IS THE IMPAIRMENT TEST A FARSE? THE CASE OF ATHLETES IN BRAZILIAN FOOTBALL CLUBS

João Henrique Krauspenhar [1]
Suliani Rover [2]

▪ Received: 08/16/2021 ▪▪ Approved: 05/16/2022 ▪▪▪ Second Approved Version: 04/05/2022

ABSTRACT

This study analyzes the disclosure, measurement, and recognition of the recoverability of athletes as assets in Brazilian football clubs based on evidence of problems in carrying out the impairment tests. Thirty-four football clubs that played divisions A and B of the Brazilian league system in 2019 were examined, obtaining a sample of 198 observations considering the period between 2013 and 2019. The research showed an unsatisfactory level of disclosure of the impairment test (44.46%) and a satisfactory level of recognition of loss (76.19%) (in the observations where losses were identified). As for the level of recognition of impairment, there was significant variation among the pertinent observations, highlighting that clubs must disclose such information. When the analysis considers the group of professionals in a team, the estimated recoverability of athletes indicates that their book value is predominantly recoverable, with only six observations showing signs of unrecognized impairment. Complementary analysis of athletes analyzed separately indicates that 12 out of 18 observations have at least one athlete with evidence of unrecognized impairment. The results update and extend the literature on the subject, explaining the contrast in recognizing impairment when comparing Brazilian and European clubs, indicating the non-observance of the accounting standard by Brazilian football clubs. On the other hand, it points out that the low level of impairment recognition is justified when considering the value of the teams as a whole, leading to a debate about accounting standards.

Keywords: Impairment test; athletes, Brazilian football clubs.

O TESTE DE IMPAIRMENT MENTE? O CASO DOS ATLETAS DOS CLUBES DE FUTEBOL BRASILEIROS

[1] Mestre em Contabilidade pela Universidade Federal de Santa Catarina
Campus Universitário Reitor João David Ferreira Lima, s/nº Trindade – Florianópolis – SC, CEP: 88040-900. (48) 996007766, joaohkrauspenhar@gmail.com.
https://orcid.org/0000-0002-6454-7748

[2] Doutora em Contabilidade pela Universidade de São Paulo
Professora do Programa de Pós-Graduação em Contabilidade e do Departamento de Ciências Contábeis da Universidade Federal de Santa Catarina
Campus Universitário Reitor João David Ferreira Lima, s/nº Trindade – Florianópolis – SC, CEP: 88040-900. (48) 999683251, sulianirover@gmail.com
https://orcid.org/0000-0001-8612-2938

RESUMO

A partir de indícios de problemas na realização do teste de *impairment* de atletas pelos clubes de futebol brasileiros, este estudo analisa a evidenciação, mensuração e reconhecimento da recuperabilidade do ativo atletas nessas entidades. Por meio de uma amostra composta por 198 observações, do período entre 2013 e 2019, de 34 clubes de futebol integrantes das séries A e B do campeonato brasileiro no ano de 2019, mensura um nível de evidenciação do teste de *impairment* insatisfatório (44,46%), porém satisfatório em relação ao reconhecimento de perda (76,19%), nas observações em que esta ocorreu. Quanto ao nível do reconhecimento de *impairment*, identificou-se grande variação entre as observações pertinentes, destacando-se a importância da divulgação de informações pelos clubes para sua compreensão. A estimativa de recuperabilidade dos atletas, realizada no nível dos planteis, aponta que seu valor de registro é predominantemente recuperável, tendo apenas seis observações apresentado indícios de *impairment* não reconhecido. Análise complementar dos atletas isolados indica que 12 de 18 observações possuem ao menos um atleta com indícios de *impairment* não reconhecido. Os resultados atualizam e estendem a literatura a respeito do tema, explicando o contraste no reconhecimento de *impairment* entre a realidade brasileira e europeia ao indicar a inobservância da norma contábil pelos clubes de futebol brasileiros. Por outro lado, aponta que o baixo nível de reconhecimento de *impairment* se justifica ao ser considerado o valor dos planteis, provocando debate a respeito da norma contábil.

Palavras-chave: Teste de *impairment*, atletas, clubes de futebol brasileiros.

1 INTRODUCTION

Reliable representation is one of the fundamental principles of accounting (CPC, 2019). The impairment test contributes to achieving reliable representation by ensuring that assets are not recorded at a value greater than the economic benefits they can offer to the entity (Zandonai & Borba, 2009). Thus, finding evidence of problems when applying the impairment test leads to in-depth investigation.

This is the case of athletes as assets of Brazilian football clubs, a sector in which independent audit reports show the absence of support for their recoverable amount (Lima & Sampaio, 2017; Lima, 2018; Moreira, 2020; Moraes, 2021).

In addition, there is a significant contrast between the incidence of recognition of loss by impairment of Brazilian athletes and those from other countries. When studying clubs in Brazil, Silva and Miranda (2018) identified this loss in only 3.33% of the observations. On the other hand, research on Italian clubs identified 83.33% (Gazzola & Amelio, 2016), and European clubs had an incidence of 60% (Gazzola et al., 2020).

Such facts are especially relevant when considering the warning by Risaliti and Verona (2013) that accounting records involving athletes as assets can cover up financial statements manipulation, i.e., they represent an opportunity for accounting fraud.

However, it is important to emphasize that athletes are assets with a relevant role in the football production chain and are vital inputs in the main product – the sporting event (Leoncini & Silva, 2005). Not by chance, they correspond to 98.6% of the intangible assets and approximately 16% of the total assets of Brazilian football clubs (Assis & Nakamura, 2019).

The problematic circumstances associated with the importance of this asset justify the research question addressed in this study: how is the recoverability of athletes as assets disclosed, measured, and recognized by Brazilian football clubs?

This article clarifies the clues to the problems observed, improving the literature by going beyond identifying the level of disclosure and recognition of impairment of athletes (obtained through asset recoverability via the Transfermarkt platform – an online solution that provides an estimate of the football players' market value.

2 THEORETICAL FRAMEWORK

2.1 Athletes

Athletes play an important role in the production chain of the football industry. They can be considered as inputs of the main product – the sporting event – and also as by-products of the values raised with the negotiation of their contracts (Leoncini & Silva, 2005). Mósca et al. (2009) researched representatives of the main actors of what they called the "organizational field of football." The authors identified that athletes are seen as the most relevant part of the business, without which nothing would exist in the organizational field.

The relevance of athletes to clubs is evident in research that points to a positive correlation between variables related to investment in these professionals and the clubs' sports performance (Szymanski, 1998; Dimitripoulos & Limperopoulos, 2014; Ferri et al., 2017; Krauspenhar & Rover, 2020b). In this sense, it is not surprising that 89% of investments by Brazilian football clubs in 2019 were directed toward hiring and training athletes (Grafietti, 2020).

The accounting of rights arising from the contract with athletes is one of the main problems related to football clubs' financial statements (Pavlovic et al., 2014; Maglio & Rey, 2017), regulated in Brazil by ITG 2003 (R1) (CFC, 2017). This standard provides that the costs of hiring and training athletes must be accounted for in the intangible assets of the entities and amortized for the duration of their contracts (Galvão & Miranda, 2016). Contracting costs include any expense necessary for the conclusion or renewal of a contract with the athlete, such as paying compensations related to contract termination, athlete bonuses, prize money, and commission to the athlete managers (CFC, 2017). The calculation of costs with athlete training is complex. It involves spending on items such as food, technical training, and physical preparation and this cost can only be recognized as asset if the athlete demonstrates technical conditions to become a professional player. While this requirement is not fulfilled, such items are recognized as expenses (CFC, 2017).

Therefore, the intangible asset account for the cost of training athletes shows the usable expenses of the club in its youth teams. In contrast, the account for the cost of professional athletes shows the expenses of training athletes who have been in the football club since the youth team and are now professionals, as well as the costs of hiring professionals from other clubs. Therefore, the balances of both accounts represent the total investment of the football club in athletes.

