment suggests that the 5% rate assumed in the RFRM is neither aggressive nor understated, but rather reflects a fair and economically justified allocation of value to the brand (*Figure 29*).

Figure 29: Profit Split Method (25% Rule)

Profit Split Method	
Revenues DreamTeam	112.000.000,0
EBIT DreamTeam	23.403.000
Profit Split (Rule of Thumb 25%)	25%
	5.850.750
Implicit Rate	5,22%

Source: Own Elaboration (2025)

The use of the Profit Split Method in this context offers several conceptual and practical advantages. On a conceptual basis, it provides an internally derived cross-check based on actual profit generation by the firm/determined market value as opposed to hypothetical market transactions. This is particularly helpful in situations when market comparables for royalty rates are limited, inconsistent or not completely reliable because of geographical, scope or exclusivity differences. On a practical basis, the Profit Split Method embodies the consistent economic principle: that the value of an intangible can be estimated as a percentage of the profits it helps to generate. This points to a direct relationship between value of an intangible, and the income of the enterprise, supporting the rationale behind attributing value to a brand. Additionally, because the Profit Split Method is relatively straightforward, it is easier to apply and interpret, when compared to other methodologies, making it more accessible to valuation professionals and decision makers alike, many of whom are not technically trained.

However, the method has some drawbacks: its greatest disadvantage is being heuristic. The 25% allocation is a generalized average which does not mean it is a true representative of the contribution of a particular brand in a particular industry. In high margin industry, or in strong market share cases with strong consumer loyalty, the real contribution could be above 25% which means below valuation. In commodity industry such as insurance, the contribution may well fall under 25% which could facilitate the overvaluation of that brand.

Furthermore, the use of EBIT as the base for applying the 25% Rule can also create issues. EBIT figures can be impacted by non-operating adjustments, like depreciation policies, or investments that skew the brand's real economic value contribution. A normalized, brand-specific EBIT should be used where revenues and expenses are generated solely from brand value activities.

It is also important to recognize that the PSM, when used in this simplified rule-of-thumb form, ignores long-term value drivers, like growth potential, market expansion, or strategic brand synergies. These factors are incorporated in a carefully designed RFR model through a terminal value and a market-informed royalty rate. Unlike the primary approach used in this thesis, the PSM does not incorporate forward-looking dynamics and cannot be a substitute for an entire income approach or RFRM model to estimate brand value for fair value accounting standards or investment decisions.

Regardless of the limitations, the convergence between the RFRM-based royalty rate and the implied rate from the PSM is compelling evidence. It provides the analyst with confidence that the economic contribution of brand, when considered through a wholly different methodology, can be viewed as materially consistent. The cross-checking of these approaches increases the dependability of the valuation output and forms the basis of recommended best practices of valuation organizations, for example, IVSC and OECD Transfer Pricing Guidelines. The proximity of the implied royalty rates from both approaches supports the critical assumption of the brand's contribution to DreamTeam's profits, along with enhancing the overall credibility of the brand valuation framework applied in this thesis.

3.3.2 Differential Income Approach: With or Without Scenario

An alternative technique used to estimate the economic contribution of an intangible asset to the overall company's value is the Differential Income Approach, also referred to as the "With or Without" method. As detailed by Bini (2011) and supported by international valuation literature (Reilly & Schweih, 1999; IVSC, 2021), this approach seeks to estimate the fair value of an intangible by quantifying the difference in business enterprise value under two mutually exclusive scenarios: one in which the intangible asset is present and fully exploited, and another in which it is entirely absent.

While the RFRM provides a middle way between income and market-based estimation of brand value, it does not capture the full extent of a brand's strategic contribution. As known, brands are not merely licensing toll, but they influence customer behavior, facilitate pricing power and enhance competitive insulation. This method helps in better simulating firm's operations in both scenarios, enabling a more holistic assessment.

The Differential Income Approach is especially relevant in M&A contexts or PPAs, where buyers try to understand the incremental value generated by individual intangible components. According to Bini's framework, two scenarios must be constructed:

1. A with scenario, which represents the firm's actual financial projections, assuming the brand is fully active (*Figure 30*). Considering the actual situation of DreamTeam (with DreamTeam's brand in operation), the revenues are projected to grow at a steady rate of 3,4% annually. COGS are kept stable at 64%, in line with historical margins, while OPEX are set at 14,1% of revenues.²⁵ The resulting NOPAT is discounted using a WACC of 5,45%, which was derived from industry peers and adjusted for DreamTeam's specific capital structure.

