ACCOUNTING CHOICES, CORPORATE CHARACTERISTICS AND ADOPTION OF IFRS IN TWO PHASES

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ABSTRACT

The aim of this study is to evaluate which corporate characteristics, representative of economic, contractual and institutional incentives, are associated with the realization of multiple accounting choices in large companies in Brazil, peculiar environment of accounting transition to International Financial Reporting Standards (IFRS) in more than one phase. To achieve this objective, a diagnosis of accounting choices was made in 75 large companies (listed and unlisted companies) during the period 2008 to 2013, as well as a survey of the corporate characteristics that may be associated with these choices. The technique used was correspondence analysis. The main contribution of the study is the analysis of several accounting choices simultaneously, in an IFRS transition environment in more than one phase. Unlike most previous accounting choice studies, evidence has been found that institutional features are more closely associated with making accounting choices than economic and contractual features, both during the transition period (2008-2009), as after full adoption (2010-2013). Possible explanations for this result may be related to the level of development of the Brazilian market and the accounting institutional learning curve.

Keywords: Accounting Choices. Corporate Characteristics. IFRS. Institutional Theory.

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ESCOLHAS CONTÁBEIS, CARACTERÍSTICAS CORPORATIVAS E ADOÇÃO DO IFRS EM DUAS ETAPAS

RESUMO

O objetivo desse estudo é avaliar quais características corporativas, representativas de incentivos econômicos, contratuais e institucionais, associam-se à realização de múltiplas escolhas contábeis nas empresas de grande porte no Brasil, ambiente peculiar de transição contábil para o International Financial Reporting Standards (IFRS) em mais de uma etapa. Para atingir tal objetivo, foi feito um diagnóstico das escolhas contábeis em 75 empresas de grande porte (companhias listadas e não listadas) durante o período de 2008 a 2013, bem como, um levantamento das características corporativas que possam estar associadas a essas escolhas. A técnica utilizada foi a análise de correspondência. A principal contribuição do estudo é a análise de diversas escolhas contábeis simultaneamente, em um ambiente de transição para o IFRS em mais de uma etapa. Diferentemente do que aponta a maioria dos estudos anteriores sobre escolhas contábeis, foram encontradas evidências de que características institucionais associam-se em maior grau à realização de escolhas contábeis do que características econômicas e contratuais, tanto durante o período de transição (2008-2009), quanto após a adoção completa (2010-2013). Possíveis explicações para esse resultado podem estar relacionadas ao nível de desenvolvimento do mercado brasileiro e à curva de aprendizado institucional contábil.

Palavras-chave: Escolhas Contábeis. Características Corporativas. IFRS. Teoria Institucional.

1 INTRODUCTION

Research has sought explanations for the accounting choices made in companies, which may be related to accounting policies of measurement, recognition, classification and presentation and be explained by economic and contractual incentives, according to the Agency Theory and the Contract Theory of the Firm, using the Positive Accounting Theory (Holthausen & Leftwich, 1983; Holthausen, 1990; Watts, 1992; Fields, Lys & Vincen, 2001). Some studies have found evidence that accounting choices can also be explained by institutional incentives (mimetic, normative and / or coercive isomorphism) and the social context firms are inserted in, especially the choices related to the adoption of a certain accounting standard, namely the International Financial Reporting Standards – IFRS, a process that implies significant institutional change (Carpenter & Feroz, 2001, Jaafar & Mcleay, 2007; Collin, Tagesson, Andersson, Cato & Hansson, 2009; Nobes, 2006, 2013; Nobes & Perramon, 2013; Haller & Wehrfritz, 2013; Stadler & Nobes, 2014). Most studies only focus on accounting choice though, at the expense of multiple accounting choices simultaneously.

As noted by Fields et al. (2001), managers do not choose only one method, but rather a set of accounting policies simultaneously. In addition, there is a need to deepen the studies on accounting choices in the process of accounting convergence to IFRS, a standard adopted in 140 countries, including Brazil, which includes concomitant accounting choices, being based on principles, which demands more judgment by the drafters of the financial statements.

In Brazil, the convergence to IFRS was characterized by a particularity that distinguishes it from other countries that adopted this international accounting standard: the convergence happened in two phases. The first (partial) of which happened in 2008 and 2009 to meet legal accounting requirements (compliance with IFRS) and the second (complete) in 2010 to meet the other IFRS requirements. This situation turns Brazil into a unique case in the adoption of IFRS, which generates motivation and opportunity for the development of studies in this context and may offer a relevant contribution to the literature of accounting choices.

Regarding the two-phase adoption of the IFRS, it should be considered that the conditions at the time of the transition to IFRS (2008-2009) were different from the conditions as from 2010 onwards. Notable aspects of difference were the need to meet the legal changes in tax matters due to the companies' uncertainty regarding the tax neutrality the changes in accounting were subject to and the levels of knowledge and learning about the new standards.