Thus, the method of measuring athletes as an asset adopted by the Brazilian accounting standard is the historical cost, advocated by Morrow (1997) in the Bosman Case – where the decision stated that clubs could not request amounts for the transfer of players whose contracts were terminated. On the other hand, Amir and Livne (2005) pointed out that manager discretion regarding measuring this asset could provide helpful information to users of financial statements. Measuring intangible assets as a whole is controversial and one of the main causes of the recent loss of relevance of accounting (Lev & Gu, 2016). In the specific case of athletes as intangible assets, they can be used to manipulate accounting statements (Risaliti & Verona, 2013).

The intangible assets in Brazilian football clubs are almost totally formed by athletes. According to research by Assis and Nakamura (2019) examining 27 clubs in 2015 and 2016, athletes correspond to 98.6%, on average, of the amount of the clubs' intangible assets. The authors highlight that in 20 clubs, the athletes correspond to more than 99% of the intangible assets and that this represents, on average, 16.86% of the clubs' total assets.

2.2 Impairment test

The impairment test ensures that the assets are not recorded in the books for a value greater than the benefits they offer to the entity (Zandonai & Borba, 2009). Thus, this test is related to the fundamental qualitative characteristic of faithful representation (Messias et al., 2020).

In Brazil, this regulation is provided by CPC 01 (R1) – Reduction to the Recoverable Amount of Assets (CPC, 2010). According to this regulation, assets recorded at an amount above recoverable through use or disposal must be reduced with the consequent recognition of an impairment loss (Gelbcke et al., 2018). Recoverable amount is the "higher of fair value less costs of disposal and value in use" (CPC, 2010). In other words, fair value is the asset's market value, and value in use is its discounted cash flow. The test should preferably be developed on assets separately, except when there is a set of assets and separation is not possible. In this case, the recoverable amount of the cash-generating unit is estimated, understood as the smallest identifiable group of assets that generates cash inflows (CPC, 2010).

Mancin (2009) considers that the group of athletes of a club is the smallest cash-generating unit necessary to measure the recoverable value of athletes by value in use. This perspective – athletes as a group – privileges the use of professionals to achieve sporting results, fan engagement, and the resulting revenues instead of selling them. However, Maglio and Rey (2017) support the possibility that the individual athlete is considered the smallest cash-generating unit. The authors indicate a "transfer-market" of athletes whose market value can be measured. From this perspective, the athlete's recoverable amount is the fair

value less selling costs. Biancone and Solazzi (2012), in a similar vein, point out that athletes' market value can be measured based on available information or any offers received.

The unit to be measured – athletes separately or as a group – influences the authors' position so the ITG 2003 (R1) subsidizes the definition of the issue in the Brazilian context: the imposition of performing impairment test for "each athlete" (CFC, 2017). In this sense, similarly to the understanding of Maglio & Rey (2017), the recoverable amount of athletes from Brazilian clubs corresponds to the net fair value of selling costs. Endorsing this conclusion, we emphasize the difficulty (perhaps impossibility) of estimating the value in use of athletes considered individually and ask: how can we measure which cash flow comes from a goal scored at the end of the championship or from a penalty save, a defense clearance, and still make these projections for the future?

Thus, in Brazil, athletes' recoverable amount is measured individually (separately), under the applicable standard, and by the net fair value of selling costs, due to this first imposition and the difficulty of estimating the cash flow resulting from them.

Finally, it is noteworthy that the ITG 2003 (R1) requires an annual impairment test of athletes, regardless of signs of devaluation within the year (CFC, 2017). In this regard, the ITG 2003 goes beyond CPC 01, which establishes this obligation only for intangible assets with an indefinite useful life or not yet available for use, and goodwill, which is not the case for athletes (CPC, 2010). Thus, it is clear that this asset's recoverability is relevant for football clubs.

2.3 Similar research

Studies on the impairment test are important to identify potential problems in complying with accounting standards and improving disclosure (Souza, Borba & Alberton, 2009). However, there is a lack of research regarding its application to athletes from football clubs (Sampaio et al., 2015).

In the Brazilian context, Silva and Miranda (2018) analyzed the disclosure of the application of the recoverability test by 20 Brazilian football clubs in the top division of the national league system (Série A) between 2014 and 2016, observing the evolution in the level of disclosure over the period although concluding that few clubs showed the criteria used to carry out the recoverability test. They also found that impairment was recognized in only two observations out of 60, which corresponds to an incidence of 3.33%.

Andrade and Piva (2020) verified compliance with the ITG 2003 regarding the disclosure of the impairment test of athletes in 20 clubs of divisions A and B (Série A is the top division and Série B is the second tier of the Brazilian football league system) in 2013 and 2014. They identified a level of disclosure similar to the study by Silva and Miranda (2018). However, Andrade and Piva (2020) only mentioned the application of the test, none of the clubs in the sample recognized an impairment loss, and only two disclosed their analysis assumptions in 2014.

Messias et al. (2020) approached the theme circumstantially, having identified the trigger events that indicate the devaluation of players in Brazilian and Portuguese clubs in 2014 and 2015. In addition to highlighting athlete

performance, the main trigger events showed the insufficiency of information disclosed by Brazilian clubs.

Gazzola and Amelio (2016) studied three clubs in the Italian league for six seasons between 2010 and 2015, observing the evaluation and application of the impairment test on athletes. They found that not all observations disclosed sufficient information regarding the application of the test and that 15 of the 18 observations recognized impairment loss.

Gazzola et al. (2020) expanded previous studies by exploring the recoverability test disclosure and transparent evaluation based on a sample of 13 European football clubs listed in STOXX from 2012 to 2016. The authors found the recognition of impairment loss of athletes in 39 observations out of 65. Also, they observed that the impairment test was a widespread practice among the clubs studied, although many did not disclose the details about the procedure. Finally, it is worth mentioning that the analysis of Gazzola et al. (2020) adopted the group of athletes as the unit to be measured since the clubs did not disclose information about each player, which may be considered a limitation of the research.

The literature presented above uses data produced before 2016, particularly addressing the clubs' disclosure about applying the impairment test and the recognition of impairment. In general terms, the results of such studies point out problems in the disclosure of the athletes' recoverability test, although there has been improvement in the Brazilian context. However, most striking is the contrast between the findings related to the recognition of impairment losses of athletes in Brazilian and European football clubs.

3 METHODOLOGY

This descriptive study adopted a mixed approach, qualitative and quantitative, using numbers to measure the variables examined and descriptive statistics for data analysis. The study thoroughly explored situations separately to illustrate the phenomena addressed (Brymann, 2012).

The research sample is composed of the clubs that played the top division and the second tier (Série A and Série B)of the 2019 Brazilian football league system and can offer data to measure the variables examined (as detailed below) in one or more years of the period covered by the study (2013 to 2019). Thirty-four clubs fulfil the conditions to form the sample, namely: América-MG, Athletico-PR, Atlético-GO, Atlético-MG, Avaí, Bahia, Botafogo, Botafogo-SP, Bragantino, Brasil de Pelotas, Ceará, Chapecoense, Corinthians, Coritiba, Criciúma, Cruzeiro, Figueirense, Flamengo, Fluminense, Fortaleza, Goiás, Grêmio, Guarani, Internacional, Oeste, Palmeiras, Paraná, Ponte Preta, Santos, São Paulo, Sport, Vasco da Gama, Vila Nova, Vitória. These clubs generated 198 valid observations. The sample was defined based on the clubs participation in the Series A and B of the 2019 Brazilian football league, which means that some of the clubs may have played other series of the Brazilian league before 2019.

Thus, the goal is to identify the level of disclosure of the impairment test and impairmenrt recognition, the level of impairment recognition and estimate the recoverability of the asset (in this case, the athlete).

The model to disclose the impairment test of athletes' contractual rights developed by Andrade and Piva (2020) was adapted to assess the level of disclosure of the impairment test and recognition of impairment. Table 1 presents the model.

