

Comparability of Accounting Choices in Subsequent Measurement of Fixed Assets, Intangible Assets, and Investment Property in South American Companies

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ABSTRACT

Expertise on comparability, accounting choices, and fair value is among the most controversial and poorly discussed themes in the current accounting scenario. Accounting choices are needed in order to guarantee a reliable representation, at the same time that their discretionary use may decrease the comparability level expected by the International Accounting Standards Board (IASB). In this article, we identified the comparability degree of accounting choices in the subsequent measurement of fixed assets, intangible assets, and investment property (IP) for listed companies in Brazil, Chile, and Peru, in addition to check whether certain entity characteristics can influence managers' accounting choice for fair value. Comparability was measured through the T-index and the explanatory variables were identified through regressions, within the period 2009-2013. It was found that, for fixed assets, national and international comparability increased after IFRS adoption, both increased over time. For intangible assets, there was not a substantial increase in national and international comparability. For IP, national and international comparability did not increase after IFRS adoption, their rates remained close to 0.50 (low comparability) in almost every year. Thus, IFRS adoption alone did not ensure comparability. By using regression analysis, we found that the characteristics industry, audit by big four, country, managers' remuneration, size, indebtedness, profitability, relevance, and time influenced managers' accounting choices, indicating the possibility that the choices under analysis have been used for management of outcomes.

Keywords: comparability, accounting choices, fair value, T-index.

1 INTRODUCTION

Currently, 138 countries have adopted or are adopting the International Financial Reporting Standards (IFRS), issued by the International Accounting Standards Board (IASB), as a means to make accounting practices converge (IFRS, 2014). As a reflection of the global accounting practices convergence process, the Grupo Latino-Americano de Emissores de Normas de Informação Financeira (GLENIF, its acronym in Portuguese), or the Group of Latin American Accounting Standard Setters (GLASS, its acronym in English), was created in 2011, consisting of agencies that issue accounting standards in 17 countries in Latin America. Its goal is working in partnership with the IASB, in order to improve the quality of financial reports in the region and contribute to spread the IFRS (GLENIF, 2014).

IFRS adoption resulted in significant changes in the way how companies register their financial results (Muller, Riedl, & Sellhorn, 2008), causing a true “silent revolution” in accounting statements, by advocating for an increased use of fair value. The IASB refers to fair value measurement in many of its standards, either on a mandatory basis, as in the case of financial instruments (IAS 39), biological assets (IAS 41), and share-based payment (IFRS 2); or on an optional basis, as in the case of subsequent measurement of fixed assets (IAS 16), intangible assets (IAS 38), and investment property (IAS 40).

Despite the advances achieved by the IASB, many IFRS allow a certain degree of flexibility in the choice of accounting practices concerning the recognition, measurement, and disclosure in financial reports (Murcia & Werges, 2011). The flexibility observed in the IFRS, in turn, leads to the so-called accounting choices. The latter refer to the selection of an accounting method instead of another equally valid one (Watts, 1992). The existence of accounting choices may lead managers to choose accounting methods that best represent their particular interests (Fields, Lys, & Vincent, 2001), and this could impact comparability. Thus, in addition to calculating comparability, research has sought to find the potential motivations that provided managers’ accounting choices with a basis (Demaria & Dufour, 2007; Christensen & Nikolaev, 2013; Taplin, Yuan, & Brown, 2014).

So, the underlying question of this research is: is IFRS adoption associated with increased comparability? Like any simple research question, this cannot be directly answered (Barth, 2013). However, a starting point to indicate the effects of IFRS adoption on the comparability of financial information is first identifying whether there was comparability between the choice of practices made by companies. In this way, the main goal of this study is identifying the degree of comparability of accounting choices on subsequent measurement of fixed assets, intangible assets, and investment property (IP) for listed companies in Brazil, Chile, and Peru. The choices refer to the option between historical cost

and fair value. As a secondary goal, we seek to check whether certain entity characteristics can influence managers’ accounting choices. To do this, we surveyed the financial statements of 300 listed companies in 3 countries participating in the GLASS (Brazil, Chile, and Peru), within the period from 2009 to 2013, in order to assess comparability before, during, and after the mandatory IFRS adoption. The countries belonging to the GLASS were chosen not only due to their importance in the international accounting convergence process, but also considering the need to evaluate the convergence process in emerging markets (Peng & Smith, 2010). The research focus was subsequent measurement, since it is only at this point that crucial measurement differences emerge, as well as because of the continued equality between historical cost and fair value at the time when an item is initially recognized and measured (Barth, 2014). Cole, Branson and Breesch (2011) identified 72 possibilities of accounting choices in the IFRS, divided into: (i) clear accounting choices, which allow alternative accounting methods for the same accounting case, e.g. FIFO or weighted average; (ii) covert accounting choices, which have vague criteria for certain accounting facts, e.g. IAS 41, accepting measurement through the cost of biological assets, when fair value cannot be reliably measured; and (iii) estimate and valuation, such as using the terms “probable” and “material.”

Because only clear accounting choices follow equally valid accounting methods, which, therefore, may be selected with absolute discretion by a manager (there is no requirement or normative influence), this study was limited to this kind of choice. Thus, the standards covered in this research are IAS 16, IAS 38, and IAS 40, which address subsequent measurement as clear accounting choices. Theoretically, the research is grounded in the idea that IFRS adoption increases comparability of financial statements, since this goal provides their adoption with a basis.

If the entity chooses the cost method, assets should be registered at their cost, minus any depreciation/amortization and losses due to accumulated impairment. If the fair value method is chosen, the assets should be measured at their fair value, which becomes the basis for subsequent measurements, in order to calculate depreciation/amortization and losses due to accumulated impairment. In the case of fixed assets and intangible assets, if book value increases due to fair value measurement, this increase should be credited on the equity account. In the case of IP, this increase should be directly recognized in the outcome for the fiscal year.

This research is especially justified by the relevance of the themes comparability, accounting choices, and fair value. According to Taplin (2011), further research is needed to examine accounting reports and promote discussions on the concept of comparability, as the latter

are still incipient. According to Fields et al. (2001), even with improved research methods, data sources, and computerization, researchers' knowledge on accounting choices remains limited. Moreover, according to Christensen and Nikolaev (2013), the choice between fair value and historical cost methods is among the most controversial issues in the accounting literature, especially due to lack of evidence as for managers' motivations to choose one or another valid practice. This research differs from the others, because in addition to reconciling these three themes, it investigated the evolution of comparability before, during, and after IFRS adoption (five-year period), in the emerging countries context (still poorly explored). This was done for all clear accounting choices possible in subsequent measurement of assets, also seeking potential justifications for the choices identified.