The Accounting Pronouncements applicable as of 2010 comply with the determinations of the IFRS. In the second phase, companies were already more knowledgeable about standards and their applications and were no longer that concerned about complying with accounting and / or tax legislation. Thus, companies started to focus on other consequences deriving from the accounting convergence process; possibly related to economic and contractual aspects, as well as to the search for legitimacy of their accounting practices (institutional isomorphism).

In addition, Brazil is a code-law country and accounting convergence is linked to the enactment of laws, without which accounting changes are not possible. Law 11.638 / 2007 represents the legal basis that permitted the convergence of Brazilian accounting to IFRS and requires that large companies (total assets superior to R$ 240 million or with gross revenues superior to R$ 300 million reais), whether listed on a stock exchange or not, prepare and disclose their financial statements in accordance with the Accounting Pronouncements issued by the Accounting Pronouncements Committee (CPC), converging to IFRS and ratified by regulatory entities such as the Brazilian Securities Commission (CVM) and the Federal Accounting Council (CFC). In this sense, although the IFRS is an international accounting standard mainly aimed at investors and creditors, in Brazil, listed and unlisted companies have adopted it, turning these companies into a focus of studies on multiple accounting choices derived from the adoption of IFRS.

Other important aspects in the Brazilian institutional context are related to the level of development of the capital market, to the high concentration of property, which ends up affecting the development of the capital market (low access of companies to the market, as the intention is to maintain control), the absence of a consolidated market for long-term debt (predominance of restricted subsidized loans), among others (Torres & Costa, 2012; Caixe & Krauter, 2013; Marques, Guimarães e Peixoto, 2015). Thus, although the IFRS is an international accounting standard, mainly focused on investors and creditors, the Brazilian institutional context may have favored accounting choices that comply with institutional aspects to a greater extent than with economic and contractual aspects.

Some researchers have investigated the compliance of Brazilian companies with the IFRS (Santos, Ponte & Mapurunga, 2014), the impacts of the first phase of IFRS adoption in Brazil (Nogueira, Jucá, Macedo & Corrar, 2012; Santos, 2012), as well as of the full adoption (Domenico, Magro & Klann, 2014; Pires & Decourt, 2015) and also the accounting choices deriving from the convergence process (Lorencini & Costa, 2012; Murcia, Souza, Wuergues & Duarte, 2013; Costa, Silva & Laurencel, 2013; Costa & Freitas, 2014; Pinto, Martins & Silva, 2015; Cavalheiro, Gimenes & Binotto, 2019; Maciel, Salotti & Imoniana, 2020). These studies do not examine the multiple accounting choices companies make simultaneously though. Instead, they deal exclusively with listed companies and do not consider joint analyses of the two phases of IFRS adoption.

Therefore, in this study, we intend to investigate the following question: What are the corporate characteristics associated to the practice of multiple accounting choices in an environment of two-phase convergence to IFRS? The corporate characteristics, as used in this research, reflect economic, contractual and institutional incentives for making accounting choices.

To answer this question, the main objective of the study was to make a diagnosis of the accounting measurement, recognition, classification and presentation choices in 75 large companies in Brazil (these being listed and unlisted companies) between 2008 and 2013, which encompasses the transition to IFRS (2008-2009) and four years thereafter, as well as a survey of the corporate characteristics likely to be associated with these choices. The technique used was correspondence analysis.

The main contribution of this research is related to the fact that, unlike most previous studies on accounting choices, there is evidence that institutional characteristics are associated to a greater extent with the practice of accounting choices than economic and contractual characteristics, both during the transition period and after the full adoption of IFRS. This implies that, in the companies analyzed (listed and unlisted companies), accounting choices can be explained by economic and contractual characteristics, but only partially and to a lesser extent when compared to institutional characteristics. Therefore, the accounting choices in the companies surveyed may have been carried out for the sake of efficiency or even managers' opportunism, but there is evidence that they were more encouraged by institutional pressures and the search for legitimacy of accounting practices.

2 LITERATURE REVIEW

2.1 Theories Related to Accounting Choices

In line with Francis (2001), Holthausen (1990) and Nobes (2013), it is considered that accounting choices can: (i) include decisions by different agents and not only by managers; (ii) be influenced by contractual and economic interests; and (iii) be influenced by the institutional environment. Thus, the Contract Theory of the Firm, which deals with contractual issues between agents, Positive Accounting Theory, which deals with the microenvironment of decisions, that is, it focuses on the economic aspects related to the agents' behavior, and Institutional

Theory, which deals with the macro-organizational environment, are theories that can ground research on accounting choices.