Figure 30: Scenario WITH

DreamTeam (EUR) - Scenario WITH		2024 (A)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)	2032 (F)
			3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%
Revenues		112.000.000	115.808.000	119.745.472	123.816.818	128.026.590	132.379.494	136.880.397	141.534.330	146.346.497
COGS %		64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%
COGS		71.680.000	74.117.120	76.637.102	79.242.764	81.937.018	84.722.876	87.603.454	90.581.971	93.661.758
OPEX %		14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%
OPEX		15.792.000	16.328.928	16.884.112	17.458.171	18.051.749	18.665.509	19.300.136	19.956.341	20.634.856
EBITDA		24.528.000	25.361.952	26.224.258	27.115.883	28.037.823	28.991.109	29.976.807	30.996.018	32.049.883
Depreciation		1.124.977	1.163.226	1.202.776	1.243.670	1.285.955	1.329.677	1.374.886	1.421.632	1.469.968
EBIT		23.403.023	24.198.726	25.021.483	25.872.213	26.751.868	27.661.432	28.601.921	29.574.386	30.579.915
Tax Expenses			(6.751.445)	(6.980.994)	(7.218.347)	(7.463.771)	(7.717.540)	(7.979.936)	(8.251.254)	(8.531.796)
NOPAT			17.447.281	18.040.489	18.653.866	19.288.097	19.943.892	20.621.985	21.323.132	22.048.119
PV			16.545.791	16.224.370	15.909.192	15.600.138	15.297.087	14.999.923	14.708.532	14.422.802

	2033 (F)	2034 (F)	2035 (F)	2036 (F)	2037 (F)	2038 (F)	2039 (F)	2040 (F)	2041 (F)	2042 (F)
	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%	3,40%
151.322.278	156.467.236	161.787.122	167.287.884	172.975.672	178.856.845	184.937.978	191.225.869	197.727.548	204.450.285	
64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%	64,0%
96.846.258	100.139.031	103.543.758	107.064.246	110.704.430	114.468.381	118.360.306	122.384.556	126.545.631	130.848.182	
14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%
21.336.441	22.061.880	22.811.984	23.587.592	24.389.570	25.218.815	26.076.255	26.962.848	27.879.584	28.827.490	
33.139.579	34.266.325	35.431.380	36.636.047	37.881.672	39.169.649	40.501.417	41.878.465	43.302.333	44.774.612	
1.519.947	1.571.625	1.625.060	1.680.312	1.737.443	1.796.516	1.857.597	1.920.756	1.986.062	2.053.588	
31.619.632	32.694.700	33.806.319	34.955.734	36.144.229	37.373.133	38.643.820	39.957.709	41.316.272	42.721.025	
(8.821.877)	(9.121.821)	(9.431.963)	(9.752.650)	(10.084.240)	(10.427.104)	(10.781.626)	(11.148.201)	(11.527.240)	(11.919.166)	
22.797.755	23.572.878	24.374.356	25.203.084	26.059.989	26.946.029	27.862.194	28.809.509	29.789.032	30.801.859	
14.142.622	13.867.885	13.598.485	13.334.319	13.075.284	12.821.282	12.572.213	12.327.984	12.088.498	11.853.665	

Source: Own Elaboration (2025)

²⁵ Information derived from DreamTeam's financial statements.

2. A without scenario, a hypothetical situation in which the brand is not present (*Figure 31*). Hitchner (2022) emphasizes that the removal of a strategically relevant brand can lead to sales contractions ranging from 3% to 10%, depending on market context and the firm's reliance on brand-driven loyalty. In line with this observation, the "without" scenario assumes an immediate revenue decline of 3%, which reflects a moderate but material level of brand dependence typical of B2B regulated industries such as the dental sector. However, this initial contraction is expected to attenuate over time. According to PwC (2020), while the short-term impact of brand loss is significant, companies often experience a progressive normalization of revenues growth, supported by market inertia, competitive repositioning, and existing client relationships. Salinas (2009) supports this trajectory, noting that firms tend to reach a new economic baseline following brand absence, as this becoming absorbed into market expectations and stakeholder behaviors. Therefore, the assumed revenue growth path moves from -3% to 0%. This assumption aligns with IVS 210, which explicitly states that *"declining cash flows in the absence of brand can be expected to taper off and stabilize"* over time, especially when the business maintains its customer base. Finally, industry-specific literature confirms that in non-consumer markets, brand switching costs and the conservatism of professional buyers tend to limit long-term disruption. As Rubio et al. (2016) state, *"in B2B sectors, revenues decay stabilizes more quickly than in B2C due to customer stickiness and risk aversion"*.