As a result, it was found that, in relation to fixed assets, national and international comparability increased after IFRS adoption and both of them have been growing over time. For intangible assets, IFRS adoption did not lead to a substantial increase in national and international comparability, which were already high before the standards were adopted. For IP, national and international comparability did not increase after IFRS adoption, remaining at a low level in almost every year under analysis. Regarding the explanatory variables, it was found that, for the three assets under study, entity characteristics influenced managers' accounting choices. Thus, it is understood that only IFRS adoption does not ensure comparability. The existence of accounting choices in the standards can enable management of outcomes, which impacts comparability.

2 THEORETICAL FRAMEWORK

2.1 Accounting Choices

According to Fields et al. (2001), an accounting choice is any decision whose primary purpose is influencing the output of the accounting system in a particular way. Also according to the authors, management intent is key to grasp the definition of accounting choices, especially when it comes to actual decisions, i.e. if the motivation behind the decision aims to influence accounting figures or it is derived from other factors.

According to Francis (2001, p. 312), "accounting choice can be driven by managerial self-interest, by a wish to maximize the interests of a shareholders, possibly at the expense of some other contracting party, or by a wish to provide information." The IASB, when issuing *The Conceptual Framework for Financial Reporting*, pointed out there are accounting choices in the standards so that the phenomenon they describe are faithfully represented.

The issue that arises is the flexibility enabled to managers when applying the IFRS, given the existence of explicit and implicit choices, freedom of interpretation, and the need for estimate and valuation (Haller & Wehrfritz, 2013), so that, in practice, financial statements become less comparable, heading in the opposite direction from the IASB proposal. When managers act opportunistically, they may use the financial choices observed in the IFRS to increase earnings, highlight many items on the financial statement, or manipulate accounting figures (Detzen & Zülch, 2012), something which might indicate the practice of management of outcomes.

According to Lo (2008), management of outcomes is the use of valuation by managers, in order to change financial reports, either to fool some stakeholders about a hidden economic company performance or to influence contractual outcomes that depend on the accounting fi-

gures reported.

Although the definitions of accounting choices and management of outcomes are close, according to Fields et al. (2001), not all accounting choices involve management of outcomes, as this term goes beyond them. Due to managers' motivations, accounting regulatory agencies consistently express their concerns to allow accounting choices in the IFRS, they are aware that the opposite extreme, i.e. absence of accounting choices, might lead to an accounting system entirely based on rules. Ideally, accounting choices exist to provide companies that operate under different business models (e.g. sectors) and/or under different institutional or environmental influences (e.g. countries) with the option of seeking an accounting method that best represents their particular operational situation (Cole et al., 2011).

Accordingly, Fields et al. (2001, p. 261) emphasize that "accounting choice likely exists because it is impossible, or infeasible, to eliminate it." According to these authors, what regulators should do is, by outlining the advantages and disadvantages of allowing accounting choices, determine the optimal discretion level.

2.2 Comparability

Comparability is among the qualitative characteristics of improving the accounting information utility that allows users to identify and grasp the similarities between the items and the differences between them. As a result, accounting information will be more useful if they can be compared through similar information from other entities, or from the same entity, within another period (IASB Framework, 2011).

According to the IASB, there are two significant factors that need to be considered so that information is

comparable: “equal things must look alike and different things must look different” (IASB Framework, 2011, item QC23). According to Yip and Young (2012), improving a factor (e.g. similarities) does not necessarily lead to improvement in another factor (differences). The authors claim that comparability depends on meeting two factors simultaneously. In practice, the apparent simplicity of the concept of comparability ends up as one of its biggest obstacles. After all, what are things? We may interpret “things” as the entity’s business operations, or types of accounts, or even a concern about the economic essence of entity transactions (Zhang & Andrew, 2010). Surely, various interpretations of this definition are likely to influence accounting practices and, therefore, comparability.

Additionally, may we distinguish “equal things” from “different things?” It would be possible to envision a scenario where “things” are addressed differently only if, for each “thing,” there was more than one accounting method. Environmental, economic, political, cultural, operational differences etc. could be solved with the existence of accounting choices in the standards, because this would allow considering different circumstances between companies and between countries (Zeff, 2007). Jaafar and McLeay (2007) argue that the separation of these terms might be feasible in different economic environments, as it is expected that entities involved in similar economic activities choose similar accounting methods, regardless of their country of origin.

Comparability is crucial to improve financial reporting quality (Barth, 2013), despite the need that the IASB provides some conceptual groundwork to choose between alternative measurement bases (Barth, 2014).

According to the Framework (IASB, 2011), a faithful representation might lead to comparability, because it could reflect the characteristics of an asset or liability (Barth, 2013). However, if there are internal or external factors influencing the reliable disclosure of an item, comparability will be hard to obtain. As a result of discussions on the theme, Zeff (2007) claims that comparability is an accounting term very hard to grasp even within a country, and this gets worse when thinking of comparability on a global basis. According to the author, it is an elusive concept, where, indeed, there is no certainty whether comparability is feasible or not.

Despite the doubts that still remain regarding the application of the concept of comparability and the prognosis that it cannot be achieved (Zhang & Andrew, 2010; Durocher & Gendron, 2011), studies evaluating the comparability level have proliferated, in a direct relationship with the increased use of the IFRS. Basically, these studies follow two trends: those assessing comparability improvement after IFRS adoption through the impact on internal accounting variables and/or those from the capital markets, usually by using regression calculation (Barth, Landsman, Lang, & Williams, 2012; Brochet, Jogonalzer, & Riedl, 2011; Cascino & Gassen, 2015); and those identifying the comparability level through choices made by the companies, either by using indexes (H, C, I, V, T) or frequencies. This research followed the second trend, it was grounded in the statement by Taplin (2011), i.e. harmony rates play an important role in research on IFRS implementation, as they are specifically designed to summarize the comparability level. The choice for T-index is justified by its potential to meet the research objectives, according to the index properties displayed in Table 1.

Table 1 Summary of key properties in the comparability indexes

PROPERTIES	INDEXES				
	H	C	I	V	T
Considers the number of companies surveyed	Yes	No	No	Yes	Yes
Considers the size of countries surveyed	No	No	No	No	Yes
Sensitivity to zero frequency	No	No	Yes	No	No
Considers non-disclosure	Yes	Yes	Yes	No	Yes
National (N) and international (I) comparability and both (B)	N	N	I	I	B
Considers multiple accounting choices	No	Yes	No	No	Yes
Able to determine a probability interval	No	No	No	No	Yes
Allows sectoral analysis, with weights	No	No	No	No	Yes
Considers partial comparability	No	No	No	No	Yes

Source: Adapted from Cole, Branson and Breesch (2008, 2009).

The T-index was created by Taplin (2004) in order to bring together in a single index all particularities of those previously proposed, besides eliminating the problems of previous indexes and creating new properties.

2.3 Previous Studies

Research on the international accounting literature investigated managers’ accounting choices between the historical cost method or the fair value

method, as well as possible explanations for this choice regarding fixed assets, intangible assets, and IP. Some of these studies are briefly illustrated in Table 2.