In the Contract Theory of the Firm, accounting is seen as a system for implementing contracts or as a system of accountability, and needs to function effectively in an imperfect environment and with incomplete information (Sunder, 2014). Watts and Zimmerman (1986) propose that accounting is part of a set of (formal or informal) contracts of the firm, in which the stakeholders voluntarily agree to a wide set of accounting choices that can apply. Coase (1990) argues that a theory of the accounting system is part of the Theory of the Firm, insofar as it considers accounting as a valuable source of information on the behavior of the firm and which contributes to its development. The 'theory of accounting choices', described in Watts and Zimmerman (1986, 1990) is thus part of the Theory of the Firm, according to Watts (1992). As noted later, however, this view is incomplete, as there are other significant factors than contracts that affect accounting choices.

Watts and Zimmerman (1986; 1990) highlight the three hypotheses of Positive Accounting Theory that guide studies aimed at explaining and predicting accounting practices adopted in different organizations: bonus plan hypothesis, debt/equity hypothesis and political cost hypothesis. These hypotheses can be interpreted from an opportunistic perspective and from the perspective of efficiency, combined with conservatism.

In the opportunistic perspective, the three hypotheses of Positive Accounting Theory assume that managers choose accounting policies to maximize their own uses. In the perspective of efficiency, it is assumed that compensation contracts, internal control systems and, more generally, good corporate governance, limit opportunism and motivate managers to choose accounting policies to control contractual costs, thus benefiting the company and the shareholders.

Serving one's own or the company's interests is a rational view of accounting choices, but individuals can accept and follow social standards, without reflection or behavioral resistance (legitimation process), limiting themselves to defending their interests, which would then be an institutional view of accounting choices. Thus, a theory whose objective is to help explain accounting phenomena, based on behavior patterns, standard, beliefs and procedures that companies use to achieve legitimacy in the environment they operate in, is considered complementary to the purely economic view (Silva, Martins & Lemes, 2016).

Dillard, Rigsby and Goodman (2004) explain that the institution is an established order, which comprises standardized and rule-bound social practices, and institutionalization is the process by which the practices expected in various social contexts are developed and learned. In this sense, Institutional Theory considers that the organization needs to adapt to social standards of acceptable behavior, in addition to reaching levels of productive efficiency. Institutional Theory therefore explains accounting choices through the institutional pressure organizational actors are subject to, whether this pressure is coercive, mimetic or normative. DiMaggio and Powell (1983) point out that it may not always be possible to distinguish between the three forms of institutional pressure and, in fact, two or more of these pressures may be operating simultaneously, making it almost impossible to determine which form of institutional pressure was stronger in all the cases. In addition, the strength of the various institutional pressures can vary over time.

According to Silva et al. (2016), to 'construct a theory of accounting choices', one needs to understand the role of accounting in contractual relationships between stakeholders and how these relationships can affect the accounting choices (agency and monitoring costs), which is the task of the Contract Theory of the Firm. It is also necessary to recognize economic forces in the face of individual and selfish characteristics of human beings, a task Positive Accounting Theory covers. On the other hand, one cannot disregard the human capacity to build collective phenomena, with normative and cognitive configurations, called institutions, which curb, facilitate and influence actions and choices. Institutional Theory focuses on these collective phenomena. Thus, according to Silva et al. (2016), reconciling these three theories in the same effort to explain accounting choices, instead of dealing with isolated perspectives, which has been very frequent, can further the consistency in the scientific development of this research area.

2.2 Earlier Studies and Hypotheses Development

One branch of the literature on accounting choices suggests that these are made in order to maximize company wealth (efficient contracting perspective), to transfer wealth among the various agents (opportunistic perspective) or to provide information on future cash flows of the company, without affecting them directly (informational perspective). This is based on economic theories, such as Agency Theory and the Contract Theory of the Firm, and on the hypotheses of incentive plans, indebtedness and political costs, which are part of the Positive Accounting Theory (Holthausen & Leftwich, 1983; Holthausen, 1990; Watts, 1992; Fields et al., 2001).

Based on this perspective, a number of empirical studies have been developed, including economic and contractual incentives, reflected in company characteristics, namely profitability (Martínez, Martínez & Diazaraque, 2011; Costa et al., 2013), indebtedness (Missonier-Piera, 2004; Quagli & Avallone, 2010; Lorencini & Costa, 2012) and size (Astami & Tower, 2006; Costa & Freitas, 2014), involving one or more of these characteristics (Lourenço & Curto, 2010; Cole, Branson, & Breesch, 2013; Murcia et al., 2013; Israeli, 2015; Baik, Hyunkwon, Wooseok & Kwangjin, 2016; Gordon, Henry, Jorgensen & Linthicum, 2017; Maciel et al. 2020).

