

Comparability of Accounting Choices in Evaluation of Intangible Assets of Listed Brazilian Companies

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Abstract

The aim of this study is to verify whether accounting choices within the CPC 04 Technical Pronouncement (Brazilian rule akin to the IAS 38 Intangible Assets from IASB) have allowed to compare the financial statements of Brazilian traded companies. The studied period was from 2010 to 2012 and we observed accounting choices related to recognition, assessment and impairment. Comparability was measured by the Herfindhal Index (H Index). The results showed that the absence or reduction of accounting choices could reduce the differences in the financial statements and, accordingly, increase their comparability.

Keywords: Accounting choices. Comparability. Intangible Assets.

1 Introduction

Several countries, like Brazil, Canada, Egypt, Spain, Greece and the UK have adopted the International Financial Reporting Standards (IFRS) (Deloitte, 2012). These rules come from the International Accounting Standards Board (IASB) as a form of convergence in accounting practices. After discussing the advantages and expectations concerning to IFRS adoption, Lima (2010, p. 11) points that there is a belief that “a common international language can bring great benefits to the development of economic and financial analyzes in companies of different countries and regions”. Among these benefits is the improvement in the quality, transparency and usefulness of accounting information to be disclosed and the reduction of differences between accounting rules, expected to result in a greater degree of comparability of financial reporting, which is the aim of IFRS (Chand & White, 2007; Cairns, Massoudi, Taplin & Tarca, 2010; Iudícibus, Martins, Gelbcke & Santos, 2010).

Concerning to Brazil, the adoption of the international rules came to meet this worldwide movement of convergence and, according to Oliveira and Lemes (2011) The Securities Commission approved the Instruction n. 457 (2007), which mandates the adoption of the IFRS to the Brazilian traded companies. The aim of adhering to international rules was to corroborate the world tendency to convergence and the access to the global capital market (Oliveira & Lemes, 2011).

It is in this scenario that we analyze accounting choices, which are alternative criteria for identifying, measuring and evidencing them according to international parameters. The choice of this or that method, this or that form of disclosure

may be influenced by the existence of externalities, agency costs and information asymmetry affecting comparability (Fields, Lys & Vincent, 2001; Paulo, 2007; Cairns *et al.*, 2010; Lorencini & Costa, 2012).

Given the sophistication of companies and markets, we observe that much of the value attributable to the entity comes from intangible plots present in their business and constitutes the primary means of differentiation between companies, because they are re non-monetary assets arising from the knowledge of the entity (Edvinsson, 2002; Milone, 2004; Colauto, Nascimento, Avelino & Bispo, 2009; Rolim, 2009).

In order to define the accounting treatment of these assets, there is the CPC 04 Technical Pronouncement as an accounting standard akin to the IAS 38 – Intangible Assets issued by the IASB, the Brazilian regulatory instruments. This Statement establishes the criteria for recognition, measurement and disclosures specific to that asset (CPC 04, item 01) and points as usual in IFRS accounting choices in some of its major stages of evaluation.

Since this has been an issue discussed in the literature and with differences, this study aims to answer the following question: which is the degree of comparability of accounting choices in Brazilian |traded companies, concerning to CPC 04? As a consequence, the goal of this search is to verify whether CPC 04 accounting choices have allowed the comparability of financial statements in listed companies in Brazil.

The study was applied to the entities belonging to sector of Oil and Gas and Electricity in Brazil, in the years 2010-2012 because those are the most representative sectors in intangible assets in Brazilian traded companies and we aim to measure the evolution in comparability degree from the moment the international standards have become mandatory in Brazil. In order to measure the comparability degree of accounting choices we used the Herfindhal Index (H Index), which, according to Taplin (2004), is intended to measure the probability of selecting, at random, two companies from the same country and these companies use the same accounting methods.

Given the increasing materiality of intangible values and the of international accounting standards to allow the comparability among financial statements, we consider as relevant to develop this study, in order to verify whether, in practice, the accounting choices in CPC 04 have allowed the comparability of financial statements

We expect that this search may contribute for accounting practice, by demonstrating to the information users if they are comparable between periods and between entities, allowing adequate economic and financial analysis of the organization, and thus assist the process of decision making. To the framers of accounting standards the results can subside future standards in order to make the financial statements more comparable or to understand that these accounting standards are sufficient and appropriate.