Table 2 Previous studies addressing choice between the Historical Cost and Fair Value methods

	IDENTIFICATION	MAIN RESULTS
Demaria and Dufour (2007)	<p>Objective: investigate the use of FV and factors related to the accounting choice</p> <p>Standard analyzed: IFRS 1, IAS 16, IAS 38, and IAS 40</p> <p>Sample: 107 companies from France, for the year 2005</p>	<p>Choices: (1) IFRS 1: 79% for HC and 21% for FV; (2) IAS 16: 96% for HC and 4% for FV; (3) IAS 38: 100% for HC; (4) IAS 40: 73% for HC and 27% for FV</p> <p>Logistic regression: adopting FV was not related to any of the characteristics studied: size, leverage, managers' remuneration, and structure of ordinary shares held by banks, insurance companies, or investment funds</p>
Muller et al. (2008)	<p>Objective: examining the causes and consequences of choosing between HC or FV</p> <p>Standard analyzed: IAS 40</p> <p>Sample: 133 companies from 15 European countries, for the year 2005</p>	<p>Choices: IAS 40: 20% for HC and 80% for FV</p> <p>Logistic regression: managers' choices are influenced by the pre-IFRS local standard in each country, the capital dispersion level, and the entity's transparency commitment. There is evidence of opportunism and that adopting FV is related to lower information asymmetry and greater liquidity</p>
Tudor and Dragu (2010)	<p>Objective: introducing the impact of IFRS adoption on intangible assets</p> <p>Standard analyzed: IAS 38</p> <p>Sample: 51 companies from Germany, Austria, France, Great Britain, and Italy, for 2009</p>	<p>Choices: IAS 38 (1) Goodwill: 52% for HC and 48% for FV; (2) Marks: 59% for HC and 41% for FV; (3) Patents and Licenses: 61% for HC and 39% for FV; (4) Customer List: 57% for HC and 43% for FV</p>
Cairns, Massoudi, Taplin and Tarca (2011)	<p>Objective: investigating the impact of FV on comparability</p> <p>Standards analyzed: IFRS 1, IFRS 2, IAS 16, IAS 38, IAS 39, IAS 40, and IAS 41</p> <p>Sample: 228 companies from Australia and the UK, for 2005</p>	<p>Choices: (1) IFRS 1: 82% for HC and 18% for FV; (2) IAS 16: 77% for HC and 23% for FV; (3) IAS 38: 100% for HC; (4) IAS 40: 17% for HC and 83% for FV. The results suggest a conservative approach or lack of incentives to use FV</p>
Taplin, Verona and Doni (2011)	<p>Objective: assessing the differences between IFRS and USGAAP and assessment of accounting items</p> <p>Standards analyzed: IAS 1, IAS 2, IAS 16, IAS 19, IAS 36, IAS 38, IAS 39, and IAS 40</p> <p>Sample: 200 companies from Germany, France, UK, and Italy, for 2009</p>	<p>Choices: (1) IAS 16: 99% for HC and 1% for FV; (2) IAS 38: 96% for HC and 4% for FV; (3) IAS 40: 93% for HC and 7% for FV. The elimination of accounting choices might be one way to increase the comparability of some items</p>
Christensen and Nikolaev (2013)	<p>Objective: investigating the use of FV and HC in nonfinancial assets</p> <p>Standard analyzed: IAS 16, IAS 38, and IAS 40</p> <p>Sample: 1,539 companies from Germany and the UK, for 2005 or 2006</p>	<p>Choices: (1) IAS 16: 97% for HC and 3% for FV; (2) IAS 38: 100% for HC, possibly due to strict requirements set out in IFRS to revalue intangible assets; (3) IAS 40: 53% for HC and 47% for FV. In the case of IP, companies are almost equally likely to use HC or FV</p> <p>Logistic regression: institutional differences, FV measurement costs, investment opportunities, greater ease of performance measurement, and financial dependence are decisive in choosing</p>
Andrade, Silva and Malaquias (2013)	<p>Objective: analyzing the financial choices by Brazilian companies</p> <p>Standard analyzed: IAS 40</p> <p>Sample: 39 companies from Brazil, for 2009 and 2010</p>	<p>Choices: IAS 40: 56% for HC and 44% for FV</p> <p>Logistic regression: none of the variables in the study (asset size, indebtedness, corporate governance level, and return on equity – ROE) showed a statistically significant relationship with the choice for FV</p>
Taplin et al. (2014)	<p>Objetivo: identifying the characteristics of firms that use FV instead of HC</p> <p>Standard analyzed: IAS 40</p> <p>Sample: 96 companies from China, for 2008</p>	<p>Choices: IAS 40: 50% for HC and 50% for FV</p> <p>Logistic regression: companies listed on international stock exchanges and those that are volatile in terms of above-average profits are more likely to use FV</p>

Note. HC: Historical cost; FV: fair value.
Source: Prepared by the authors.

By analyzing the studies, a still conservative approach by managers was found out, preferring the historical cost instead of the fair value method, in almost all cases. Only at two times managers' accounting choice for the fair value exceeded the historical cost method (Muller et al., 2008, and Cairns et al., 2011, concerning only IP). The studies also showed that certain company characteristics can influence financial choices.

In another trend of studies assessing comparability through its contributory effect, Brochet et al. (2011) found that mandatory IFRS adoption led to benefits

in capital markets, by reducing return on insider trades due to improved comparability. Cascino & Gassen (2015) showed that only companies with high compliance incentives had increased comparability after IFRS adoption. From the perspective of benefits to the capital market and resorting to data from French and German companies, Liao, Sellhorn and Skaife (2012) pointed out that a company's profit and book value under the IFRS were comparable in the first year after adoption, but financial choices were different between companies from those countries.

In order to measure comparability between the accounting figures generated by the local standard and the IFRS, some studies (Liu & O'Farrel, 2010; Haverty, 2006; Gray, Linthicum, & Street, 2009) showed a low comparability for most items compared.

Faced with a considerable number of studies that claim comparability is hard to be achieved, Durocher and Gendron (2011) point out that accounting standard

setters are organized around the user-driven myth, and the user himself ritually celebrates the comparability ideal and keeps in silence during the process of issuing standards, preventing this ideal to be put into question. However, IFRS adoption is a reality for many countries, and the results, due to their scope, may be reflected on the discussion the IASB needs, concerning which comparability is desired.

3 METHODOLOGICAL ASPECTS

In order to make up the sample for this survey, only countries belonging to the GLASS were selected, where the adoption: (i) was mandatory for all listed companies; (ii) had taken place in a particular fiscal year that included at least two countries, with a view to enable measuring comparability in different economic and cultural contexts; and (iii) had taken place for at least three fiscal years, so that it was possible to analyze the evolution of

their accounting practices. Thus, only Brazil, Chile, Ecuador, and Peru were initially included in the sample. Subsequently, Ecuador was excluded from the study, when the fact that this country does not publish notes was noticed, since they are crucial to identify accounting choices.