According to these studies, several stakeholders use profitability indices as a measure of company performance, because as stakeholders have expectations about the company's performance, managers are encouraged to make accounting choices that contribute to achieving the expected performance. Profitability is also used as a proxy for the existence of incentive plans linked to accounting figures as, the higher the profitability, the higher the remuneration, also considering that information about these plans may or may not be available to external users. Indebtedness is related to agency costs. In that case, accounting choices would be made to avoid breaches of contractual covenants. Larger companies tend to have higher levels of disclosure, more resources for financial reporting, and more incentives to analyze and select accounting criteria that minimize impacts on accounting figures (political costs).

In this sense, based on the Contract Theory of the Firm and Positive Accounting Theory, focusing on the economic and contractual incentives and considering the Brazilian context of the multi-phase IFRS adoption, the first set of research hypotheses is:

H1: (a) profitability, (b) indebtedness and (c) size are characteristics associated with the multiple accounting choices companies make in adopting IFRS.

This theoretical perspective is also found in the works of Bowen, DuCharme and Shores (1995, 1999), according to whom the joint treatment of traditional economic variables of the accounting choice literature and variables representing claims implicit in the companies' contractual relations with their stakeholders denotes that the latter variables have greater explanatory power of the accounting choices.

Bowen et al. (1995), based on theoretical and informal evidence, argue that claims implicit in contracts between the company and its short-term customers, suppliers, employees and creditors create incentives for management to make accounting choices to increase long-term revenues. This means that managers can use accounting policies to influence explicit contracts (for example, debt contracts), as well as implicit contracts (improving the company's reputation for maintaining relationships with customers, suppliers, employees and short-term creditors). According to the researchers, the implicit claims reflect agreements or expectations between the company and its stakeholders, which are often not written into contracts.

From this perspective, by analogy with the studies of Bowen et al. (1995, 1999), a variable that may represent customers' implicit contractual claims is the percentage of sales growth as, the more sales are made, the more future customer demands can occur. In the same line of reasoning, accounting choices may also be related to the dependence of suppliers' implicit claims and may be represented by the companies' level of inventories in relation to Total Assets.

Similarly, the intensity of the workforce, measured in this study by indicator 1 - (Fixed Assets / Total Assets), similarly to Bowen et al. (1995, 1999), denotes the implicit contractual claims of employees (the higher the indicator, the greater the workforce intensity and, consequently, the more implicit contractual claims by the employees can occur): Finally; the relation between short-term debts and total debts can be a representative variable of the short-term creditors' contractual claims (Bowen et al., 1995; 1999).

Based on the Contract Theory of the Firm and the Positive Accounting Theory, complemented by the analysis of the stakeholders' implicit contractual claims towards the companies, the second set of research hypotheses is presented:

H2: the implicit contractual claims of (a) customers, (b) suppliers, (c) employees and (d) short-term creditors are characteristics associated with the multiple accounting choices companies make in adopting IFRS.

The results of the studies mentioned are often contradictory and, based on these results, the aforementioned authors agree that many other causes, not necessarily economic and financial, can be added to explain the behavior of the agents in the companies in further depth. Thus, institutional pressures, reflected in characteristics such as listing on stock exchanges, sector, auditing and, especially, the country of origin (control) of companies, are significant in the research on accounting choices, notably under IFRS (Jaafar & Mcleay, 2007; Colin et al., 2009; Martínez et al., 2011; Haller & Wehrfritz, 2013; Nobes & Perramon, 2013; Stadler & Nobes, 2014) because they reflect the institutional context companies are inserted in.

An important concept of the institutional approach to scientific research is isomorphism, which is related to the fact that a business organization, for example, is impelled to resemble others under the same environmental conditions, which may help to explain and predict variations or uniformities in the use of certain accounting practices. Institutional theory, therefore, explains accounting choices through the institutional pressure organizational actors are subject to, whether this pressure is: (i) coercive, resulting from resource dependence, shared legislation, legitimacy problems, cultural expectations of society; (ii) mimetic, derived from conditions of uncertainty, imitation of legitimate and successful organizations; or (iii) normative, derived from the regulatory power of professional entities (DiMaggio & Powell, 1983).

Firms are under pressure from various actors that impose a variety of laws, regulations and expectations on the organization, and organizational responses depend on the multiplicity of these actors (Oliver, 1991). Guerreiro, Rodrigues and Craig (2012) affirm that shareholders are one of the most important users of financial statements and one of the most important actors to consider when companies choose an accounting standard.