Moreover, COGS increase by 1%, while OPEX remain unchanged. This reflects the loss of brand efficiencies such as better supplier terms, production scale, and demand predictability. As noted by Salinas (2009) and Bini (2011), strong brands contribute to lower unit costs through enhanced negotiation power and operational optimization. Conversely, OPEX are assumed to be constant, as most operating expenses (personnel and administration) are fixed in the short term. In addition, as IVSC (2021) points out, firms may maintain or increase commercial spending to counteract brand loss, offsetting any potential reductions.

Figure 31: Scenario WITHOUT

DreamTeam (EUR) - Scenario WITHOUT	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)	2032 (F)	2033 (F)
	-3%	-3%	-3%	-2%	-2%	-2%	-2%	-1%	-1%
Revenues	108.640.000	105.598.080	102.958.128	100.487.133	98.075.442	96.212.008	94.287.768	93.344.890	92.411.442
COGS %	65%	65%	65%	65%	65%	65%	65%	65%	65%
COGS	70.290.080	68.321.958	66.613.909	65.015.175	63.454.811	62.249.169	61.004.186	60.394.144	59.790.203
OPEX %	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%
OPEX	15.318.240	9.633.396	9.392.561	9.167.140	8.947.128	8.777.133	8.601.590	8.515.574	8.430.419
EBITDA	23.031.680	27.642.726	26.951.658	26.304.818	25.673.503	25.185.706	24.681.992	24.435.172	24.190.820
Depreciation	437.602	525.212	512.082	499.792	487.797	478.528	468.958	464.268	459.626
EBIT	22.594.078	27.117.514	26.439.577	25.805.027	25.185.706	24.707.178	24.213.034	23.970.904	23.731.195
Tax Expenses	(6.303.748)	(7.565.787)	(7.376.642)	(7.199.602)	(7.026.812)	(6.893.303)	(6.755.437)	(6.687.882)	(6.621.003)
NOPAT	16.290.330	19.551.728	19.062.935	18.605.424	18.158.894	17.813.875	17.457.598	17.283.022	17.110.191
PV	15.448.619	17.583.473	16.258.072	15.047.995	13.927.982	12.957.373	12.042.116	11.305.708	10.614.333

	2034 (F)	2035 (F)	2036 (F)	2037 (F)	2038 (F)	2039 (F)	2040 (F)	2041 (F)	2042 (F)
	-1%	-1%	-1%	0%	0%	0%	0%	0%	0%
Revenues	91.487.327	91.029.891	90.574.741	90.303.017	90.032.108	90.032.108	90.032.108	90.032.108	90.032.108
COGS %	65%	65%	65%	65%	65%	65%	65%	65%	65%
COGS	59.192.301	58.896.339	58.601.857	58.426.052	58.250.774	58.250.774	58.250.774	58.250.774	58.250.774
OPEX %	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%	14,10%
OPEX	8.346.114	8.304.384	8.262.862	8.238.073	8.213.359	8.213.359	8.213.359	8.213.359	8.213.359
EBITDA	23.948.912	23.829.168	23.710.022	23.638.892	23.567.975	23.567.975	23.567.975	23.567.975	23.567.975
Depreciation	455.029	452.754	450.490	449.139	447.792	447.792	447.792	447.792	447.792
EBIT	23.493.883	23.376.413	23.259.531	23.189.753	23.120.183	23.120.183	23.120.183	23.120.183	23.120.183
Tax Expenses	(6.554.793)	(6.522.019)	(6.489.409)	(6.469.941)	(6.450.531)	(6.450.531)	(6.450.531)	(6.450.531)	(6.450.531)
NOPAT	16.939.089	16.854.394	16.770.122	16.719.812	16.669.652	16.669.652	16.669.652	16.669.652	16.669.652
PV	9.965.238	9.403.089	8.872.650	8.388.963	7.931.644	7.521.821	7.133.173	6.764.606	6.415.083

Source: Own Elaboration (2025)

The different Business Enterprise Value generated under each scenario are presented in *Figure 32*. The “With Brand” scenario yields a cumulated present value of € 253 million, while the “Without Brand” scenario results in only € 197 million. The resulting brand value, equal to approximately €55 million, represents the economic benefit attributable to the DreamTeam brand in its current use. This valuation not only confirms the brand’s pivotal role in sustaining profitability but also illustrates how its absence would significantly impair operating margins and cash flow generation capacity.