Table 1
Disclosure requirements for impairment tests and recognition of impairment of athletes

Recoverability test	1.1-Indication that the recoverability test, in general, was carried out
	1.2- Indication that the recoverability test was carried out for athletes as intangible assets
	1.3- Presentation of documents/information related to the recoverability test for athletes as intangible assets
Recognition of impairment loss	2.1- Indication of loss because of the lack of recoverability of athletes as intangible assets
	2.2- Recognition of loss because of the lack of recoverability of athletes as intangible assets in the income statement
	2.3- Presentation of documents/information regarding the recognition of loss because of the lack of recoverability of athletes as intangible assets

Source: Adapted from Andrade and Piva (2020)

Based on the analysis of the financial statements and explanatory notes of each valid observation, the requirements in Table 1 were observed and the respective level of disclosure of the impairment test ($Lev.Dis.Tes.Rec_{it}$), and recognition of impairment ($Lev.Dis.Rec.Imp_{it}$) of athletes, according to equations (1) and (2):

$$Lev.Dis.Tes.Rec_{it} = \frac{It.Dis.Tes.Rec_{it}}{3} \quad (1)$$

$$Lev.Dis.Rec.Imp_{it} = \frac{It.Dis.Rec.Imp_{it}}{3} \quad (2)$$

$It.Dis.Tes.Rec_{it}$ corresponds to the number of items disclosed regarding the application of the impairment test (prefix 1) and $It.Dis.Rec.Imp_{it}$ is the number of items disclosed related to the recognition of impairment (prefix 2), according to Table 1. The calculation of $Lev.Disc.Rec.Imp_{it}$ only occurs in observations in which there is recognition of impairment of athletes.

Also, only in these observations equation (3) was used to identify the level of recognition of impairment of athletes ($Lev.Loss.Imp_{it}$):

$$Lev.Loss.Imp_{it} = \frac{Loss.Imp_{it}}{Athletes.Imp_{it}} \quad (3)$$

In this equation, $Loss.Imp_{it}$ is the recognized amount of the impairment loss related to the athletes' lack of recoverability and $Athletes.Imp_{it}$ is the book value of the intangible asset related to the athletes ($Athletes_{it}$) plus the amount of the recognized loss ($Loss.Imp_{it}$), neutralized from the impairment, according to equation (4). This variable comprises all the items related to athletes, therefore covering athletes in youth teams, trained athletes, professionals, or any other

denomination the clubs may adopt. This information was extracted from the financial statements and explanatory notes for each observation.

$$Athletes.Imp_{it} = Athletes_{it} + Loss.Imp_{it} \quad (4)$$

The athletes' book value ($Athletas_{it}$) and their respective recoverable amount ($Amo.Rec.Ath_{it}$) were compared to estimate the recoverability assets (athletes), calculating the non-recoverable amount of the group of athletes ($Amo.Non.Rec_{it}$) and percentage of recoverability ($\%.Rec_{it}$), according to equations (5) and (6):

$$Amo.Non.Rec_{it} = Athletes_{it} - Amo.Rec.Ath_{it} \quad (5)$$

$$\%.Rec_{it} = \frac{Amo.Rec.Ath_{it}}{Athletes_{it}} \quad (6)$$

It is noteworthy that the accounting values of athletes ($Athletes_{it}$) were first collected considering the group of athletes. This is because, in line with the warning by Gazzola et al. (2020), most observations do not contain information about the book value of the individual athletes.

On the other hand, the variable $Amo.Rec.Ath_{it}$ is the recoverable amount of the athletes for which their market value was considered. The Transfermarkt tool – an online solution that estimates the market value of football players from different countries, including Brazil – was adopted. The tool's methodology is based on crowdsourcing, in which its multiple users provide estimates regarding the market value of football players, from which the platform extracts its own assessment. This methodology is justified by the concept of the wisdom of crowds, according to which large groups have an excellent ability to assess situations, despite the presence of extremes (Surowiecki, 2005).

However, elements such as the number of users participating on the platform must be considered since they affect the predictive value of the estimates provided. This can be considered a research limitation since the study cannot control these elements. In any case, previous studies validate the use of Telemarkt, such as Peeters (2018), who points out that the estimates it provides are used as a reference in the actual negotiation of athletes. Herm, Callsen-Bracker, and Kreis (2014) went further, statistically finding that the values predict the athletes' negotiation prices. Several recent studies also use Telemarkt to obtain the football players' market value (Poza, 2020; Romann et al., 2021; Buzzacchi et al., 2021).

It is important to note that the platform indicates the market values of football players in the different years covered by the study so each observation corresponds to an assessment of the respective period. As the tool estimates in Euros (€), they were converted to Real (BRL) according to the exchange rate on December 31 of the year of reference.

Thus, any observation with a positive non-recoverable amount ($Amo.Non.Rec_{it}$) or recoverability percentage ($\%.Rec_{it}$) less than 100%, indicates that the recoverable amount of the group of athletes ($Amo.Rec.Ath_{it}$) is lower than its book value ($Athletes_{it}$). This situation indicates an impairment not recognized

adequately since it is possible to conclude that at least one of the athletes of the group has an estimated recoverable value that is inferior to their accounting value.

However, the fact that this analysis was carried out on the group of athletes, there may be observations in which there are athletes with an indication of unrecognized impairment without a positive $Amo.Non.Rec_{it}$ or $\%.Rec_{it}$ less than 100%. This happens, for example, due to the presence in the group of an athlete with a recoverable amount so expressive that it compensates for the others that, if analyzed individually (as imposed by the accounting standard), would show that indication.

The study addressed this limitation by conducting a supplementary analysis at the individual level. Thus, when the observations considered data related to the book value of the individual athletes, this data was considered, collecting variables and calculating equations (5) and (6) for each athlete in that observation.

4 ANALYSIS OF RESULTS

4.1 Level of disclosure of the impairment test of athletes

Figure 1 shows each of the four possible outcomes for the variable levels of disclosure of the impairment test ($Lev.Dis.Tes.Rec_{it}$). In 62 observations – approximately 31% of the sample – none of the required items presented in Table 1 were observed, not even the indication that the recoverability test, in general, was carried out. This finding is similar to Silva and Miranda's (2018), who found that 30% of the Brazilian football clubs they studied considering the period from 2014 to 2016 did not disclose information regarding the application of the impairment test.

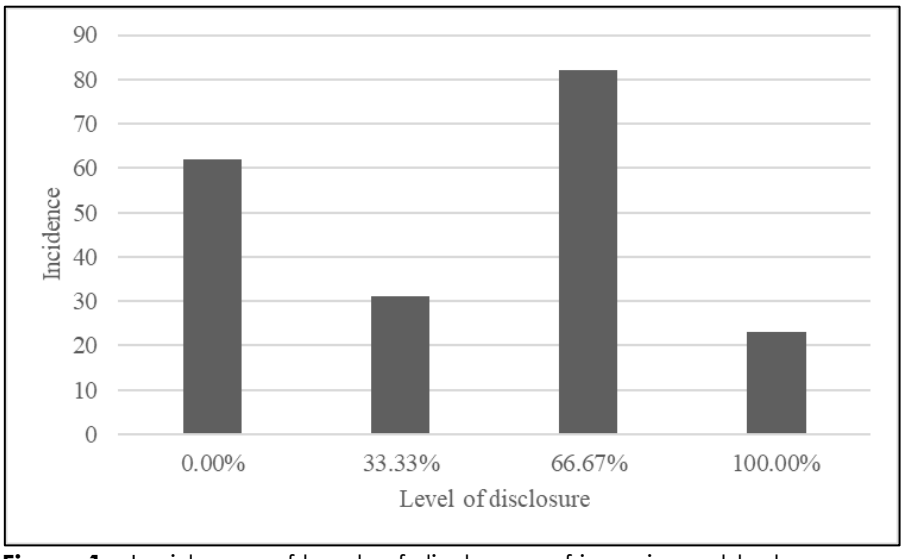

Figure 1 – Incidence of levels of disclosure of impairment test
Source: Elaborated by the authors

In another 31 observations, there is only a general indication of the application of the recoverability test, which implies a disclosure level of 33.33%. For

example, this is the case of Vasco da Gama in 2017, whose explanatory note 2.7 states:

> At the date of each financial statement, the club analyses whether there is evidence that the asset amount will not be recovered. The club estimates the asset's recoverable amount if such evidence is identified. The recoverable amount of an asset is the higher of (a) its fair value less costs that would be incurred to sell it and (b) its value in use. Value in use is equivalent to the discounted cash flows (before taxes) derived from the continuous use of the asset until the end of its useful life. When the residual book value of the asset exceeds its recoverable amount, the club recognizes impairment of this asset, and any reduction in the recoverable amount of the assets is recorded in the year-end income statement.