In Brazil, the ownership structure is characterized by a strong concentration of ownership and control rights of in one shareholder or control block (Caixe & Krauter, 2013; Marques et al., 2015). In this case, institutional pressure comes from few owners or a single owner and accounting can be useful for maintaining control, for example. In companies with dispersed ownership, then, there is a greater probability of resistance to institutional pressures, due to the greater degree of multiplicity of actors (Oliver, 2001). As there is little direct intervention of the owner, in this circumstance, accounting can be more useful for accountability for example. Therefore, the ownership structure may be associated with accounting choices, with coercive isomorphism being implicit.

As the expectation was to find a predominance of companies with a high stockholder concentration, in this study, it was also evaluated whether the type of control (Brazilian or foreign) and the type of controlling shareholder (private or public) are associated to the accounting choices under coercive isomorphism. Thus, we consider that the national or foreign control exercised over the company can impregnate the accounting for aspects of countries' national economic culture, which may reflect in their accounting choices (Cieslewicz, 2014). Similar reasoning is used to determine if the type of controlling shareholder (private or state) is associated with accounting choices in companies, as there may exist different institutional pressures between the two groups, such as some specific legislation, and the company's property structure may be affected (on this last aspect, see Caixe & Krauter, 2013).

Research on accounting choices in non-listed companies, which therefore do not trade securities in the market, is scarce. Dependence on external markets as a source of financing can be an explanation for different accounting choices in listed and unlisted companies (Penno & Simon, 1986). Guerreiro et al. (2012) argue that, although the IFRS is an international standard focused primarily on meeting the needs of investors, institutional contexts can influence the choice of this standard, reinforcing the notion that organizational choices are not driven solely by economic rationality. Thus, in this study, from the institutional prism, under coercive isomorphism, it was assessed whether the trading of securities in the market (listed or unlisted company) is associated with accounting choices.

The accounting choices may also be related to the normative and / or coercive influence of the sector, especially if under specific regulation. In addition, companies in the same industry are expected to use the same corporate communication strategies, at risk of being punished by the market, or of incurring innovation costs (cost of using a different accounting policy than other companies in the industry), as suggested by the mimetic isomorphism of the Institutional Theory (DiMaggio & Powell, 1983; Collin et al., 2009; Martínez et al., 2011).

Finally, auditors can also influence accounting decisions. Collin et al. (2009) argue that auditors and audit firms are important actors in the process of institutionalizing accounting standards and, therefore, the Institutional Theory mechanism that can explain the influence of auditing on accounting choices is normative, as it follows legal determinations and exerts pressure on the audited companies by providing a clean or qualified opinion.

Thus, based on the aspects of the Institutional Theory, the third set of research hypotheses is:

H3 (a) ownership structure, (b) control, (c) type of controlling shareholder, (d) trading of securities in the Brazilian market, (e) sector and (f) audit are characteristics associated with accounting choices companies make in adopting IFRS.

Hence, in this study, three large sets of hypotheses are considered: the first (H1) involving economic and contractual characteristics; the second (H2) encompassing the implicit contractual characteristics (both based on the Contract Theory of the Firm and Positive Accounting Theory) and the third (H3) involving the institutional characteristics (deriving from Institutional Theory), according to the mechanisms of institutional isomorphism. This means that, in order to understand (explain) the accounting choices, it is necessary that the combination of economic, contractual and institutional variables be observed, otherwise leading to a partial view of the accounting choices.

The main aspect of this research is the study of the hypotheses in the two distinct periods of convergence to IFRS: in the period during the adoption (2008-2009) and after the full adoption (2010-2013). Thus, for analytic purposes, each hypothesis is tested in both periods (during the adoption of IFRS and after the full adoption).

3 METHODOLOGICAL ASPECTS

A quantitative and documentary study with primary and secondary data collection was undertaken. To investigate large Brazilian companies (listed and unlisted) that adopted IFRS, as required by Brazilian legislation, inclusion in the ranking of the Journal Exame Melhores e Maiores was used as a sample selection criterion. Thus, the survey sample consists of 75 large companies (listed and unlisted corporations) that are among the 100 largest companies in Brazil according to the 2013 ranking of Exame Melhores e Maiores. The sample was thus constituted because 25 (notably limited companies) of the 100 largest companies were excluded due to inaccessibility to their complete financial statements. The review period includes the years of transition to IFRS (2008-2009, partial adoption) and 4 years of full adoption (2010-2013, full IFRS).

Based on the definitions of accounting choices by Watts (1992) and Fields et al. (2001), widely diffused in the literature, and by analogy with the studies of Nobes (2006; 2013), accounting choices, in this study, are choices among accounting policies of measurement, recognition, classification and presentation, explicit in IFRS, equally valid to deal with the same economic event, which also comply with Brazilian accounting legislation and are monitored by external auditors. The scope of this research is limited to that definition. In this study, the accounting choices are variables collected from primary sources, that is, directly from the investigated companies' financial statements. Twelve accounting choices were selected with their analytic categories, which covered the two phases in the adoption of IFRS in Brazil, as demonstrated in Figure 1.