This paper is divided into four sections besides this introduction. The second section presents the theoretical framework, which is a brief review of accounting choices, intangible assets, comparability and previous studies. The third one presents the methodological proceedings adopted in this search and the fourth section describes and analyzes the results. Finally, the conclusions on the evidences found in the study.

2 Theoretical Framework

In this section we describe the theoretical framework of this search, specifically the general aspects in the Theory of accounting choices, intangible assets, comparability and previous study on this theme.

2.1 Accounting choices

According to Sterzeck (2011), significant changes have have occurred in the regulatory environment and in international accounting standards. These changes were reflected not only in the form of preparing the financial statements, but especially reinforce a modification in accountant attitude, for exercising greater judgment on the transactions to be accounted (Sterzeck, 2011).

In many cases, managers have options regarding the recognition, measurement and disclosure of the economic events of the entity and this results in a consequent judgment on elaborating financial statements (Murcia & Werges, 2011). Although IFRS bring certain restrictions on the accounting treatment of financial information, the rules allow some degree of discretion concerning the choice of accounting procedures (Cosenza & Grateron, 2003; Murcia & Werges, 2011). Accounting choices regard to any decision which aims to influence the results of accounting informations to a particular path (Fields *et al.*, 2001).

According to Murcia and Werges (2011), the accounting choices may happen in three phases of accounting treatment of financial and economic information: (a) In recognition: choose the way to recognize a specific economic event or not to recognize it (eg, to recognize or not an environmental liability); (b) in measurement: choose which accounting method to use (eg: using the straight-line method or the declining balance for the calculation of depreciation); and (c) in disseminating information: choose to evidence or not certain voluntary information (eg, projection of future profits).

The existence of multiple criteria in international accounting standards allows administrators to choose valid alternatives in order to present information the way you want (Paulo, 2007; Murcia & Werges, 2011). The problem is that the accounting choices are influenced by economic incentives for the managers, which would still be a form of management results (Murcia & Werges, 2011), which would be in conflict to the main goal of the IFRS, that is to ensure the comparability of financial statements, according to CPC 26 item 1.

Murcia and Werges (2011, p. 31) point that choosing an accounting method and not other can be due to several economic motivations: “increase profits in order to augment remuneration; increase profits to accomplish the market analysts estimations; decrease profits in order to pay less taxes; decrease profits in order to avoid the attention of the media and the syndicates.

According to Fields *et al.* (2001) not all the accounting choices involve managing results, because it exceed the accounting choices. But when these choices are directed to any point and have a specific goal, in this case, the idea of accounting choice is consistent to managing results (Fields *et al.*, 2001).

2.2 Intangible assets

International accounting standards still represent a goal to IASB and the Financial Accounting Standards Board (FASB), even after ten years of Norwalk Agreement (commitment to eliminate differences between standards issued by these institutions), because the financial crisis, among other factors, contributed as a condition unfavorable to the development of the convergence process (Dragu, 2010). According to this author, although these negative elements, these agencies continue to collaborate in achieving a single set of financial accounting standards, due to the implications brought by globalization.

Market and companies sophistication gave arise to a phenomenon in which much of the value attributable to the entity comes from intangible plots present in your business (Milone, 2004; Rolim, 2009). Schmidt and Santos (2003) point that we can gradually perceive an increasing materiality of the amounts of the intangible asset mix of entities, caused by the growing interdependence between financial markets and countries.

Perez and Famá (2006) highlight that organizations are seeking new ways to generate value, looking for the best interaction between tangible and intangible assets, as it is this interaction that defines the actual value of the company. It became clear the importance of intangible assets in capitalist system, specifically with the advance of information technology and telecommunication, when it was noted the development of scientific studies of the 1980th decade and the emergence of a new scenario that imposed changes to current authorities so that they could keep their businesses (Schmidt & Santos, 2003; Avelino, Pinheiro & Lamounier, 2012).

The increasing materiality of intangible assets brings problems related to how do the agencies treat these assets. So that, it becomes relevant to verify which is the treatment given by the international standards “to that item so controversial that accounting is closely studying more than a century without having gotten even a single definition. This indicating then the existence of a real problem to be solved and also the vast field to be explored (Schmidt & Santos, 2003, p.1).