Data were collected for the years 2009 to 2013, covering the period before, during, and after the year of IFRS mandatory adoption, as shown by Table 3.

Table 3 IFRS mandatory adoption period for listed companies from the countries sampled

	Local GAAP (before)	Initial year of mandatory IFRS adoption	Post-mandatory IFRS adoption (after)
Brazil	2009	2010	2011, 2012 e 2013
Chile	2009 ^a	2009-2010	2011, 2012 e 2013
Peru	2009 and 2010	2011	2012 and 2013

^a In Chile, some listed companies have been required to adopt the IFRS in 2009. Source: Prepared by the authors.

The survey sample consisted of 300 listed companies, represented by the 100 largest companies in each country. We examined 6,000 accounting choices, 400 of them were accounting choices by country and year. We chose to prioritize larger companies because of their

importance in the capital market, and also due to an increased likelihood to be affected by the IFRS (Cairns et al., 2011). Entity size was measured by the total asset value (in 2013). Table 4 illustrates how the survey sample was defined.

Table 4 Sample of Listed Companies Surveyed

DESCRIPTION OF ENTITIES	COUNTRY		
	Brazil	Chile	Peru
Total number of companies listed on the Stock Exchange ^a in 2014, according to the software Economática®	369	218	196
(-) Financial institutions and insurance companies	(37)	(55)	(64)
(-) Companies excluded for not having a corresponding sector ^b	(73)	(11)	(9)
(-) They were not listed companies in some of the periods analyzed	(23)	(24)	(5)
(-) They did not publish financial statements in some of the periods analyzed	(13)	(8)	(18)
(-) They published financial statements on 03/31 or 06/30 each year	(04)	(0)	(0)
(-) Smaller companies in the sample	(119)	(20)	(0)
(=) Final sample	100	100	100

^a Brazil: Securities, Commodities, and Futures Exchange; Chile: Santiago Stock Exchange; Peru: Lima Stock Exchange. ^b Chile does not have companies belonging to the industrial machinery, textiles, and vehicles and parts sectors; and Peru does not have companies belonging to the pulp and paper, software and data, transport and services, and vehicles and parts sectors. Source: Prepared by the authors.

Data collection was conducted by using the software Economática® (identification of the entities listed on stock exchanges from the sample countries, the business sector, the entity size, indebtedness, profitability, and the balance of fixed assets, intangible assets, and IP), and through each company's notes, in order to collect

accounting choices - historical cost or fair value - and audit firm.

To measure the comparability of financial statements by companies from the three countries, we resorted to the T-index calculation, created by Taplin (2004, p. 61), whose formula is:

$$T = \sum_{i=1}^N \sum_{j=1}^N \sum_{k=1}^M \sum_{l=1}^M \alpha_{kl} \beta_{ij} \rho_{ki} \rho_{lj} \quad \mathbf{1}$$

Where:

N: it is the number of countries investigated;

M: it is the number of accounting methods analyzed.

α_{kl} : it is the comparability coefficient between the accounting methods k and l;

β_{ij} : it is the comparison weighting between companies from countries i and j;

ρ_{ki} : it is the proportion of companies from country i using the accounting method k;

ρ_{lj} : it is the proportion of companies from country j using the accounting method l.

The T-index ranges from 0, when two companies are not comparable, to 1, when all companies are comparable to each other (Taplin, 2010). It may be seen as the probability that two randomly selected companies have comparable accounts (Taplin, 2011). For interpreting comparability, some studies have suggested reference scales to identify the comparability degree of financial statements (Parker & Morris, 2001; Ali, Ahmed, & Henry, 2006), and others provided their findings by interpreting index values as high, moderate, or low comparability (Taplin, 2006; Tudor & Dragu, 2010). In this study, for interpreting the comparability index, we chose to adopt the classification proposed by Taplin (2006), because he is the creator of the T-index, and the rate between 0.75 and 1 was regarded as a high comparability; it was moderate between 0.55 and 0.74, and it was low between 0 and 0.54.

For calculating comparability, it was assumed that: (i) non-disclosure of information was excluded from comparability calculation; (ii) countries were weighted according to their size, through the total number of companies in each country, according to Economática®; (iii) for "non-applicable" practices, i.e. where there was no disclosure of the accounting choice because companies do not have that particular asset in their financial statements, such non-disclosure

was regarded as not applicable.

T-index calculation was performed by using the T-Index Calculator software, provided through e-mail message by the creator of the index, Ross H. Taplin. To do so, we adopted as a criterion the modes 1c2b3a4a, regarding comparability within each country (national) and 1c2c3a4a, concerning comparability between countries (international).

To identify the reasons that gave rise to certain comparability levels, we used Logit and Probit regressions, since the dependent variable is a dichotomous variable (dummy). Independent variables were outlined in accordance with the accounting literature, assuming that company characteristics may explain the reasons why different entities choose different accounting practices. Thus, nine research hypotheses were developed, as subsequently shown.

According to Cole et al. (2011), it is interesting to test whether audit type influences managers' choice for accounting methods. According to them, audit firms may influence the preparation and disclosure of financial statements. According to Watts (2003), it is expected that companies audited by the so-called big four choose to use the historical cost method, because they are more conservative. Souza, Botinha, Silva and Lemes (2015) also found out that the fact that companies are audited by one of the big four reduced by about 20% their probability to choose the fair value method. In this way, the first hypothesis tested is: H_1 : There is a negative association between listed companies audited by the big four and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

As for indebtedness, Christensen and Nikolaev (2013) argue that companies in need of loans are usually asked to provide guarantees for the various credit types. Therefore, these companies are susceptible to a demand for fair value accounting. These authors found out that indebtedness is positively associated

with using fair value measurement. Thus, the second hypothesis tested in this research is: **H₂**: There is a positive association between indebtedness level and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

Haverty (2006) ensures that a country's accounting practices reflect typical local aspects. According to Jaafar and McLeay (2007), company's country of domicile is a significant variable to be addressed when analyzing financial choices, because accounting practices systematically reflect the rules and regulations in force within the country where a company is registered. Cole et al. (2011), examining which determinants influence managers' financial choices, found that country is the variable that mostly influences such choices. Therefore, the third hypothesis tested in this study is: **H₃**: Listed companies belonging to the same country of domicile tend to choose the same accounting practices in subsequent measurement of fixed assets, intangible assets, and IP.

Demaria and Dufour (2007) highlight that preparers of financial statements show strong resistance to changes and, therefore, they tend to keep accounting practices adopted within previous periods. Corroborating this claim, Muller et al. (2008) found that the probability that a company chooses the fair value method is greater where the pre-IFRS domestic standard required or allowed measuring assets at fair value. Haller and Wehrfritz (2013) similarly noticed that when companies adopt the IFRS, they tend to keep the required accounting policies or predominantly chosen under the national GAAP. Such reasoning leads us to test this hypothesis: **H₄**: The probability that a listed company chooses the fair value method is greater in countries whose pre-IFRS domestic standards required or allowed measuring fixed assets, intangible assets, and IP at fair value.