Events (Variables)	**Standards**	**Accounting Choices (Categories)**
Accounting Choices of Measuring		
1. Inventories	CPC 16/IAS 2	Mean cost
		FIFO
2. Depreciation (rates)	CPC 27/IAS 16	Economic rates
		Others
Accounting Choices of Recognition		
3. Depreciation	CPC 27/IAS 16	Straight-line
		Decreasing balances
		Units produced
4. Operational leasing installments	CPC 06/IAS 17	Straight-line
		On systematic base
5. Subsidies related to assets	CPC 07/IAS 20	Deferred income (Liabilities)
		Asset deduction
6. Subsidies related to income	CPC 07/IAS 20	Revenue
		Expense deduction
7. Regular purchase or sale of financial assets	CPC 14/CPC 38/IAS 39	Trading date
		Settlement date
Accounting Choices of Classification		
8. Interests paid	CPC 03/IAS 7	Operating CF
		Financing CF
9. Dividends and IOOC paid	CPC 03/IAS 7	Operating CF
		Financing CF
10. Interests received	CPC 03/IAS 7	Operating CF
		Investment CF
11. Dividends and IOOC received	CPC 03/IAS 7	Operating CF
		Investment CF
Accounting Choices of Presentation		
12. CFS	CPC 03/IAS 7	Direct method
		Indirect method

Figure 1 – Accounting choices investigated between 2008 and 2013
Obs.: FIFO: First in; first out; CF: Cash Flow; IOOC: Interest on Own Capital; CFS: Cash Flow Statement; CPC: Accounting Pronouncement converging with International Accounting Standards (IAS).

Source: Prepared by the authors.

During the data collection, the term "not applicable" (na) was used whenever the company did not use a certain accounting policy due to the absence of an economic event to be accounted for. The term "not available" (nd) was used whenever the company did not disclose the accounting policy, although it has accounted for a specific economic event. Thus, "non-disclosure" was also analyzed as a company's choice not to disclose the accounting policy. The materiality of the economic event related to the accounting choice was not verified, which may justify the lack of disclosure of the related accounting policy.

In addition to the accounting choices, based on the literature, the corporate characteristics analyzed were defined along with the theories, the corresponding hypotheses, the constructs and the authors that support them (Figure 2).

Theories	**H**	**Characteristics**	**Denomination**	**Constructs**	**Authors**
Contract Theory of the Firm and Positive Accounting Theory	1a	ROE*	Profitability	Net income / Mean net equity	Martínez *et al.* (2011); Costa *et al.* (2013); Maciel *et al.* (2020)
	1b	IND*	Indebtedness	Debts/Total assets at the end of each year	Missonier-Piera (2004); Quagli and Avallone (2010); Lorencini and Costa (2012); Maciel *et al.* (2020)
	1c	SIZ*	Size	Total assets at the end of each year	Astami and Tower (2006); Quagli and Avallone (2010); Lorencini and Costa (2012); Costa *et al.* (2013); Costa and Freitas (2014); Maciel *et al.* (2020)
	2a	CLI*	Clients	% sales growth at year end in relation to previous year	By analogy with the study by Bowen *et al.* (1999)
	2b	SUPP*	Suppliers	Inventories/Total assets at year end	Bowen *et al.* (1999)
	2c	EMPL*	Employees	1 – (Fixed assets/Total assets) at year end	
	2d	CRED*	Short-term creditors	Short-term debt/Total debt at year end	Bowen *et al.* (1999); Missonier-Piera (2004)

Theories	H	Characteristics	Denomination	Constructs	Authors
Institutional theory	3a	PROP*	Property structure	Percentage of total stock held by main stockholder in each year	Similarly to the studies by Oliver (1991); Guerreiro *et al.* (2012); Caixe and Krauter (2013); Marques *et al.* (2015)
	3b	CONT	Control	Brazilian or foreign, in each year	By analogy with the studies by Guerreiro *et al.* (2012) and Cieslewicz (2014)
	3c	TYPE_CS	Type of controlling stockholder	Private or state-owned, in each year	By analogy with the studies by Guerreiro *et al.* (2012) and Caixe and Krauter (2013)
	3d	TRAD	Securities trading in Brazilian market	Liste dor unlisted company in each year	By analogy with Penno and Simon (1986) and Guerreiro *et al.* (2012)
	3e	SECTOR	Sector	Activity sector of each company in each year	Jaafar and Mcleay (2007); Collin *et al.* (2009); Martínez *et al.* (2011); Nobes and Perramon (2013); Haller and Wehrfritz (2013); Cole *et al.* (2013); Stadler and Nobes (2014)
	3f	AUD	Auditing	Auditing of each company in each year (Big Four or others)	Collin *et al.* (2009); Martínez *et al.* (2011); Lorencini and Costa (2012); Costa and Freitas (2014)

Figure 2 – Corporate characteristics analyzed
* Quantitative corporate characteristics later categorized for the application of correspondence analysis.
Source: Prepared by the authors.