For Dragu (2010) intangible asset is a non-monetary one, without physical substance and identifiable, besides controlled and generating future economic benefits (CPC 04, item 10). According to Rolim (2009), software, copyrights, customer lists, franchises, customer relationships and marketing right are common examples of intangible assets.

At the beginning, an intangible asset has to be identified by the acquisition cost of internal generation (Rolim, 2009). Concerning to measurement after identification, CPC 04 determines that the agency can elect to recognize the intangible asset at cost or at revaluation method, if the option for the second method is not restricted by law. In Brazil, the evaluation is not allowed, due to the prohibition imposed by Law n. 11.638 (2007) (Rolim, 2009; Avelino *et al.*, 2012).

In cost model, the intangible asset should be carried at its cost less any accumulated amortization and impairment losses accumulated impairment (CPC 04, item 74). And in the revaluation model an intangible is carried at revalued amount, i.e., its fair value at the date of revaluation less any subsequent accumulated amortization and accumulated impairment (Rolim, 2009).

2.3 Comparability and previous studies

The CPC 26 – Presentation of the accounting demonstrations “aims to determine the basis for presenting accounting statements in order to ensure the comparability both between the statements of previous periods and with the financial statements of other entities” (Lemes & Carvalho, 2010, p. 7). To ensure this comparability, it came the convergence of international accounting standards, which “is a process that seeks to preserve the particularities inherent in each country, but allows reconciling accounting systems with other countries in order to improve the exchange of information to be interpreted and understood” (Niyama, 2010, p. 37).

In this sense came studies (Stergios & Laskaridou, 2008; Cairns *et al.*; 2010, Dragu, 2010; Tudor & Dragu, 2010; Haller & Wehrfritz, 2013) to verify, in accounting practice, whether international standards are achieved to ensure comparability, as proposed by the IASB. Cairns *et al.* (2010) investigated the use of fair value in 228 British and Australian companies and they stated that there was an increase in using measurement by fair value of financial instruments and share-based payment when this use was mandatory. According to these authors, when fair value measurement was facultative comparability was not found. This suggests a conservative approach and/or lack of incentives to use fair value measurement to most of the analyzed companies.

Dragu (2010) and Tudor and Dragu (2010) found a high level of comparability for the evaluation of intangible assets, when analyzing respectively 50 companies listed in London Stock Exchange and 51 traded companies listed in five European countries. Many accounting practices examined by them had, if not the maximum matching, a trend visible

harmonization. Stergios and Laskaridou (2008) found similar results when analyzing 270 Greek companies listed in Athens Stock Exchange before and after the mandatory adoption of international accounting standards. They stated that comparability comparability evolved positively and significantly.

On the other hand, Haller and Wehrfritz (2013) found that IFRS not necessarily lead to harmonic financial statements when these standards provide flexibility in its application. They analyzed 183 traded companies in Germany and 192 in the UK in 2005 and, in 2009, 213 German and 224 British ones and they verified that accounting statements are different in both countries. This indicates that comparability may be negatively affected by the specific influence of each country. According to these authors, abolishing or reducing the explicit ac contained in IFRS policy choice could be an option to reduce the differences and promote comparability.

When we want to measure the degree of comparability between two accounting practices of the agencies, we have to analyze whether they have adopted the same accounting methods to each element or group in the Balance Sheet. We can measure this comparability degree by using Index Calculation such as H, I, C or T Indexes. (Taplin, 2004).

H Index is used when we want to measure comparability between accounting information of different agencies in the same country (Van der Tas, 1988). C Index is used when a company uses more than one accounting method and the I Index is applied when we intend to compare companies from different countries but without bothering to give greater weight to that country whose sample of companies analyzed was higher (Taplin, 2004). The T Index seeks to bring in a single index the specifics contained in the previous three, being, however, the generalization of the indices H, I and C (Taplin, 2010).

Nevertheless it is important to highlight that although T index is more complete to measure comparability of accounting statements of trades in the same country (T National Index) the methodology is the same one used to measure comparability by H Index, the most simple one (Fabiano, 2012).

3 Methodology

The search sample is composed by 49 Brazilian traded companies in the field of Oil and Gas and Electricity in 2010-2012 (Table 1). The choice of these companies is given because it is the sector with the largest representation of intangible assets between public companies in Brazil, making a total of intangible R\$ 170,395,532 in thousands of reais, representing 31.93% of total intangible all capital market companies in Brazil, in 2012.