According to Watts and Zimmerman (1986), the existence of variable remuneration plans for directors, based on financial outcomes, may encourage them to choose accounting methods that increase the value of profits for the period, in order to maximize their remuneration. Hou, Jin and Wang (2014) found that the positive effects of adopting the IFRS on executive remuneration were motivated by changes in profit, derived from measuring at fair value and consequent reduction in conservatism. Thus, the fifth hypothesis comes from the assumption that managers tend to choose accounting methods that increase the company's profit, in order to maximize their remuneration, when there are incentive plans: **H₅**: There is a positive association between incentive plans and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

Costa, Silva and Laurencel (2013) notice that profitability indexes are employed by many users of financial statements as a measurement of company's performance. Christensen and Nikolaev (2013) argue

that fair value measurement may be used in order to facilitate measuring entity's performance and, as a consequence, be useful in assessing company's management. According to them, changes in the value of non-financial assets are useful information about company's operational performance, because capital gain realization is often a part of the business model (and historical cost does not reflect investment opportunities). As a result, the sixth hypothesis tested in this study is: **H₆**: There is a positive association between profitability and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

According to Cullinan (1999), a company's operational sector influences managers' financial choices. Jaafar and McLeay (2007) emphasize that the choice of accounting methods depends not only on the company's country of domicile and the set of regulations involved, but also operational circumstances. Demaria and Dufour (2007) found that the operational sector is the main determinant so that a manager chooses the fair value method. So, we have the seventh hypothesis tested in this study: **H₇**: The operation sector of listed companies influences the choice of accounting practices for subsequent measurement of fixed assets, intangible assets, and IP.

Watts and Zimmerman (1986) claim that large company managers tend to choose accounting methods that defer recognizing profits for future periods. Larger companies may try hiding their size, by choosing accounting policies that minimize the assets and revenue declared, so that such information is less visible politically (Cullinan, 1999). Therefore, "the directors of large companies tend to choose accounting policies that decrease outcomes to reduce their political costs" (Costa et al., 2013, p. 27), in accordance with the hypothesis tested: **H₈**: There is a negative association between company size and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

Since the widespread use of the IFRS over time is associated with comparability (Barth et al., 2012), which is affected by accounting choices, Jaafar and McLeay (2007) analyzed comparability evolution by observing the behavior of financial choices over the years, for various countries and sectors. Souza et al. (2015), investigating managers' financial choices, between the cost or fair value methods regarding IP in Brazil and Portugal, found that in both countries the incidence of fair value measurement has increased year after year. In this way, the ninth hypothesis tested is: **H₉**: There is a positive association between time and choosing the fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

Taking the research hypotheses as a basis, the variables used in the Logit and Probit models are summarized in Table 5.

Table 5 Summary of the regression model variables

Variable	Abbreviation	Constructs	Expected sign	Proxy
Accounting Choice	EC	Companies that chose historical cost versus companies that chose fair value		Dummy variable: D=0: cost D=1: fair value
Audit Firm	BF	Companies audited by the so-called Big Four	HC (-)	Dummy variable: D=0: not audited by a big four D=1: audited by a big four
Indebtedness	ENDIV	Company indebtedness, per year	FV (+)	Result of the relationship between Total Liabilities and Equity ^a
Country	PAIS	Countries included in the sample		One dummy variable for each country: 1=Brazil; 2=Chile; and 3=Peru
Pre-IFRS	PGAAP	Companies domiciled in countries whose national GAAP (pre-IFRS) allowed or required assessment at fair value, through the revaluation model	FV (+)	Dummy variable: D=0: did not allow or did not require revaluation D=1: allowed or required revaluation
Managers' remuneration	REM	Companies that made a profit, in each business year	FV (+)	Dummy variable: D=0: loss for the fiscal year D=1: profit for the fiscal year
Profitability	RENT	Return on shareholders' Equity, per year	FV (+)	Annual outcome of the relationship between Net Revenue and Equity ^a
Relevance	RELEV	Relevance of the balance of assets analyzed, per year	FV (+)	Annual outcome of the relationship between Assets analyzed and Total Assets ^a
Sector	SET	Operation sector according to the classification of the database Económica®		One dummy variable for each sector: 1=Agro and Fishery; 2=Food and Beverage; 3=Trade and Electronics; 4=Construction; 5=Electric Power; 6=Real Estate; 7=Mining; 8=Non-metallic mineral; 9=Others; 10=Oil and Gas and Chemicals; 11=Steel and Metal; 12=Telecommunications
Size	TAM	Company size, per year	HC (-)	Natural logarithm of total assets ^a
Time	T	Period analyzed, in years	FV (+)	One dummy variable for each year: 1=2009; 2=2010; 3=2011; 4=2012; and 5=2013

Note. HC: historical cost; FV: fair value

^a The variables size, indebtedness, relevance, and profitability were converted into dollars. The reference date for such values was 12/31 each year.

Source: Prepared by the authors.

Although the Logit and Probit models are similar in most of their applications, and many researchers, in practice, choose the Logit model due to its comparative mathematical simplicity, in some situations the Probit model may be useful (Gujarati, 2004). In this way, we chose to conduct statistical tests on both models, in order to define which might be the most suitable for this research. The robustness of the regression model was examined through three features, all observed by Hosmer and Lemeshow (2000): (i) the Hosmer-Lemeshow test; (ii) the model's classification table; and

(iii) the curve Receiver Operating Characteristic (ROC).

For estimating the regression, entities that did not disclose their financial choices or those that did not have fixed assets, intangible assets, and/or IP (not applicable) were excluded from the sample. However, exclusions were made only in years where there was no such disclosure or assets. Similarly, listed companies using estimated cost at the time of first adoption (IFRS 1) were regarded as choosing the fair value method, at that particular business year, for regression calculation.

4 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Comparability of Fixed Assets, Intangible Assets, and IP

Tables 6, 7, and 8 show the national and international comparability degree for subsequent measurement of fixed assets, intangible assets, and IP of listed

companies from Brazil, Chile, and Peru, within the period from 2009 to 2013. The choices found for the three items were related to historical cost, estimated cost, fair value, “does not apply” and “does not disclose.”

Table 6 *National and international comparability of fixed assets*

	Brazil	Chile	Peru	International
Panel A – Fixed Real Estate Assets				
2009	1.00	0.52	0.55	0.52
2010	0.64	0.64	0.55	0.61
2011	1.00	0.79	0.53	0.59
2012	1.00	0.78	0.78	0.85
2013	1.00	0.78	0.75	0.84
Panel B – Fixed Plant and Equipment Assets				
2009	1.00	0.51	0.70	0.66
2010	0.64	0.73	0.70	0.68
2011	1.00	0.82	0.51	0.63
2012	1.00	0.82	0.90	0.91
2013	1.00	0.83	0.88	0.91

Source: Prepared by the authors.