The initially quantitative characteristics were categorized by means of the third criterion: until the first third, low; between the first and second third, medium; superior to the second third, high, as demonstrated in Table 1. The third criterion is a frequency measure that does not take into account the existence of outliers. The remaining characteristics are by nature categorical, such as: Brazilian or foreign control, audited by the Big Four or others etc.

Table 1
Categories of quantitative characteristics

		ROE	IND	SIZ*	CLI	SUPP	EMPL	CRED	PROP
N	Valid	448	438	449	442	414	444	435	432
	Absent	2	12	1	8	36	6	15	18
Minimum		-978.37	0.02	250,703	-51.16	0.03	0.11	0.41	25.13
Maximum		371.42	78.77	752,966,638	2,804.96	47.92	1.00	100.00	100.00
Mean		19.32	27.54	22,678,394	26.81	10.58	0.66	31.90	77.32
Standard deviation		77.00	17.40	68,653,249	138.53	10.29	0.21	26.33	25.16
1st third	Until	7.66	18.98	4,946,771	7.74	2.60	0.58	15.39	57.59
2nd third	Between	7.66	18.98	4,946,771	7.74	2.60	0.58	15.39	57.59
		23.53	34.63	13,180,539	19.76	13.98	0.80	33.67	100.00
3rd third	As from	23.53	34.63	13,180,539	19.76	13.98	0.80	33.67	100.00

* Values in thousands reais; decimal digits omitted.
Obs.: N: number of observations; ROE: profitability; IND: indebtedness; SIZ: size; CLI: clients; SUPP: suppliers; EMPL: employees; CRED: short-term creditors; PROP: property structure.
Source: Prepared by the authors.

Information on the ownership structure of the listed companies was obtained from the Comdinheiro database, which extracts the numbers directly from B3, while the information from the unlisted companies was obtained from the publication Grandes Grupos of the newspaper Valor Econômico, for each year. The verification if the company trades securities in the domestic market was made by the CVM website, in each year. The information on control, type of controlling shareholder and sector were collected from the website of the Magazine Exame Melhores e Maiores for all companies, while information on the audit was collected directly from each financial statement, year by year. The data required for the composition of the other variables of the listed companies were collected from the Comdinheiro database and, in the case of unlisted companies, all data was manually collected from the financial statements of each company for each year.

The collected data were analyzed descriptively, to identify the characteristics of the companies and the diagnosis of the accounting choices of measurement, recognition, classification and presentation made. Then, the correspondence analysis technique was used to identify the association between the accounting choices and the selected variables.

According to Fávero and Belfiore (2015), correspondence analysis is a bivariate analysis technique through which the association between two categorical variables and between their categories is studied, as well as its intensity, based on a contingency table (or cross-tabulation).

Fávero, Belfiore and Fouto (2006) explain that correspondence analysis uses the chi-squared test (χ^2) to standardize the frequency coefficients and ground the associations. Based on a contingency table, which presents the observed absolute frequencies of the categories of two variables, in which a given cell ij contains a given number n_{ij} (i = 1, ..., I and j = 1, ..., J) of observations, the expected frequencies and χ^2 are calculated for each cell, considering the differences between the observed and expected frequencies. χ^2 is given by:

$$\chi^2 = \sum_{i=1}^{I}\sum_{j=1}^{J}\frac{\left[n_{ij} - \left(\frac{\sum c_j . \sum l_i}{N}\right)\right]^2}{\left(\frac{\sum c_j . \sum l_i}{N}\right)}$$

χ^2 corresponds to the sum, for all cells, of the coefficients corresponding to the ratio between the squared residue and the expected frequency in each cell. For (I - 1) x (J - 1) degrees of freedom and a given significance level, if the total χ^2 coefficient is higher than its critical value, it can be argued that a statistically significant association exists between two categorical variables, that is, the frequency distribution of the categories of a variable according to the categories of another is not random and, therefore, a pattern of dependence exists between those variables (Fávero & Belfiore, 2015). In summary, χ^2 is based on the comparison of frequencies observed in certain categories, with the frequencies expected in these categories.

In this study, we tested the association between each possible accounting choice and each economic, contractual and institutional characteristic, using the χ^2 statistic. Subsequently, the adjusted standardized residuals were analyzed for cases where the χ^2 statistic was significant (≤0.05), which permitted verifying the association between each category of accounting choice and each category of corporate characteristics. These analyses were developed in each period (during and after the adoption of IFRS).