Table 1: Search sample – Companies in Oil and Gas and Electricity sector, in 2012.

Entity description	SECTORS	
	Oil and Gas	Electricity
Amount of entities	11	60
(-) Excluded entities: They have not intangible assets in their accounting statements in the analyzed period or they were not traded companies in any of the three analyzed periods..	(05)	(17)
(=) Number of analyzed entities	06	43

The choice of exercises for analysis from 2010 to 2012 was due to the fact that the mandatory adoption of IFRS for listed companies in Brazil took place from the exercise ended in 2010 (CVM Instruction n. 457 (2007)). In order to evaluate the evolution of comparability among the statements, we considered relevant to take in account the last exercises from this date. We chose the entities and intangible values using the Economatic software and we seek accounting statements and notes in the site Securities Commission (CVM).

After selecting the companies in the sample and gathering their accounting statements and notes, it is necessary to identify the accounting choices or methods possible to the entities according to CPC 04. Table 2 presents the allowed ones, which were analyzed in each main evaluation phase of the intangible assets.

Table 2: Evaluation phases and accounting choices to be analyzed

ETAPA	ESCOLHA CONTÁBIL
Recognizing	Is a specific intangible heritage element recognized in the entity's asset?
Evaluation	Initial Assessment: cost of acquisition or production cost? Further evaluation: cost method or fair value? Does the entity apply the impairment test?
Impairment	Does de entity amortize the recognized intangible assets? Amortization: line method of depreciation, declining balance depreciation, amortization or other method for producing?

The analysis was done in each of the three main phases of intangible assets: recognizing, evaluation and impairment, determining the number of the accounting treatments: the used, the not used and the not mentioned ones in the accounting policies in the reports. So that, it was calculated the relative frequency and the comparability index for each evaluation phase and for each element of the recognized intangible asset and afterwards, it was estimated the average among these indexes, in order to find the value of the comparability degree of the intangible asset of the analyzed entities.

In order to measure the comparability degree of the accounting choices we used H Index whose formula we found in the study of Van der Tas (1988, p. 159):

$$H = \sum_{i=1}^n pi^2 \quad (1)$$

Where H represents the Herfindahl Index; n is the number of alternatives of disposable accounting methods; pi is the relative frequency correlated to the i accounting method, which has a value varying from 1 to n (Taplin, 2003). Concerning to the Index analysis, the scale varies from 0 to 1, where 1 is the maximum value and leads to conclude a maximum comparability degree for this element (all the companies use the method) and zero assumes the minimum value, i.e., there is no comparability (Van der Tas, 1988; Taplin, 2004; Tudor & Dragu, 2010).

In order to interpret the comparability degree of accounting choices we used Table 3 as a standard based on the studies of Tudor and Dragu (2010).

Table 3: Interpretation of H Index

H Index	Comparability degree
between 0.700 and 1,000	high
between 0.500 and 0,699	medium
between 0.000 and 0,499	low

This search methodology was also based on the studies of Dragu (2010) and Tudor and Dragu (2010) who, as in this paper, intended to measure de comparability degree of accounting practices of intangible assets.

4 Results

In data analysis we presented the accounting choices referent to recognizing, evaluation and impairment of each element in intangible asset. Concerning to recognizing, the analyzed companies identified the following elements of intangible asset: concession contract, goodwill, software and other intangibles (constituted by a contract with customers, a right of way and property seven elements called “other intangible assets” by the entities themselves in their financial statements)

Related to evaluation, the study was divided in two parts: the first one involves the initial evaluation of the intangible assets elements and the second one the further evaluation (measurement after recognizing). The third phase (impairment) was divided in three parts: using or not impairment test; using or not any amortization method and which was the amortization method chosen by the entities. Table 4 presents the accounting choices related to concession contracts.

Table 4: Evaluation of Concession Contract Intangible Asset.