This example shows to a greater or lesser extent, the reproduction of the rules and concepts contained in CPC 01 – Reduction to the Recoverable Amount of Assets (CPC, 2010a).

Another 82 observations present more details about the application of the recoverability test when highlighting its application on athletes as intangible assets, reaching a level of disclosure of 66.66%. The explanatory note 3.4 to the 2015 financial statements of Atlético-MG is an example of this situation:

> [...] At the end of each year, the club evaluates the possibility of economic and financial recovery of the net book value of the cost of each athlete in this account. If there are indications of non-recoverable costs, the amount is written off in a specific account of the income statement. [...]

In this case, similar to the disclosure of the previous requirement, the information provided by the clubs is close to the normative provisions of the ITG 2003 – Professional Sports Entity (CFC, 2013).

As for the fulfillment of requirement 1.3, a 100% level of disclosure was observed in only 23 observations implying an approximate incidence of 11%. Only six clubs (Bahia, Botafogo, Criciúma, Flamengo, Palmeiras, and Santos) – out of 34 – met the level of detail of this requirement in at least one of the years studied. The clubs in this situation offer detailed information, as observed in explanatory note 11.2 of Botafogo's financial statements in 2016:

> The controlling entity must conduct the impairment test of the net value of the total cost attributed to each athlete recorded as an intangible asset annually. If such recovery, in whole or in part, does not occur, the expected loss is recognized in the income statement by the estimated non-recoverable amount. The subsidiary entity measures the athletes' market value through several quantitative, physical, and historical factors to support its calculation methodology, such as a) contract length; b) athlete age; c) position and versatility in the field; d) performance in matches; e) physical condition; f) growth potential, and g) curriculum.

Economic factors significantly compose the analysis of this estimate, especially when market conditions, marketing strategy, and the financial return expected by the controlling entity are evaluated. Based on the entity's administration estimates and the assessments described above, no indicators of loss of economic substance of the recoverable amount of its intangibles were observed.

Some of the published criteria coincide with those pointed out in the literature, such as contract length, athlete age, physical condition, and performance (Biancone & Solazzi, 2012; Andrade & Piva, 2020; Messias et al., 2020). Furthermore, in these few observations, useful details are provided regarding the clubs' application of the recoverability test, such as indications of impairment, the criteria for measuring market value, the smallest identifiable cash-generating unit, estimated cash flows, and discount rate.

In 2017, the football club Santos started to declare in explanatory note 2.3 of its financial statements that one of the criteria used to assess the market value of its athletes is the "consultation on specialized websites," similar to the methodology used in this research when estimating the recoverability of the athlete as an asset. In addition to providing methodological support to this study, this finding corroborates Peeters (2018) and Herm et al. (2014) regarding the player evaluation platform Transfermarkt, which offers amounts used as a reference in the negotiation of athletes and predicts their effective prices.

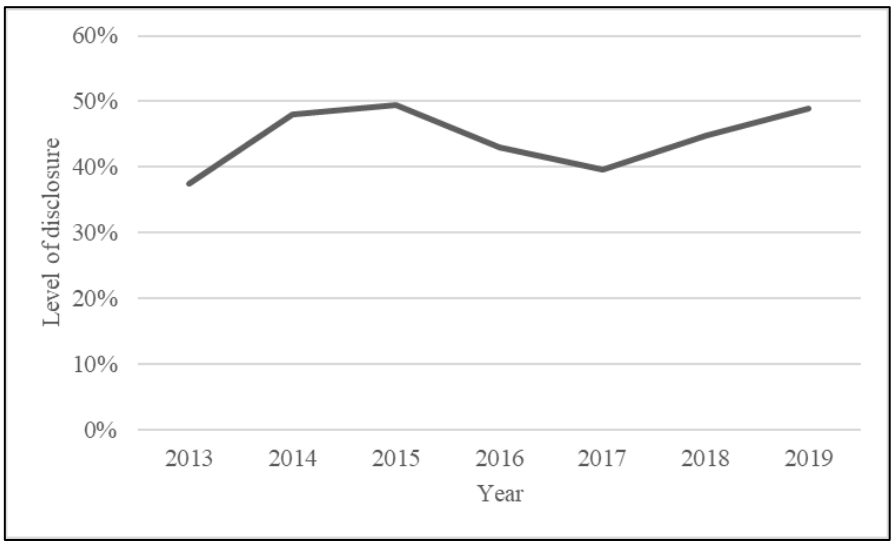

Figure 2 – Average level of disclosure of the application of the impairment test per year
Source: Elaborated by the authors

Overall, the average level of disclosure of the impairment test in the sample is 44.46%, which is unsatisfactory. However, this average shows subtle improvement compared to the 37.5% in 2013 and 48.89% in 2019 (Figure 2). This greater detail in recent years is in line with research by Silva and Miranda (2018), who pointed out in 2013 and 2014, a lower level of disclosure (approximately 62.5%) than those Andrade and Piva (2020) pointed out in 2014, 2015, and 2016 (65%, 70 %, and 75%, respectively).

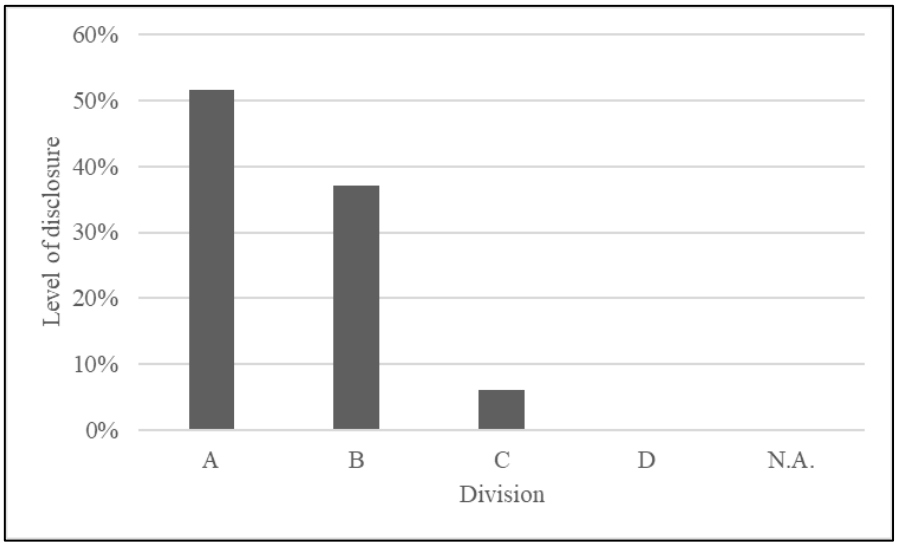

Figure 3 – Average level of disclosure of the application of the impairment test by divisions of the Brazilian national league system
Source: Elaborated by the authors

Furthermore, a difference was found between the observations of the different divisions of the Brazilian league system, with greater disclosure in the highest divisions. Figure 3 shows an expected result due to the presumed greater administrative structure and financial capacity of club members of the top divisions. This finding corroborates a study by Krauspenhar and Rover (2020a) to some extent by highlighting the highest level of compliance and the lowest number of reservations in the independent audit reports of the clubs in the higher divisions of the Brazilian national league system. The Brazilian literature complements these findings, but it is limited to clubs playing the best series.

4.2 Level of disclosure of recognition of impairment of athletes

First, it stands out the low incidence of recognition of impairment by the clubs in the sample – seven out of the 198 observations (3.54%). This incidence aligns with the 3.33% identified by Silva and Miranda (2018). Thus, the contrast between the Brazilian and international clubs identified in the literature (Gazzola & Amelio, 2016; Gazzola et al., 2020) is confirmed in this research, even though considering a broader and more recent period.

Table 2 presents these seven observations, the information they disclosed (see Table 1), and the level of disclosure of the recognition of impairment of athletes ($Lev.Dis.Rec.Imp_{it}$).