Concerning Brazil, national comparability with regard to fixed assets was maximum within all periods analyzed, except for 2010, first IFRS adoption year. These results are justified by the fact that in Brazil, before IFRS adoption (2009), only one method for subsequent measurement of fixed assets was allowed (historical cost) and after adoption (2011-2013) revaluation was banned in Brazil. As estimated cost was not prohibited by the Brazilian standards, in 2010 the comparability rate was 0.64, something which shows that if two Brazilian companies are randomly selected, there is a 64% chance that they have chosen the same accounting method for subsequent measurement of fixed assets, for 2010.

For Chile, a low/moderate national comparability was identified for 2009 and 2010 (early adoption periods) and there was a high comparability for 2011 to 2013 (Table 6). These findings stem from the fact that, in early IFRS adoption periods, Chilean listed companies diversified their accounting choices, alternating between the historical cost, fair value, and estimated cost methods. In the following years, most entities chose to measure their fixed assets at the cost method.

Peru, before IFRS adoption (2009 and 2010), showed a moderate national comparability, because while most listed companies adopted the historical cost method, the others adopted the fair value method (Table 6). In the adoption year (2011), national comparability was low due to the possibility of subsequent measurement of fixed assets at estimated cost, in addition to two other

equally valid methods (historical cost and fair value). A larger number of accounting choices reflected lower comparability. For the years 2012 and 2013, although fair value could be used, the vast majority of entities chose historical cost.

Regarding international comparability, it was found that, although it was low/moderate in early adoption periods (2009 to 2011), since the moment when IFRS adoption became mandatory for the three countries (2012 and 2013), comparability was high (Table 6). This result derives from the fact that, despite the existence of accounting choices in Chile and Peru, most entities in these countries chose the historical cost method for subsequent measurement of fixed real estate assets, just as in Brazil by law.

The results of this research are similar to those observed in other studies (Demaria & Dufour, 2007; Cairns et al., 2011; Taplin et al., 2011; Christensen & Nikolaev, 2013), which pointed out that even with accounting choices, entities have become increasingly conservative in relation to subsequent measurement of their fixed assets. Because most of them choose the historical cost method, comparability (national and international) was high and it has increased over time.

Regarding subsequent measurement of intangible assets (Table 7), Brazil showed a high comparability in all years under analysis, due to prohibition of estimated cost in early adoption and evaluation at fair value for subsequent measurement of intangible assets.

Table 7 *National and international comparability of intangible assets*

	Brazil	Chile	Peru	International
2009	1.00	0.90	0.94	0.95
2010	1.00	0.98	0.94	0.97
2011	1.00	0.98	0.91	0.97
2012	1.00	0.98	0.97	0.98
2013	1.00	0.95	0.97	0.98

Source: Prepared by the authors.

Regarding Chile and Peru, comparability was high in every year, even before IFRS adoption and during early adoption (Table 7). Despite there are accounting choices for subsequent measurement of intangible assets, almost no Chilean and Peruvian listed company has chosen the fair value or estimated cost method to value these assets. Although the IFRS provide accounting choices, the accounting practices adopted by listed companies in Chile and Peru (which adopted the IFRS without modifications) were similar to those adopted by listed companies from Brazil (which has forbidden the accounting choices provided by the IFRS).

As for the national and international comparability analysis over time, it was found that, even showing high values for all years under analysis, comparability has increased over the years.

The results of this research corroborate the findings of previous studies (Demaria & Dufour, 2007; Cairns et al., 2011; Taplin et al., 2011; Christensen & Nikolaev, 2013), which identified that all companies (or the vast majority) adopt the historical cost method for subsequent measurement of intangible assets, despite the possibility of adopting the fair value method according to IAS 38. These findings may be a result of requirements set out in the IFRS to revalue intangible assets,

due to the difficulty in identifying the fair value for this asset type, given the lack of incentives to use fair value and/or the still conservative attitude taken by the entities.

The results of this study, however, are different from those found by Tudor and Dragu (2010), who, investigating 51 listed companies from Germany, Austria, France, Great Britain, and Italy, in 2009, found that a large part of them chose to recognize their intangible assets at fair value, something which led the comparability of these companies to be moderate (0.601).

In a T-index analysis for IP (Table 8), concerning Brazilian companies, in 2009 comparability was full, and after IFRS adoption (in 2010) their value declined sharply. However, we may not say that comparability decreased after IFRS adoption. The fact is that in 2009 only two entities had IP recognized and only one disclosed its accounting choice. The maximum comparability in 2009 was due to the fact that one listed company disclosed its accounting choice in relation to IP measurement. However, from 2010 to 2013 comparability was low, because some entities chose the historical cost method and others the fair value method. The existence of accounting choices enabled the adoption of diversified practices within the same country.

Table 8 *National and international comparability of investment properties*

	Brazil	Chile	Peru	International
2009	1.00	0.50	0.59	0.43
2010	0.51	0.55	0.61	0.54
2011	0.52	0.53	0.54	0.49
2012	0.52	0.54	0.50	0.52
2013	0.53	0.57	0.50	0.48

Source: Prepared by the authors.

Chile and Peru obtained a low national comparability for virtually all fiscal years (Table 8). Just as in Brazil, low comparability was due to the fact that managers' accounting choices for subsequent measurement of IP were divided between the historical cost and the fair value methods. As a result, international comparability was low for all business years.

Analyzing comparability evolution over time, it was found that the Brazilian national comparability has (slowly) increased, due to companies' migration to the fair value method (Table 7). Chilean national comparability has also increased, but because entities have become more conservative (adopting the historical cost method) over time. Peruvian national comparability, in

turn, has decreased over time, due to the fact that accounting choices are divided between the two methods. International comparability has not increased or decreased, but it remained low for all years.

When analyzing previous studies on accounting choices for subsequent measurement of IP, it was found that the results are inconclusive. Some studies found that most companies chose to adopt historical cost (Demaria & Dufour, 2007; Taplin et al., 2011), others that most companies chose fair value (Muller et al., 2008; Cairns et al., 2011), and others, in turn, observed companies that chose both methods, in the same proportion (Andrade et al., 2013; Christensen & Nikolaev, 2013; Taplin et al., 2014). Given the nature of the asset under analysis (IP) – and the resulting “ease” to identify its fair value, when compared to the other assets –, the results

may have been divergent considering the various economic, cultural, legal, and temporal contexts where the studies took place.

In Latin American countries, accounting choices are divided between the two alternatives available, something which represents low/moderate comparability, and it can be seen through the results of this research and Andrade et al. (2013).

4.2 Regression Analysis

Subsequently, Probit regressions were estimated for fixed assets and for IP, and Logit for intangible assets. Table 9 provides a summary of these regression results, for each variable under analysis, as well as the expected and observed signs, with the respective values of marginal effects.