ACCOUNTING CHOICE	Number of companies			Relative Frequency			H Index		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Recognizing	49	49	49	1.000	1.000	1.000			
a) Recognize	44	44	44	0.898	0.898	0.898	0.817	0.817	0.817
b) Not recognize	5	5	5	0.102	0.102	0.102			
Initial assessment	49	49	49	1.000	1.000	1.000			
a) Acquisition cost	30	29	29	0.612	0.592	0.592			
b) Production cost	0	0	0	0.000	0.000	0.000	0.467	0.454	0.454
c) Both	14	15	15	0.286	0.306	0.306			
d) Not mentioned	5	5	5	0.102	0.102	0.102			
Further evaluation	49	49	49	1.000	1.000	1.000			
a) Cost method	15	15	15	0.306	0.306	0.306	0.575	0.575	0.575
b) Fair value	0	0	0	0.000	0.000	0.000			
c) Not mentioned	34	34	34	0.694	0.694	0.694			
Impairment Test	49	49	49	1.000	1.000	1.000			
a) Used	43	43	43	0.878	0.878	0.878	0.785	0.785	0.785
b) Not used	0	0	0	0.000	0.000	0.000			
c) Not mentioned	6	6	6	0.122	0.122	0.122			
Amortization	49	49	49	1.000	1.000	1.000			
a) Used	43	43	43	0.878	0.878	0.878	0.781	0.781	0.781
b) Not used	1	1	1	0.020	0.020	0.020			
c) Not mentioned	5	5	5	0.102	0.102	0.102			
Amortização methods	49	49	49	1.000	1.000	1.000	0.368	0.368	0.383
a) Straight-line method	26	26	27	0.531	0.531	0.551			
b) Declining balance method	0	0	0	0.000	0.000	0.000			
c) Units of production method	2	2	2	0.041	0.041	0.041			
d) Other methods	11	11	11	0.224	0.224	0.224			
e) More than one method	1	1	1	0.020	0.020	0.020			

f) Not mentioned	9	9	8	0.184	0.184	0.163
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Concerning to concession contracts, most of the analyzed traded companies (89.8%) recognized them in the three analyzed periods, which reflects a high degree of comparability (0.8170 (Table 4). From the initial assessment we found that the entities are divided in recognizing them at cost or both (acquisition cost and cost of production), which resulted in a low level of comparability.

With respect to depreciation methods chosen by firms, these range from straight-line method itself (other methods), units of production method or more than one method (respectively, according to the degree of preference), which resulted in a low degree of comparability in the three periods analyzed (0.368, 0.368 and 0.383, respectively). This result means that if two entities were selected randomly in 2012, for example, there is 38.3% of chance they have adopted the same amortization accounting methods in concession contracts.

Among the entities that recognize concession contracts, only one did not mention the use of Impairment Test. All the other mentioned it. Concerning to amortization, only one company mentions that do not amortize the recognized concession contracts (Table 4).

Table 5 presents goodwill evaluation. Only eleven companies recognized it in 2010 and 2011 and twelve did it in 2012. For this element, H index was 0.652 in the two first years and 0.630 in 2012. This may be interpreted as a harmonization medium degree. The results of this search were different from those of Tudor and Dragu (2010). They analyzed 52 traded companies listed in five European countries and found a maximum comparability degree (H index equal to one), which demonstrates that all the entities recognized goodwill in their accounting statements.

Table 5: Evaluation of Goodwill intangible asset.

ACCOUNTING CHOICE	Number of companies			Relative Frequency			H Index		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Recognizing	49	49	49	1.000	1.000	1.000			
a) Recognize	11	11	12	0.224	0.224	0.245	0.652	0.652	0.630
b) Not recognize	38	38	37	0.776	0.776	0.755			
Initial assessment	49	49	49	1.000	1.000	1.000			
a) Acquisition cost	11	11	12	0.224	0.224	0.245			
b) Production cost	0	0	0	0.000	0.000	0.000	0.652	0.652	0.630
c) Both	0	0	0	0.000	0.000	0.000			
d) Not mentioned	38	38	37	0.776	0.776	0.755			
Further evaluation	49	49	49	1.000	1.000	1.000			
a) Cost method	0	0	0	0.000	0.000	0.000	1.000	1.000	1.000
b) Fair value	0	0	0	0.000	0.000	0.000			
c) Not mentioned	49	49	49	1.000	1.000	1.000			
Impairment Test	49	49	49	1.000	1.000	1.000			
a) Used	11	11	12	0.224	0.224	0.245	0.652	0.652	0.630
b) Not used	0	0	0	0.000	0.000	0.000			
c) Not mentioned	38	38	37	0.776	0.776	0.755			
Amortization	49	49	49	1.000	1.000	1.000	0.627	0.627	0.601
a) Used	6	6	7	0.122	0.122	0.143			
b) Not used	5	5	5	0.102	0.102	0.102			