Table 2
Disclosure of recognition of impairment per observation

Club	Year	Requirements			*Lev.Dis.Rec.Imp* (%)
		2.1	2.2	2.3	
Coritiba	2015	OK	OK	OK	100.00
Coritiba	2016	OK	OK	*	66.67
Cruzeiro	2019	OK	OK	*	66.67

Internacional	2017	*	OK	*	33.33
Santos	2015	OK	OK	OK	100.00
São Paulo	2019	OK	OK	OK	100.00
Vitória	2018	OK	OK	*	66.67

Source: Elaborated by the authors

These observations showed an average level of disclosure of impairment recognition of 76.19%, which is sufficient. It should be noted that the low number of observations hinders generalizations. Thus, this research carried out separate analyses.

The observation of the football club Internacional in 2017 was the only one that disclosed only one requirement. In this case, only requirement 2.2 on the recognition of the loss in income statements was indicated. The requirement related to the indication of the loss due to non-recoverability was not evidenced. Although the table in the explanatory note number 13 of the 2017 financial statements clearly indicates the recognition of impairment of BRL 9,413,661.00, the text presented below indicates that there is no such loss.

At the other extreme are the observations of Coritiba in 2015, Santos in 2015, and São Paulo in 2019. In these situations, all requirements were disclosed, including 2.3, which requires the disclosure of information related to the recognition of impairment. In the case of Coritiba in 2015, there is information that the impairment refers to two athletes who made up the balance at the end of the year but were dismissed at the beginning of the following year. Santos, in 2015, indicated that the loss referred to an athlete based on qualitative and historical factors. In the impairment recognized by São Paulo in 2019, there is a detail that refers to three professional athletes whose contracts were still valid until the end of 2021 but whose recoverability of the amounts recorded was considered unlikely. The recognition of impairment in these cases corroborates the literature on trigger events (Andrade & Piva, 2020; Messias et al., 2020; Biancone & Solazzi, 2012), confirming that sports performance is a criterion considered in the application of the recoverability test.

The other three impairments recognized – Coritiba in 2016, Cruzeiro in 2019, and Vitória in 2018 – disclosed requirements 2.1 and 2.2. In addition to indicating the loss due to non-recoverability, it is also possible to verify their recognition in the income statements. However, they are limited to this as they do not provide further details regarding the motives or athletes involved.

4.3 Level of recognition of impairment of athletes

Table 3 shows the level of recognition of impairment of athletes (Lev.Loss.Imp$_{it}$) for the seven observations.

Table 3
Level of recognition of impairment of athletes per observation

Club	Year	*Loss.Imp* (BRL)	*Athletes.Imp* (BRL)	*Lev. Loss.Imp* (%)
Coritiba	2015	282,752	29,763,911	0.95
Coritiba	2016	1,630,682	34,887,927	4.67

Cruzeiro	2019	2,129,492	100,125,993	2.13
Internacional	2017	9,413,661	56,515,122	16.66
Santos	2015	9,958,000	90,472,000	11.01
São Paulo	2019	7,400,000	204,658,000	3.62
Vitória	2018	3,652,000	13,786,000	26.49

Source: Elaborated by the authors

The representativeness of the loss concerning athletes as an asset varies significantly among the observations, ranging from 0.95% for the club Coritiba in 2015 to 26.49% for Vitória in 2018. This variation is represented by the standard deviation of 9.38% compared to an average level of recognition of the respective observations of 9.36%.

The analysis of the observations separately demonstrated that the low level of recognition of impairment by Coritiba in 2015 was addressed in the clubs' explanatory notes. The notes indicated the case of two players who would be dismissed in early 2016, whose contracts were already close to the end and, therefore, largely amortized. On the other hand, the loss recognized by São Paulo, at a level of 3.62%, corresponds to the irrecoverability of three athletes whose contracts were still in force for more than a year and who, therefore, maintained a considerable book value to be amortized.

As for Vitória in 2018 and Cruzeiro in 2019, both were relegated from the top division (Série A), which is a result of the athletes' poor sports performance – one of the criteria adopted to apply the recovery test (Andrade & Piva, 2020; Messias et al., 2020; Biancone & Solazzi, 2012). In addition, they imply a decrease in the cash flow projected for the following year, given the expected decrease in different revenue lines, such as television, awards, advertising, and contributions from fans. In this sense, Vitória's level of loss recognition of 26.49% seems to be more appropriate to the seriousness of the situation than Cruzeiro's modest level of 2.13%, especially when considering the presumed greater frustration with the sporting performance presented by the club's valuable group of athletes.

Similarly, the impairment recognized by Internacional in 2017 took place in a year in which the club played in the second tier division with a competitive and valuable team, did not win the tournament but obtained the promotion to the top division. The frustration of the expectation of both obtaining the promotion and winning the tournament certainly contributed to that recognition.

Santos' non-recoverable loss in 2015 is also worth mentioning, as it has the highest absolute value and corresponds to only one athlete. From this case, it can be seen how the acquisition of a player that does not present the expected sports performance can significantly impact the account related to athletes, having implied an impairment recognition level of 11.01%.

Thus, it is noted that understanding the level of recognition of impairment of athletes requires adequate information about them, and it is possible to understand it better in the observations that presented a higher level of disclosure.

4.4 Athletes' estimated recoverability

When estimating the athletes' recoverability, six observations from the sample could not be considered due to the impossibility of estimating the recoverable amount of their athletes (Amo.Rec.Ath) due to the absence of the respective evaluations on the Transfermarkt platform. They were: Botafogo-SP in 2013, 2014, 2016, and 2017, Fortaleza in 2016, and Guarani in 2014. Therefore, the findings presented below concern the 192 remaining observations.

The preponderance of recoverable amounts of the teams was higher than the respective accounting values indicating the absence of indications of impairment not duly recognized. In fact, only six observations were not verified, which corresponds to 3.13% of the sample, a percentage close to the incidence of impairment recognition identified in the study by Silva and Miranda (2018).

This implies the non-recoverable amount of the group of athletes (Amo.Non.Rec$_{it}$) measured is predominantly negative, with an average of -BRL 110,864,155. In general, the recoverable amount of soccer players exceeds the book value by this amount. This variable differs substantially according to the division of the Brazilian national league system integrated by the observation. The smaller the non-recoverable amount, the higher the division to which the observation belongs, as shown in Figure 4. This scenario results from the inequality between Brazilian clubs, where clubs in the higher divisions have a more valuable group of athletes.

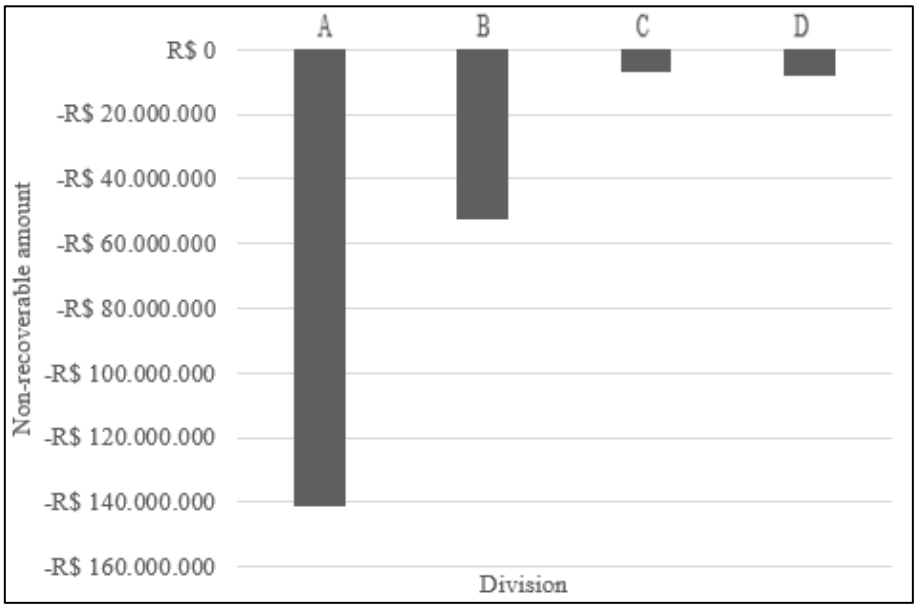

Figure 4 – Average non-recoverable amount of the group of athletes per series
Source: Elaborated by the authors

Coherently with the non-recoverable amount, the percentage of recoverability (%.Rec$_{it}$) measured for the observations is predominantly higher than 100%, reaching an average of 3367.90%, which corresponds to coverage of the recoverable amount concerning the recording of more than 33 times. Contrasting with the previous finding, the observations of the Serie B of the Brazilian league have the highest percentage of recoverability. This indicates that the clubs participating in this division achieve the best relationship between their athletes'

market values (represented by the recoverable amount) and the cost for acquisition/training (represented by the book value) (Figure 5).