Figure 32: Cumulated PV of both Scenarios

BEV WITH (EUR)	
Cumulated PV	253.390.073
Tax rate	27,90%
WACC	5,45%

BEV WITHOUT (EUR)	
Cumulated PV	197.581.939
Tax rate	27,90%
WACC	5,45%

BRAND VALUE	55.808.134
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Source: Own Elaboration (2025)

Notably, the EV obtained in the “with” scenario amounts to €253 million. This result is consistent with industry benchmarks: in the healthcare and dental materials sectors, the average EV/EBIT market multiple ranges between 10x and 15x. Applying these multiples to DreamTeam’s 2024 EBIT (€23.4 million) implies a valuation between €234 and €350 million, thereby validating the reasonableness of the outcome derived from the Differential Income Approach (DIA).

In the present case study, the brand value estimated using the Differential Income Approach (DIA) closely aligns with the result obtained through the Relief from Royalty Method (RFRM). This convergence reinforces the reliability of the valuation process and validates the use of RFRM as a primary methodology in accordance with IVS 210 and IFRS 3. The RFRM remains a preferred method in professional practice due to its conceptual clarity, market consistency, and auditability. It estimates the brand’s value based on hypothetical royalty savings, effectively reflecting the licensing equivalent of owning the brand. As noted by Bini (2011) and Salinas (2009), this approach captures a portion of the brand’s value, specifically its market-replaceable cash flow, but may omit broader economic contributions such as enhanced gross margins, customer retention, and pricing power.

In contrast, the DIA accounts for these broader strategic effects by comparing the projected performance of the business with and without the brand. However, it introduces higher sensitivity to assumptions regarding revenue growth, cost variations, and operational disruptions. Despite these limitations, when the outcomes of the DIA and RFRM are consistent, as they are in DreamTeam’s case, it significantly increases confidence in the robustness of the valuation (*Figure 33*).

Figure 33: Comparison of Brand Value Estimates (DIA vs RFRM)

Brand Value (DIA)	55.808.134
Brand Value (RFRM)	45.639.022
<i>delta</i>	<i>10.169.112</i>

Source: Own Elaboration (2025)

This alignment suggests that the RFRM, even if theoretically narrower in scope, has effectively captured the brand’s economic impact in this specific B2B, regulated context. As Hitchner (2022) and Reilly & Schweih’s (1999) argue, triangulating multiple methods provides the most defensible valuation outcome. In DreamTeam’s case, the comparable

results from DIA and RFRM confirm the central role of the brand in driving enterprise value, while also illustrating that the RFRM can deliver a reliable standalone estimate when properly calibrated with sector-appropriate assumptions.

Ultimately, the consistency across models supports the conclusion that DreamTeam's brand generates measurable, market-aligned economic value. It highlights the usefulness of RFRM not only for compliance and reporting purposes, but also as a faithful representation of brand equity when applied in a robust, data-driven valuation framework.

Conclusion

This thesis stems from a fundamental and increasingly relevant paradox in the field of business valuation: while intangible assets have become the dominant source of value creation in today's economy, their representation in both academic research and practical methodologies remains incomplete. The growing centrality of intangible capital, as demonstrated by global data and literature, from WIPO's findings on intangible investment trends to the dominance of intangibles in the market value of S&P 500 firms, demands a rethinking of how value is conceptualized, measured, and communicated.

Within this broader context, this research has focused on the valuation of brand equity in a non-consumer, regulated, and technical industry, through the lens of the Relief from Royalty Method. This work therefore positions itself at the intersection between gaps in academic theory and practical needs in valuation, offering both empirical validation and critical reflection.

Indeed, much of the academic literature has prioritized income-based approaches (primarily the Multi-Period Excess Earnings Method), especially in relation to core intangibles like technology or customer relationships. The RFRM, while widely used in professional valuation practice and endorsed by standards such as IVS 210 and ISO 10668, has received limited scholarly attention. Where it does appear, it is often confined to consumer branding in mass markets, neglecting the strategic roles that brands can play in B2B sectors.