c) Not mentioned	38	38	37	0.776	0.776	0.755			
Amortização methods	49	49	49	1.000	1.000	1.000			
a) Straight-line method	5	5	6	0.102	0.102	0.122			
b) Declining balance method	0	0	0	0.000	0.000	0.000			
c) Units of production method	0	0	0	0.000	0.000	0.000	0.747	0.747	0.717
d) Other methods	2	2	2	0.041	0.041	0.041			
e) More than one method	0	0	0	0.000	0.000	0.000			
f) Not mentioned	42	42	41	0.857	0.857	0.837			

All the entities which recognize goodwill evidenced that the initial assessment is done by acquisition cost method (because of the prohibition of recognizing the acquired goodwill). Table 5. The other companies did not evidence it, because they did not recognize nor evidenced it. This reflected on a medium degree of comparability for the three periods: 0.652, 0.652 e 0.630 respectively. Further evaluation has an H Index equal to one, which represents the maximum degree of comparability, by virtue of the entire entities dis not evidence the used method for measurement after recognizing the goodwill.

All the entities which recognized goodwill mentioned in notes that they used impairment test (Table 5). The other companies did not evidence it because they did not recognize it and this reflected in a medium comparability degree for the three periods. Concerning to amortization, the entities which recognized goodwill divide themselves in amortizing and not amortizing it. Those not mentioned, just because they did not recognize it. So, we have a medium comparability degree (rather than 0.627) for the three periods. When companies amortize goodwill, mostly opt for the straight-line method or, to a lesser extent, by another method itself, defined by the entity.

The results of this search conflicted to those found by Tudor and Dragu (2010). They stated that 96% of the entities they analyzed both amortize or do not mention to amortize the recognized goodwill. The two companies which evidenced to amortize were divided between the linear and the product unit method.

Table 6 presents the software evaluation. Concerning to recognizing, there is a medium but decreasing comparability degree in the three periods. Regarding the initial assessment, all entities that have recognized the software as intangible assets or assess the cost (preferably) or both (purchase and production).. H Index had maximum value of further evaluation (what means a maximum degree of comparability), because no company evidenced the used method to measure its assets after recognizing it.

Table 6: Evaluation of Software Intangible Asset

ACCOUNTING CHOICE	Number of companies			Relative Frequency			H Index		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Recognizing	49	49	49	1.000	1.000	1.000			
a) Recognize	14	16	17	0.286	0.327	0.347	0.592	0.56	0.547
b) Not recognize	35	33	32	0.714	0.673	0.653		0	
Initial assessment	49	49	49	1.000	1.000	1.000			
a) Acquisition cost	9	11	12	0.184	0.224	0.245	0.554	0.51	0.497
b) Production cost	0	0	0	0.000	0.000	0.000		4	
c) Both	5	5	5	0.102	0.102	0.102			
d) Not mentioned	35	33	32	0.714	0.673	0.653			
Further evaluation	49	49	49	1.000	1.000	1.000			
a) Cost method	0	0	0	0.000	0.000	0.000	1.000	1.00	1.000
b) Fair value	0	0	0	0.000	0.000	0.000		0	
c) Not mentioned	49	49	49	1.000	1.000	1.000			
Impairment Test	49	49	49	1.000	1.000	1.000			
a) Used	11	14	16	0.224	0.286	0.327	0.652	0.59	0.560
b) Not used	0	0	0	0.000	0.000	0.000		2	
c) Not mentioned	38	35	33	0.776	0.714	0.673			
Amortization	49	49	49	1.000	1.000	1.000			
a) Used	13	16	17	0.265	0.327	0.347	0.610	0.56	0.547
b) Not used	0	0	0	0.000	0.000	0.000		0	
c) Not mentioned	36	33	32	0.735	0.673	0.653			
Amortização methods	49	49	49	1.000	1.000	1.000			
a) Straight-line method	12	15	16	0.245	0.306	0.327			
b) Declining balance method	0	0	0	0.000	0.000	0.000			
c) Units of production method	0	0	0	0.000	0.000	0.000	0.630	0.57	0.560
d) Other methods	0	0	0	0.000	0.000	0.000		5	
e) More than one method	0	0	0	0.000	0.000	0.000			
f) Not mentioned	37	34	33	0.755	0.694	0.673			

Most of traded companies that recognized software as an intangible asset evidenced they use impairment test (78.57%, 87.50% e 94.11% respectively) (Table 6). When the companies evidenced the used amortization method they opted by linear amortization one.