Table 9 Summary of the regression results

VARIABLE	Statistical significance ^a				Expected sign	Marginal effects ^b			
	IM	IE	INT	PPI		IM	IE	INT	PPI
SET2	ns	ns	ns	ns		ns	ns	ns	ns
SET3	ns	ns	ns	ns		ns	ns	ns	ns
SET4	0.032	ns	ns	0.024		-11.78	ns	ns	+22.61
SET5	ns	0.000	ns	0.000		ns	+14.17	ns	+71.07
SET6	0.014	ns	ns	0.001		-12.04	ns	ns	+41.40
SET7	ns	ns	ns	ns		ns	ns	ns	ns
SET8	0.021	ns	ns	0.000		-11.75	ns	ns	+58.38
SET9	0.033	ns	ns	0.007		-7.91	ns	ns	+24.50
SET10	ns	ns	ns	ns		ns	ns	ns	ns
SET11	ns	ns	ns	ns		ns	ns	ns	ns
SET12	ns	ns	ns	ns		ns	ns	ns	ns
BF	ns	ns	0.025	0.002	-	ns	ns	-5.82	-23.24
PAIS2	0.000	0.000	ns	ns		+15.59	+11.01	ns	ns
PAIS3	0.000	0.000	ns	0.027		+23.92	+14.28	ns	+17.09
REM	0.015	ns	ns	ns	+	+8.06	ns	ns	ns
TAM	ns	ns	0.003	ns	-	ns	ns	+1.92	ns
ENDIV	ns	ns	ns	0.003	+	ns	ns	ns	-3.86
RENT	0.001	0.003	ns	ns	+	-10.45	-7.79	ns	ns
RELEV	0.000	0.010	0.051	0.000	+	+16.88	+10.02	+14.17	+41.48
T2	ns	ns	ns	ns	+	ns	ns	ns	ns
T3	ns	ns	ns	ns	+	ns	ns	ns	ns
T4	0.000	0.000	ns	ns	+	-21.81	-14.64	ns	ns
T5	0.000	0.000	ns	ns	+	-20.49	-14.14	ns	ns

Note. IM: fixed real estate assets; IE fixed plant and equipment assets; INT: intangible assets; PPI: investment properties; ns: not significant; -: negative sign (historical cost); +: positive sign (fair value); SET2: food and beverage sector; SET3: trade and electronics sector; SET4: construction sector; SET5: electric power sector; SET6: real estate sector; SET7: mining sector; SET8: non-metallic mineral sector; SET9: other sectors; SET10: oil, gas, and chemicals sector; SET11: steel and metal sector; SET12: telecommunications sector; BF: *big four*; PAIS2: Chile; PAIS3: Peru; REM: managers' remuneration; TAM: company size; ENDIV: entity indebtedness; RENT: profitability; RELEV: relevance of the balance of assets analyzed; T2: 2010; T3: 2011; T4: 2012; and T5: 2013.

^a Statistical significance: 5%; ^b marginal effects in percentage;

Source: Prepared by the authors.

By analyzing Table 9, it was found that the sectors (i) food and beverage; (ii) trade and electronics; (iii) mining; (iv) oil, gas, and chemicals; (v) steel and metal;

and (vi) telecommunication were not statistically significant for any assets under study. This denotes that managers' accounting choice for subsequent measure-

ment of their respective assets does not depend on the fact that listed companies belong to these sectors. The same was noticed when the years 2010 and 2011 were analyzed. The fact that accounting choice took place in 2010 and/or 2011 did not influence managers' selection of the historical cost or fair value method for subsequent measurement of fixed assets, intangible assets, and IP.

On the other hand, the variable relevance of the balance of assets analyzed in relation to the balance of total assets was statistically significant for the four assets. It reveals that this variable tends to influence managers' choice for a specific method, i.e. the more relevant the balance of the corresponding asset, the greater the likelihood that the company chooses the fair value method. The same result was found by Souza et al. (2015, pp. 163-164), who, investigating entities in Brazil and Portugal, found that "the greater the importance of IP regarding total assets, the greater the likelihood that the company chooses the fair value method."

The variables "big four," "country," "profitability," and "time," when statistically significant, showed the same signs for all surveyed assets. In turn, the variables "company size," "indebtedness," "profitability," and "time" showed signs different from the expected, something which corroborates the claim by Martins, Pinto and Alcoforado (2012) that there are still gaps to grasp the reasons influencing managers to make a decision between the historical cost and fair value methods, since not all hypotheses were unanimously supported by evidence.

Concerning the variable big four, significant for intangible assets and IP, we found that it tends to conservatively influence the entities, as pointed out by the literature (Watts, 2003; Cole et al., 2011, Souza et al., 2015). For instance, the fact that the entity is audited by a big four reduced by 23.24% the probability to choose the fair value method for subsequent measurement of IP. The variable "country" suggested to influence managers' financial choices, as claimed by Jaafar and McLeay (2007) and Cole et al. (2011). This finding may be justified, among other factors (such as culture), by the influence that standards prior to the adoption (pre-IFRS) can exert on public companies, as argued by Demaria and Dufour (2007), Muller et al. (2008), and Haller and Wehrfritz (2013).

A statistically significant profitability for fixed assets, in turn, had a negative sign (historical cost), contradicting the theory (Costa et al., 2013; Christensen & Nikolaev, 2013). The latter claims that, since users have expectations about companies' profitability, managers tend to choose the method that best contribute to achieve the performance desired by investors (fair value). However, with regard to intangible assets and IP, which were not statistically significant, these findings corroborate the results of previous studies (Cole et al., 2011; Andrade et al., 2013; Costa et al., 2013; Souza et al., 2015), which found that profitability does not in-

fluence managers' accounting choice to use the historical cost or fair value method.

The variable "time" (specifically the years 2012 and 2013, for fixed assets) showed negative indexes, revealing that the incidence of fair value measurement has not increased over the business years. As for intangible assets and IP, in all periods investigated this variable was not statistically significant, something which shows that time did not affect using the fair value method for these assets, as indicated by Souza et al. (2015). So, we may not claim that over the years (and, therefore, having more experience with the IFRS) entities tend to prefer the fair value instead of the historical cost method for subsequent measurement of intangible assets and IP in relation to the countries/periods investigated.

The variable "entity size", statistically significant for subsequent measurement of intangible assets, showed a coefficient with positive sign, something which refers to the influence for adopting fair value. These findings indicate that larger companies tend to measure their intangible assets through the fair value method and smaller companies tend to do so through the historical cost method. This fact may be justified by the practical difficulty and high cost to identify the fair value of such assets.