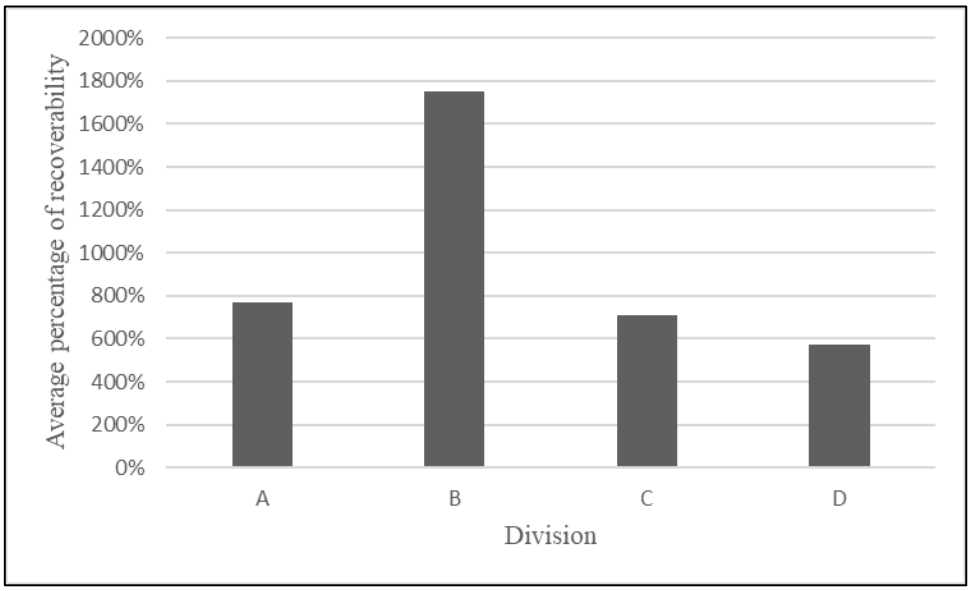

Figure 5 – Average percentage of recoverability of the group of athletes per series of the league
Source: Elaborated by the authors

The measurement of the non-recoverable amount and the percentage of recoverability indicates that the book value of the group of athletes is predominantly recoverable, providing a possible explanation for the low incidence of impairment recognition by Brazilian football clubs.

It is interesting to analyze the six observations (Table 4) that showed a positive non-recoverable amount and, consequently, a percentage of recoverability below 100% – indications of impairment not duly recognized.

Table 4
Observations with indications of impairment not recognized in the group of athletes

Club	Year	Division	$Athletes$ (BRL)	$Amo.Rec.Ath$ (BRL)	$Amo.Non.Rec$ (BRL)	$\%.Rec$ (%)
Avaí	2013	B	2,673,133	2,099,500	573,633	78.54
Guarani	2013	C	915,000	484,500	430,500	52.95
Vila Nova	2013	C	3,531,942	2,745,500	786,442	77.73
Ponte Preta	2014	B	79,030,126	56,621,900	22,408,226	71.65
Vasco da Gama	2014	B	61,237,842	52,487,500	8,750,342	85.71
Ponte Preta	2018	B	76,763,700	60,073,200	16,690,500	78.26

Source: Elaborated by the authors

Initially, it is noteworthy that five observations refer to the years 2013 and 2014, which can be attributed to the recent validity of the ITG 2003 (CFC, 2013). There is no observation of clubs participating in the top division due to the more significant administrative structure they presumably have.

When analyzing each observation in greater depth, frustration in sports performance is perceived as a relevant factor. This is the case of Avaí in 2013, which was in the second consecutive year of participation in Série B. The club did not manage to pass to the second phase of the competition and did not obtain the desired promotion to the top division. The same frustration happened to Vasco in 2014. Vasco is a traditional Brazilian club, and being relegated to play the second-tier division means already considerable frustration, which was increased since the club only reached third place in the Série B competition. The findings are in line with the study by Messias et al. (2020), according to which athletes' sports performance is a trigger event of recognition of impairment.

The case of Ponte Preta deserves special attention, as this club disclosed in its explanatory notes that it adopts a measurement criterion based on the market assessment of its athletes conducted by its managers, contrary to the method based on the historical cost established by the ITG 2003 (R1) (CFC, 2017). The adoption of this method was problematic since, for two years, it showed signs of impairment not duly recognized, not having been sensitive to the effective variation in the market value of its group of athletes. This result is part of Morrow's (1997) and Amir and Livne's (2005) debate regarding the best method of measuring the asset related to athletes, favoring the historical cost.

In addition, none of these observations recognized impairment, which could have altered the situation verified in the measures of the non-recoverable amount and percentage of recoverability since it would reduce the book value of the group of athletes. In fact, none of these observations even indicated the performance of the impairment test in their explanatory notes, which explains the situation verified but does not justify it since it is an imposition of the accounting standard to apply the test.

Another normative imposition concerns the need to apply the impairment test to "each athlete" (CFC, 2017). Table 5 presents the observations that have information available about the individual athletes, indicating the number of athletes analyzed and showing signs of impairment not duly recognized (positive non-recoverable amount and percentage of recoverability lower than 100%), and the descriptive statistics of the percentage of recoverability calculated for the athletes of each observation.

Table 5
Number of athletes, athletes with an indication of impairment, and descriptive statistics of the percentage of recoverability of observations with data regarding athletes separately

Club	Year	Division	Number of Athletes	Number of Athletes with Impairment	*%.Rec.Ath* (%)		
					Min.	Max.	Average
Atlético-GO	2017	A	3	0	633.28	34138.52	701.98
Atlético-GO	2018	B	5	0	910.94	3475.81	2421.82
Atlético-GO	2019	B	1	0	7087.65	7087.65	7087.65
Corinthians	2013	A	15	1	57.73	571.07	185.47
Corinthians	2014	A	14	1	92.29	599.42	200.45
Corinthians	2015	A	17	0	164.98	15824.47	1041.67
Corinthians	2016	A	17	4	42.54	3518.18	167.35
Corinthians	2017	A	23	1	94.64	6878.71	714.03

Corinthians	2018	A	24	3	30.27	5336.34	663.73
Corinthians	2019	A	27	6	19.61	17928.76	298.50
Grêmio	2015	A	23	2	72.77	42500	547.68
Santos	2014	A	14	3	71.30	16150	707.15
Santos	2015	A	19	0	195.81	35416.67	2098.77
Santos	2016	A	21	3	9.73	129000	694.48
Santos	2017	A	23	1	69.39	34224.14	866.81
Santos	2018	A	25	2	64.53	70105.26	923.08
Santos	2019	A	30	4	20.13	125833.33	801.27
Vitória	2015	B	16	0	143.35	27180	1359
Total	**NA**	**NA**	**317**	**31**	**9.73**	**129000**	**620.55**

Source: Elaborated by the authors

Of the 317 athletes, 31 had a recoverability percentage lower than 100%, an estimated recoverable amount lower than the respective book value. There is an incidence of athletes with signs of unrecognized impairment of 9.78% higher than that found in the analysis of the group of athletes in the observations.

What stands out most is the circumstance that 12 of the 18 clubs analyzed at this level (incidence of 66.67%) had at least one athlete with a percentage of recoverability lower than 100%, and none of them recognized impairment. Considering that the Brazilian accounting standard determines the application of the impairment test on "each athlete" (CFC, 2017), this incidence should have been verified in practice, which is not the case (Silva & Miranda, 2018). However, it is similar to that examined in European football clubs (Gazzola & Amelio, 2016; Gazzola et al., 2020). When analyzing the explanatory notes of the financial statements of these observations, it appears that, except for Atlético-GO in 2017, all disclosed the application of the impairment test on the intangible asset. However, they do not indicate that this test was applied to the athletes individually.