Table 7 presents the evaluation of other intangible assets, which are represented by client's contract, a right of way and property seven elements called "other intangible assets" by the entities themselves in their financial statements. From this table we perceive that H index was high (0.700) in all analyzed evaluation phases and in all periods, which represents a high comparability index. One exception was further evaluation that in all periods had a maximum value H Index equal to one), because no entity evidenced which measurement method they used after recognizing in other to evaluate their intangible Assets.

Table 7: Evaluation of other intangible assets.

ACCOUNTING CHOICE	ACCOUNTING			Number of companies			Relative Frequency		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Recognizing	49	49	49	1,000	1,000	1,000			
a) Recognize	9	9	9	0,184	0,184	0,184	0,700	0,700	0,700
b) Not recognize	40	40	40	0,816	0,816	0,816			
Initial assessment	49	49	49	1,000	1,000	1,000			
a) Acquisition cost	9	9	9	0,184	0,184	0,184			
b) Production cost	0	0	0	0,000	0,000	0,000	0,700	0,700	0,700
c) Both	0	0	0	0,000	0,000	0,000			
d) Not mentioned	40	40	40	0,816	0,816	0,816			
Further evaluation	49	49	49	1,000	1,000	1,000			
a) Cost method	0	0	0	0,000	0,000	0,000	1,000	1,000	1,000
b) Fair value	0	0	0	0,000	0,000	0,000			
c) Not mentioned	49	49	49	1,000	1,000	1,000			
Impairment Test	49	49	49	1,000	1,000	1,000			
a) Used	9	9	9	0,184	0,184	0,184	0,700	0,700	0,700
b) Not used	0	0	0	0,000	0,000	0,000			
c) Not mentioned	40	40	40	0,816	0,816	0,816			
Amortization	49	49	49	1,000	1,000	1,000			
a) Used	9	9	9	0,184	0,184	0,184	0,700	0,700	0,700
b) Not used	0	0	0	0,000	0,000	0,000			
c) Not mentioned	40	40	40	0,816	0,816	0,816			
Amortização methods	49	49	49	1,000	1,000	1,000			
a) Straight-line method	9	9	9	0,184	0,184	0,184			
b) Declining balance method	0	0	0	0,000	0,000	0,000			
c) Units of production method	0	0	0	0,000	0,000	0,000	0,700	0,700	0,700
d) Other methods	0	0	0	0,000	0,000	0,000			
e) More than one method	0	0	0	0,000	0,000	0,000			
f) U Not mentioned	40	40	40	0,816	0,816	0,816			

The averaging for each of intangibles, as well as accounting for each choice is presented in Table 7. The results of the second column (General H Index) consist in general averages for the three main phases of intangible assets: recognizing, evaluation and impairment.

From the analysis of aggregate values of H Index (Table 7) we found that, concerning to recognizing, for the three analyzed years, the comparability degree was medium with decreasing values for the three periods. Regarding to evaluation, we found that further evaluation tends to be more harmonic (0.894 for the three periods) than the initial assessment (0.593, 0.580 e 0.570, respectively). This confirms the results found by Tudor and Dragu (2010). When analyzed together (initial assessment and subsequent evaluation), they result in a high degree of harmonization, however, with decreasing values in the three years (0.744, 0.737 e 0.732, respectively).

Table 8: Aggregate values for H Index

ACCOUNTING CHOICE	H INDEX			GENERAL H INDEX		
	2010	2011	2012	2010	2011	2012
RECOGNIZING						
Concession contracts	0.817	0.817	0.817			
Goodwill	0.652	0.652	0.630	0.690	0.682	0.673
Software	0.592	0.560	0.547			
Other intangible assets	0.700	0.700	0.700			
EVALUATION						
Initial assessment	0.593	0.580	0.570	0.744	0.737	0.732
Further evaluations	0.894	0.894	0.894			
IMPAIRMENT						
Impairment test	0.697	0.682	0.669			
Amortization	0.680	0.667	0.657	0.663	0.649	0.639
Amortization methods	0.611	0.597	0.590			
INTANGIBLE ASSET GENERAL INDEX				0.699	0.689	0.681