By choosing to apply the RFRM to DreamTeam case, a B2B dental company with an internationally recognized but internally generated brand, the thesis offers a concrete answer to a dual research question: (1) Can the RFRM be effectively applied in technical, non-retail sectors where branding operates differently than in consumer markets? and (2) What are the methodological limitations or adjustments required to make it consistent with both economic logic and academic expectations?

In addressing these questions, the work implicitly critiques the narrow scope of much of the existing literature and argues for an expansion of the contexts in which the RFRM is considered valid. The broader contribution to literature lies, therefore, in extending the applicability domain of the RFRM and documenting a methodological framework that

incorporates both market-derived and firm-specific elements. Through the construction of a defensible royalty rate, a realistic residual useful life, and a risk-adjusted discount rate tailored to intangibles, this thesis builds a replicable model that could be applied to similar industrial brands. It shows that the RFRM can be robust in technical sectors, if supported by solid data, coherent assumptions, and appropriate risk adjustments.

At the same time, the thesis acknowledges that the RFRM, while useful in attributing economic value and visibility to brands present structural limitations. Chief among these is its tendency to underestimate value, especially when the brand contributes to broader operational and strategic performance beyond licensing equivalents. In addition, the derivation of an appropriate royalty rate remains methodologically fragile, due to the limited availability of transparent, comparable benchmarks and the absence of standardized empirical models. These weaknesses highlight the need to support the RFRM with complementary valuation tools that can validate, refine or challenge its results in a structured way. The Profit Split Method and the Differential Income Approach are not mere add-ons; they serve to stress-test the results and to reintroduce dimensions of value that the RFRM may ignore, such as pricing power, risk mitigation, or synergies. This triangulation reflects a methodological stance increasingly advocated in valuation standards (IVSC, OECD), but still underexplored in literature. By showing convergence across these methods, the thesis reinforces the credibility of the results while highlighting the importance of multi-angle valuation in dealing with intangibles.

Equally important is the normative implication of this work, highlighting the disconnect between economic value and accounting recognition, especially regarding internally generated brands. The DreamTeam case illustrates how large portions of enterprise value remain invisible under IAS 38. This misalignment calls for either a revision of accounting standards or the development of parallel valuation models that can better reflect what truly matters in firm valuation. The thesis does not propose a solution to this systemic issue but demonstrates, that there are feasible ways to bridge this gap.

This work does not claim to revolutionize the field of intangible asset valuation, but it does aim to clarify and expand it. It offers a documented case study, a critical assessment of methods, and a response to academic underrepresentation. By integrating established standards, industry-specific benchmarks, and cross-method validation, it proposes a

balanced framework that connects practice with theory and fills a recognized gap in the literature. The contribution is modest but tangible: a case-based justification for broader acceptance of RFRM in under-explored sectors, and a call for more nuanced, context-sensitive valuation models that reflect the real dynamics of intangible-driven value creation.

In a world where the intangible increasingly defines the tangible, valuation must evolve, not just methodologically, but conceptually.

Future Research Directions

Building on the findings of this thesis, several avenues for future research can be identified. First, it would be valuable to extend the application of the Relief from Royalty Method to a broader range of B2B and regulated industries, such as pharmaceuticals, industrial chemicals, or MedTech, to assess whether the methodological adaptations proposed here hold in different operational and strategic contexts. Comparative case studies across sectors could help isolate variables that most affect the method's reliability and relevance. Moreover, further research could explore the integration of RFRM with real option valuation models to better capture managerial flexibility and long-term brand growth options, especially in innovation-driven firms. Additionally, the development of hybrid models that combine income-based and market-based inputs could offer more nuanced results, particularly where benchmarking data is limited. Future studies might examine how current accounting standards (IAS 38, IFRS 3) could evolve to better incorporate internally generated intangible value, and whether supplementary disclosure frameworks could bridge the gap between financial reporting and strategic valuation. Finally, from a technical standpoint, deeper investigation into the determination of royalty rates, through machine learning on large datasets of licensing agreements or sector-specific royalty mapping, could improve the objectivity and comparability of RFRM applications. These future directions reflect a growing need for adaptable, interdisciplinary, and data-informed approaches to intangible valuation, an area that remains both theoretically underdeveloped and practically indispensable.

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