It should be noted that the average percentage of recoverability of individual athletes is 620.55%, indicating that their recoverable amount substantially exceeds the book value. This finding explains the circumstance that the analysis of the group identified few observations with indications of non-recognized impairment since the high percentage of recoverability of an individual athlete often compensates that of other devalued athletes in the group. This occurred with the 12 observations that showed at least one athlete with a percentage of recoverability lower than 100%, none of them showing an indication of impairment not recognized in the analysis of the groups.

Thus, the apparent contradiction between the findings obtained when analyzing the group and the individual athletes points out that Brazilian football clubs do not meet the ITG 2003 (R1) when conducting the impairment test, applying it only to the group and not to individual athletes as provided in the regulation (CFC, 2017). This finding also explains the discrepancy between studies of the Brazilian (Silva & Miranda, 2018) and European (Gazzola & Amelio, 2016; Gazzola et al., 2020) clubs regarding the recognition of impairment of athletes, considering that the low incidence verified in Brazil is due to the non-observance of the standards.

Despite this finding, the subject is not the object of attention in audit reports of the financial statements of Brazilian football clubs and is not identified as a common reason for reservation or emphasis (Krauspenhar & Rover, 2020a) except for Vitória (in 2016 and 2017) and Flamengo (in 2019 and 2020) (Lima & Sampaio, 2017; Lima, 2018; Moreira, 2020; Moraes, 2021).

5 FINAL CONSIDERATIONS

The research analyzed the disclosure, recognition, and measurement of the recoverability of athletes from Brazilian football clubs.

There was insufficient disclosure regarding the application of of the impairment test but sufficient for its recognition, despite the low number of observations in this case.

Considering this limitation, the analysis of the level of recognition of impairment offered thought-provoking conclusions regarding the reasons that give rise to such loss and the importance of its disclosure.

Finally, the estimation of the athletes' recoverability presented contrasting results that stimulated the debate. It was observed that the book value of the group of athletes is predominantly recoverable, but the incidence of individual athletes with signs of non-recognized impairment is high. This contrast poses the question presented in the title of this article: Is the impairment test carried out by Brazilian football clubs a farse?

The impairment test does not provide a definite answer but subsidizes a debate beyond disclosure and the accounting standard. If the test strictly follows the ITG 2003 (R1), the results of the isolated analysis clearly point to the inadequacy of the impairment test applied by Brazilian football clubs since the standard determines that the test has to be applied to "each athlete" (CFC, 2017). On the other hand, if one sticks to the primacy of essence over form – a corollary of reliable representation (CPC, 2019) – the findings of the recoverability estimate at the group level indicate that the low recognition of impairment of Brazilian football clubs is fully justified.

Therefore, the impairment test on Brazilian football clubs contradicts a current standard that many of them claim to follow. The question that remains, however, is whether they are wrong insofar as they are guided by a fundamental principle of accounting.

The findings reach the research objective of contributing to the evolution of the standards by offering subsidies and giving rise to this debate. In a segment where the professionalization of management is so recent, such a discussion is welcome to reinforce the importance of observing the standards or, otherwise, changing it.

At the same time, this study contributes to the literature by extending the research by Andrade and Piva (2020) and Silva and Miranda (2018) on the impairment of athletes in Brazilian football clubs by updating and adding data. Also, this research emphasizes the issue of disclosure, adding the analysis of the representativeness of that loss and the estimated recoverability of the athletes as assets. It is important to note that this estimate, based on an innovative methodology and from a perspective that has not yet been worked on, explains

the difference found concerning the recognition of impairment by Brazilian (Silva & Miranda, 2018) and European (Gazzola & Amelio, 2016; Gazzola et al., 2020) football clubs.

In addition, this research circumstantially contributes to the literature on trigger events of impairment of athletes and corroborates previous studies (Andrade & Piva, 2020; Messias et al., 2020; Biancone & Solazzi, 2012). Finally, it contributes to the issue of the measurement method of athletes based on the specific situation of the football club Ponte Preta, establishing a dialogue with the research by Morrow (1997) and Amir and Livne (2005).

The research limitations are related to the method of measuring the recoverable amount of athletes, the low number of observations in which there was recognition of impairment and with information about athletes separately, and the very credibility of the information analyzed that was not subject to audits.

Future studies can address this limitation by using different methods to measure the recoverable amount. In addition, research that further studies the impacts of this recoverable amount on the equity and results of clubs can contribute to the debate regarding the impairment test and the measurement of athletes.

REFERENCES

Amir, E., & Livne, G. (2005). Accounting, valuation and duration of football player contracts. *Journal of Business Finance and Accounting, 32*(3–4), 549–586. https://doi.org/10.1111/j.0306-686X.2005.00604.x

Andrade, D. L. I. J., & Piva, T. A. (2020). Evidenciação do Teste de Impairment de Direitos Contratuais de Atletas em Clubes do Futebol Brasileiro. *Revista de Administração e Contabilidade Da Faculdade Estácio Do Pará – Belém, 7*(13), 106–123.

Assis, R. B. de, & Nakamura, W. T. (2019). O intangível nos clubes brasileiros: uma análise dos gastos com jogadores nas demonstrações contábeis. *Revista de Estudios Brasileños, 6*(12), 119–133. https://doi.org/10.14201/reb2019612119133

Baroncelli, A., & Lago, U. (2006). Italian Football. *Journal of Sports Economics, 7*(1), 13–28. https://doi.org/10.1177/1527002505282863

Bengtsson, M., & Wallström, J. (2014). *Accounting and disclosure of football player registrations:* Do they present a true and fair view of the financial statements? A study of Top European Football Clubs. Dissertação (Mestrado em Contabilidade), Jönköping Internation Business School of Jönköping University, Jönköping.

Biancone, P. Pietro, & Solazzi, A. (2012). Financial communication in professional football clubs. *Economia Aziendale Online, 3*(1), 153–174. https://doi.org/10.4485/ea2038-5498.003.0012

Brummet, R. L., Flamholtz, E. G., & Pyle, W. C. (1968). Human Resource measurement – A challenge for accountants. *The Accounting Review, 43*(2), 217-224.

Brymann, A. (2012). *Social Research Methods* (4th ed.). New York: Oxford University Press.

Comitê de Pronunciamentos Contábeis – CPC. (2010). *Pronunciamento Técnico CPC 01 (R1)* – Redução ao valor recuperável de ativos. Recuperado em 09 setembro de 2021 de http://www.cpc.org.br/CPC/Documentos-Emitidos/Pronunciamentos/Pronunciamento?Id=2.

Buzzacchi, L., Caviggioli, F., Milone, F. L., & Scotti, D. (2021). Impact and Efficiency Ranking of Football Managers in the Italian Serie A: Sport and Financial Performance. *Journal of Sports Economics, 20*(10), 1-33. https://doi.org/10.1177/15270025211012053

Comitê de Pronunciamentos Contábeis – CPC. (2019). *Pronunciamento Técnico CPC 00 (R2)* – Estrutura Conceitual para Relatório Financeiro. Recuperado em 09 de maio de 2021 de http://static.cpc.aatb.com.br/Documentos/573_CPC00(R2).pdf.

Conselho Federal de Contabilidade – CFC. (2013). *Resolução CFC nº 1.429 de 25 de janeiro de 2013 – ITG 2003* – Entidade Desportiva Profissional. Recuperado em 09 de maio de 2021 de http://www.normaslegais.com.br/legislacao/resolucao-cfc-1429-2013.htm.

Conselho Federal de Contabilidade – CFC. (2017). *Resolução CFC nº 2017/ITG2003(R1) de 07 de dezembro de 2017 – ITG 2003 (R1)* – Altera a ITG 2003, que dispõe sobre entidade desportiva profissional. Recuperado em 09 de maio de 2021 de http://www1.cfc.org.br/sisweb/SRE/docs/ITG2003(R1).pdf.