The third and last phase (impairment), although presenting a medium harmonization degree, if compared to the other analyzes ones (recognizing and evaluation), presented the lowest level of comparability for the three years (0.663, 0.649 and 0.639, respectively). This differs from results Dragu and Tudor (2010), whose lower levels of comparability were found in the evaluation phase. When analyzing the three stages of impairment, we state that the use of the test impairment tends to be the most similar (0.697, 0.682 and 0.669 for 2010, 2011 and 2012) and the amortization methods the least comparable (0.611, 0.597 and 0.6590, respectively).

When analyzing the H index of intangible assets as a whole for the years 2010, 2011 and 2012 we verify that the sectors of Oil and Gas and Electricity tend to have comparable financial statements, as they had, on average, a degree of comparability average, however, with decreasing values, as can be seen from Chart 1

Chart 1: Evaluation of the Intangible Asset Comparability Degree

So, H index of intangible asset of the analyzed traded companies was medium and presents decreasing values along the period, due to the diversity of accounting choices evidenced in financial statements of the analyzed entities.

5 Conclusions

The aim of this study was to investigate whether the accounting choices have allowed the comparability of Brazilian public companies financial statements, as it is proposed by IASB. We analyzed Brazilian Public companies in the sector of Oil and Gas and Electricity from 2010 to 2012.

The results suggest that, although the accounting choices, CPC allowed the comparability of intangible assets, confirming the results found by Tudor and Dragu (2010). The comparability degree of financial statements was medium but decreasing for the three periods (0.699, 0.689, e 0.681 for 2010, 2011 e 2012, respectively).

This result means, for example, that for the 2010 exercise, if two entities were selected randomly, there is 69.9% of chance that they use the same accounting methods regarding their intangible assets.

However, we note that, in spite of the intangible asset has shown a medium comparability index, in none of the analyzed phases it had a maximum value of comparability. Thus, the absence or reduction of accounting choices could reduce the differences in the financial statements and, accordingly, increase the comparability, as suggested by Wehrfritz Haller (2013).

Amortization methods, for example, had one of the lowest values of comparability indexes because they have at least five possible accounting choices (straight-line method, the diminishing balance method, unit of production method, or other methods do not show. The further evaluation, on the contrary, had comparability indexes with higher values, due to the sealing of Brazilian law to the revaluation at fair value. This index not only had a maximum degree of comparability because of some listed companies did not reveal which method used for evaluation after recognition.

This search has complemented previous studies (Cairns *et al.*, 2010, Tudor & Dragu, 2010 e Haller & Wehrfritz, 2013) and aimed to contribute to international literature for identifying, in Brazilian scenario, that the accounting choices present in CPC 04 allow the comparability of accounting statements of public companies, as intend the IFRS (in this case, IAS 38). Moreover, we meant to contribute to the accounting practice when demonstrating to users of accounting information that they are comparable between periods and between entities, allowing a better financial analysis for more reliable decision-making.

For regulators and preparers of accounting standards this search brought evidence about the comparability of financial statements in relation to intangible assets: displays a degree of comparability average (and in no time with maximum or close to it) and the trend reduce the comparability over the years. These results may support future measures to make the financial statements more harmonic or understand international standards sufficient and appropriate. The limitations to this study are that within the two sectors analyzed, it was not possible to assess the financial statements and notes of 22 companies, because they do not have balances of intangible assets in any of the periods under review or at all, or because they have become public companies during the period analyzed.

Furthermore, the analysis was restricted to intangible assets (CPC 04), entities belonging to the sectors of Oil and Gas and Electricity and the periods from 2010 to 2012. Thus, there were other groups examined the Balance Sheet, or other technical pronouncements or periods. Consequently, this research was limited to the analysis of a small number of companies, leading to the impossibility of making generalizations of the results for the remainder of traded companies in

Brazil, which did not prevent the results were treated as indicative of trends existence of comparability between the financial statements.

We suggest for further studies the analysis of the previous periods set forth herein, or for other economic sectors or all Brazilian companies, or that analyze the choices contained in other accounting Pronouncements seeking results that corroborate, complement or confront them here described, and accordingly will advance Theory

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