Regarding subsequent measurement of fixed assets and IP, the variable "size" was not statistically significant, and this confirms the findings of previous studies (Demaria & Dufour, 2007; Cole et al., 2011; Martins et al., 2012; Andrade et al., 2013; Souza et al., 2015), which identified the adoption of fair value regardless of entity size. However, it contradicts the idea of Jaafar and McLeay (2007) and Costa et al. (2013) that large companies tend to choose accounting practices that minimize assets trying to be less visible politically. Concerning listed companies in Latin America, company size did not affect managers' choice of the historical cost or fair value method for subsequent measurement of assets and IP.

Indebtedness, whose results were statistically significant for subsequent measurement of IP, showed results different from those reported in the literature (Watts & Zimmerman, 1986; Christensen & Nikolaev, 2013), since it was found that indebted companies tend to choose the historical cost method. However, Christensen and Nikolaev (2013) point out the dubious effect of indebtedness on choosing fair value because, if on the one hand debt security holders require more reliable information and sometimes contracts eliminate the revaluation reserve (thus, the effect of using fair value), on the other hand, companies are often required to submit reviews of guarantees, usually at fair value. Also, funders' willingness to grant a loan may result in more reliable measurements by companies (through independent evaluators and certifications). Investigating companies from Germany and the UK, the authors found that indebtedness is positively associated with using fair value measurement. For this research, re-

garding Latin American companies, within the period 2009-2013, this statement could not be confirmed.

As for the variable “remuneration,” which was statistically significant only for fixed real estate assets, we identified there is a positive association between incentive plans and choosing the fair value method for subsequent measurement of such assets. This finding corroborates the results of previous research (Watts &

Zimmerman, 1986; Cullinan, 1999; Hou et al., 2014), which found that the existence of variable remuneration plans, based on accounting results, leads administrators to feel encouraged to choose accounting methods that increase profit values for the period, in order to maximize their compensation.

Table 10 summarizes the results of the hypotheses tested.

Table 10 Summary of the hypotheses results

SUMMARY OF RESULTS	IM	IE	INT	PPI
H ₁ : Big four → negative association	R	R	A	A
H ₂ : Indebtedness → positive association	R	R	R	R*
H ₃ : Country → influences	A	A	R	A
H ₄ : Pre-IFRS → positive association	A	A	R	A
H ₅ : Managers remuneration → positive association	A	R	R	R
H ₆ : Profitability → positive association	R*	R*	R	R
H ₇ : Operation sector → influences	A	A	R	A
H ₈ : Size → negative association	R	R	R*	R
H ₉ : Time → positive association	R*	R*	R	R

Nota. IM: Fixed Real Estate Assets; IE: Fixed Plant and Equipment Assets; INT: Intangible Assets; PPI: Investment Properties; A: Accepts the hypothesis examined; R: Rejects the hypothesis examined; R*: Hypothesis rejected for having an observed signal different from the expected sign.
Source: Prepared by the authors.

Thus, it was found that all variables examined have influenced managers’ accounting choice for the historical

cost or fair value method (because all of them were statistically significant at least in one of the assets analyzed).

5 FINAL REMARKS

Accounting choices are needed so that a faithful representation is guaranteed, while their discretionary use may reduce comparability. To contribute to this discussion, the main aim of this study was identifying the comparability degree of accounting choices for subsequent measurement of fixed assets, intangible assets, and IP of listed companies from Brazil, Chile, and Peru, subsequently checking whether certain entity characteristics can influence managers’ financial choice for, the fair value method.

As a result, it was found that, concerning fixed assets, international comparability has increased after IFRS adoption, it kept growing over time and reached high levels after mandatory IFRS adoption by the three countries (2012 and 2013), confirming previous studies (Demaria & Dufour, 2007; Cairns at. al., 2011; Taplin et al., 2011; Christensen & Nikolaev, 2013) with regard to the fact that entities have become increasingly conservative in terms of subsequent measurement of their fixed assets.

In Brazil, the conservative attitude may be mainly explained by the influence of local legislation, because using fair value for subsequent measurement of fixed assets became forbidden. In Chile, there was greater preference for the

historical cost method, despite the possibility of adopting the fair value method. In Peru, although some listed companies have chosen the fair value method before mandatory IFRS adoption, after their adoption most entities began employing the historical cost method, thus becoming more conservative. When investigating whether certain company characteristics have influenced managers accounting choice, it was found that, in relation to subsequent measurement of fixed assets, country, profitability, relevance, and time influence managers’ financial choices.

Regarding intangible assets, there was no substantial increase in national and international comparability after mandatory IFRS adoption, although they have grown over time. This occurred because, before adoption, comparability was already high for all countries and between them. Comparability was high in Brazil due to legal prohibition to adopt the fair value method for subsequent measurement of intangible assets, as well as using estimated cost at the time of early adoption. However, in Chile and Peru, although accounting choices (historical cost, estimated cost, and fair value) were allowed, the accounting practices adopted by these countries were similar to those adopted by Brazil.

Thus, high national and international comparability of accounting choices for subsequent measurement of intangible assets was due to the fact that the vast majority of organizations have chosen to recognize their intangible assets through the historical cost method, in the three countries.

Despite conflicting with the findings of Tudor and Dragu (2010), the results of this research corroborate previous studies (Demaria & Dufour, 2007; Cairns et al., 2011; Taplin et al., 2011; Christensen & Nikolaev, 2013), which found that all companies (or most of them) adopt the historical cost method for subsequent measurement of intangible assets, despite the possibility of adopting the fair value method according to IAS 38. As for the investigation of potential explanatory variables, we identified that the variables “big four,” “size,” and “relevance” influence managers’ choices.

Regarding IP, national and international comparability has not increased after IFRS adoption, the rates remained close to 0.50 (low comparability) in virtually all business years. Through these findings, it is concluded that IFRS adoption, by itself, does not guarantee comparability. The fact that there are accounting options in the standard led managers’ choices to be diversified, even within the same country. Compared to previous studies, in the Latin American countries context, the results of this study corroborate those of Andrade et al. (2013), who found that the compa-

nies have been divided between measuring their IP through historical cost and fair value. As for regression analysis, it was found that the variables “big four,” “relevance,” “indebtedness,” “country,” and “operation sector” influence managers’ accounting choices for subsequent measurement of IP.

Given the results, the following discussions arise, which may constitute the object of further research. First, why, although there is the possibility of using the fair value method for subsequent measurement of fixed assets and intangible assets, do most companies still prefer to adopt the historical cost method for valuation of such assets? Second, what have managers taken into account in their decisions, since no high comparability was observed for any country and any period with regard to subsequent measurement of IP? Third, will it be possible to reconcile accounting choices with comparability, having in mind that an increased number of accounting choices decreases comparability, and a decreased number of accounting choices can hinder achieving a reliable representation?

This research sought to provide means for preparers of accounting standards, by demonstrating managers’ decision on the use of fair value measurement. Regarding the accounting literature, this study brings a special contribution, investigating expertise on comparability, accounting choices, and fair value in the emerging countries context.

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