Dimitropoulos, P. E., & Limperopoulos, V. (2014). Player contracts, athletic and financial performance of the Greek football clubs. *Global Business and Economics Review, 16*(2), 123–141. https://doi.org/10.1504/GBER.2014.060181

Ferri, L., Macchioni, R., Maffei, M., & Zampella, A. (2017). Financial Versus Sports Performance: The Missing Link. *International Journal of Business and Management, 12*(3), 36–48. https://doi.org/10.5539/ijbm.v12n3p36

Galvão, N. M. S., & Miranda, L. C. (2016). Participação e Evidenciação de Atletas nos Demonstrativos Contábeis de Clubes de Futebol Brasileiro. *Revista de Gestão, Finanças e Contabilidade,* 6(1), 112–131. https://doi.org/10.18028/2238-5320/rgfc.v6n1p112-131

Gazzola, P., & Amelio, S. (2016). Impairment test in the football team financial reports. *Procedia-Social and Behavioral Sciences, 220*, 105-114.

Gazzola, P., Amelio, S., Papagiannis, F., & Vatamanescu, E.-M. (2020). Financial Reporting in European Football Teams: A Disclosure Analysis of Player Registrations. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* 9(4), 182–206. https://doi.org/10.6007/ijarafms/v9-i4/6829

Gelbcke, R. E., Santos, A., Iudícibus, S., & Martins, E. (2018). *Manual de Contabilidade Societária:* aplicável a todas as sociedades de acordo com as normas internacionais e do CPC (3ª ed). São Paulo: Atlas.

Grafietti, C. (2020). *Análise Econômico-Financeira dos Clubes de Futebol Brasileiros* – Demonstrações Financeiras de 2019. Disponível em: https://static.poder360.com.br/2020/07/Analise-dos-Clubes-Brasileiros-de-Futebol-2020-ItauBBA.pdf.

Herm, S., Callsen-Bracker, H. M., & Kreis, H. (2014). When the crowd evaluates soccer players' market values: Accuracy and evaluation attributes of an online community. *Sport Management Review, 17*(4), 484–492. https://doi.org/10.1016/j.smr.2013.12.006

Krauspenhar, J. H., & Rover, S. (2020a). Análise dos Aspectos Formais e de Conteúdo do Relatório de Auditoria Independente dos Clubes de Futebol Brasileiros. In *3º UFSC International Accounting Congress* (pp. 1-17). Recuperado em 19 de novembro de 2020 de http://dvl.ccn.ufsc.br/10congresso/anais/10CCF/20200715153947_id.pdf.

Krauspenhar, J. H., & Rover, S. (2020b). Relação Entre o Desempenho Esportivo dos Clubes de Futebol Brasileiros e seu Ativo Intangível Consistente em Atletas. In *XX USP International Conference in Accounting* (pp. 1-20). Recuperado em 19 de novembro de 2020 de https://congressousp.fipecafi.org/anais/20UspInternational/ArtigosDownload/2242.pdf.

Leoncini, M. P., & Silva, M. T. da. (2005). Entendendo o futebol como um negócio: um estudo exploratório. *Gestão & Produção, 12*(1), 11–23. https://doi.org/10.1590/s0104-530x2005000100003

Lev, B., Gu, F. (2016). *The End of Accounting and the Path Forward for Investors and Managers*. (1ª ed.). New Jersey: Wiley.

Lima, A. S., & Sampaio, M. S.. (2017). *Relatório dos Auditores Independentes sobre as Demonstrações Financeiras do Exercício Findo em 2016 do E.C. Vitória*. Recuperado em 08 de maio de 2021 de http://www.ecvitoria.com.br/wp-content/uploads/2016/10/1696107506_ecb3b8aa23680033334341bef11c1f4a.pdf.

Lima, A. S. (2018). *Relatório dos Auditores Independentes sobre as Demonstrações Financeiras do Exercício Findo em 2017 do E.C. Vitória*. Recuperado em 08 de maio de 2021 de http://www.ecvitoria.com.br/wp-

content/uploads/2018/04/1987812479_4f9810ab71c32d30f4e2442f589272ce.pdf.

Maglio, R., & Rey, A. (2017). The impairment test for football players: the missing link between sports and financial performance? *Palgrave Communications, 3*(1), 17055. https://doi.org/10.1057/palcomms.2017.55

Mancin, M. (2009). *Il bilancio delle società sportive professionistiche*. Normativa civilistica, principi contabili nazionali e internazionali (IAS/IFRS). Padova: CEDAM.

Messias, D., Gallina, A. S., Ferreira, J. C., & Zanchet, A. (2020). Impairment Test em Jogadores de Futebol: análise dos trigger events que justificam a realização do teste de recuperabilidade em atletas profissionais. *Revista de Administração, Contabilidade e Economia Da Fundace, 11*(1), 80–94. https://doi.org/10.13059/racef.v11i1.659

Moraes, W. J. O. (2021). *Relatório dos Auditores Independentes sobre as Demonstrações Financeiras do Exercício Findo em 2020 do C.R. Flamengo*. Recuperado em 08 de maio de 2021 de https://www.flamengo.com.br/transparencia/demonstracoes-financeiras.

Moreira, M. (2020). *Relatório dos Auditores Independentes sobre as Demonstrações Financeiras do Exercício Findo em 2019 do C.R. Flamengo*. Recuperado em 08 de maio de 2021 de https://www.flamengo.com.br/transparencia/parecer-dos-auditores.

Morrow, S. (1997). Accounting for Football Players. Financial and Accounting Implications of 'Royal Club Liégois and Others V Bosnian' for Football in the United Kingdom. *Journal of Human Resource Costing & Accounting, 2*(1), 55–71. https://doi.org/10.1108/eb029035

Mósca, H., Silva, J., & Bastos, S. (2009). Fatores Institucionais e Organizacionais que Afetam a Gestão Profissional de Departamentos de Futebol dos Clubes: O Caso dos Clubes de Futebol no Brasil. *Gestão & Planejamento - G&P,* 10(1), 53–71.

Pavlovic, V., Milacic, S., & Ljumovic, I. (2014). Controversies about the Accounting Treatment of Transfer Fee in the Football Industry. Management - *Journal for Theory and Practice of Management, 19*(70), 17–24. https://doi.org/10.7595/management.fon.2014.0001

Peeters, T. (2018). Testing the Wisdom of Crowds in the field: Transfermarkt valuations and international soccer results. *International Journal of Forecasting,* 34(1), 17–29. https://doi.org/10.1016/j.ijforecast.2017.08.002

Poza, C. (2020). A Conceptual Model to Measure Football Player's Market Value. A Proposal by means of an Analytic Hierarchy Process. RICYDE. *Revista Internacional de Ciencias Del Deporte, 16*(59), 24–42. https://doi.org/10.5232/ricyde2020.05903

Risaliti, G., Verona, R. (2013). Player's registration rights in the financial statement of the leading Italian clubs. *Accounting, Auditing & Accountability Journal, 26*(1), 16-47. https://doi.org/10.1108/09513571311285603

Romann, M., Javet, M., Cobley, S., & Born, D. P. (2021). How relative age effects associate with football players' market values: Indicators of losing talent and wasting money. *Sports, 9*(7). https://doi.org/10.3390/sports9070099

Sampaio, C. P., Souto, E. de L. C. de, & Pedroso, R. G. (2015). Ativo Intangível: um levantamento nos principais clubes de futebol brasileiros. *15o Congresso Nacional de Iniciação Científica*.

Silva, C. M., & Miranda, E. L. (2018). Teste de Recuperabilidade Aplicado aos Ativos Atletas no Futebol. *SINERGIA - Revista Do Instituto de Ciências Econômicas, Administrativas e Contábeis, 22*(2), 49–60. https://doi.org/10.17648/sinergia-2236-7608-v22n2-7823

Souza, M., Borba, J., & Alberton, L. (2010). Divulgação da perda por impairment em empresas auditadas pelas Big Four. *Pensar Contábil, 11*(46), 12–19.

Surowiecki, J. (2005). *The Wisdom of Crowds*. Palatine: Anchor Books.

Szymanski, S. (1998). Why is Manchester United So Successful? *Business Strategy Review, 9*(4), 47–54. https://doi.org/10.1111/1467-8616.00082

Zandonai, F., & Borba, J. A. (2009). O que dizem os achados das Pesquisas Empíricas sobre o teste de impairment: uma análise dos Journals em língua inglesa. *Contabilidade, Gestão e Governança, 12*(1), 24–34.