4 RESULTS AND DISCUSSION

4.1 Company Characteristics

The large companies analyzed in this study had an annual average profitability around 20% in the period studied (2008-2013). More than 60% of the capital structure of these companies correspond to equity, approximately one third of the debt in the period is short-term, common characteristics in the Brazilian market, mainly because there is no consolidated long-term debt market in Brazil. In the sample, there was also an expressive average sales growth in the period (27%), average inventory level around 10% in relation to total assets and high labor intensity.

The survey also revealed that, on average, 77% of the total shares of the companies analyzed are in the possession of a single shareholder, as well as the fact that most large companies are not publicly traded and their capital is controlled by a few private national investors. The companies in the sample are almost all audited by one of the Big Four and most of them do not belong to an economic sector with specific regulation.

4.2 Diagnosis of Accounting Choices

It was found that the accounting choice of recognition of the regular purchase and sale of financial assets was not applicable or not identifiable in most of the companies in the sample. Other accounting choices presented high frequency of events centered in only one category, which is the case: of the measurement of inventories (average cost); recognition of depreciation (straight-line method) and asset-related subsidies (deferred income in liabilities); classification of interest received in the operating cash flow; and the presentation of the CFS by the indirect method. In this sense, the analyses and consequent evaluation of the hypotheses were applied to six accounting choices, as presented in Table 2, within the criteria proposed in the study.

Table 2
Accounting choices in sample companies

		Quantity of companies					
		2008	**2009**	**2010**	**2011**	**2012**	**2013**
Depreciation rates	Economic	35	40	52	57	58	59
	Tax	25	21	12	8	7	6
	Regulatory	8	8	3	3	3	3
	Not applicable	3	2	6	6	6	6
	Not available	4	4	2	1	1	1
	Total	75	75	75	75	75	75
Operating leasing	Straight-line	14	24	42	46	47	47
	Systematic base	5	5	4	4	4	4
	Not applicable	52	43	27	23	22	23
	Not available	4	3	2	2	2	1
	Total	75	75	75	75	75	75
Subsidies related to Income	Revenues	8	9	13	16	18	19
	Deduction of spending	3	4	5	5	5	7
	Not applicable	62	60	55	51	49	46
	Not available	2	2	2	3	3	3
	Total	75	75	75	75	75	75
Interests paid	Operating cash flow	59	58	55	54	55	55
	Financing cash flow	14	16	20	21	20	20
	Not applicable	2	1				
	Total	75	75	75	75	75	75
Dividends and IOOC Paid	Financing cash flow	63	62	65	66	66	67
	Operating cash flow	5	6	6	6	6	6
	Investment cash flow						1
	Not applicable	7	7	4	3	3	1
	Total	75	75	75	75	75	75
Dividends and IOOC Received	Operating cash flow	30	32	31	32	32	32
	Investment cash flow	14	16	20	20	20	22
	Financing cash flow	4	1				1
	Not applicable	27	26	24	23	23	20
	Total	75	75	75	75	75	75

Obs.: IOOC: Interest on Own Capital
Source: Prepared by the authors.

Concerning the depreciation rates, it was verified that most of the companies used economic rates in the years 2008 and 2009. There was a 68.6% increase in the number of companies that used economic depreciation rates between 2008 and 2013, showing an even greater increase as from the adoption of IFRS. The dissociation of accounting from tax aspects favored the use of economic depreciation rates even before the full adoption of IFRS in 2010. This result partially resembles, that of Telles and Salotti (2015), who also demonstrated increased use of economic depreciation rates in companies listed in Brazil after the adoption of IFRS. It could also be verified that some companies chose to use regulatory depreciation rates in their accounting statements for corporate purposes (energy companies).

The information on the recognition of the operating lease installments was not disclosed in 2008 and 2009, and is included in the explanatory notes of the companies fairly frequently as of 2010. Most of the companies surveyed recognize the payments of operating leases by the straight-line method, while a minority recognizes such payments on a systematic basis. Companies in the Spanish market also preferred this option, according to Martínez et al. (2011), as well as companies from seven European countries, as Cole et al. (2013) concluded.

Subsidies related to income in most companies were recognized as income rather than deduction of related expenses. This result resembles the Spanish market, considering the study by Martínez et al. (2011).

It was also observed that a larger number of companies in the sample preferred to classify the interest paid and the dividends and interest on own capital received in the operating cash flow, and the dividends and interest on equity paid in the financing cash flow, following the recommendation of Brazilian legislation (item 34A, CPC 03). This recommendation is not present in the corresponding international standard (IAS 7). Similar results were found in the works of KPMG and Von Keitz (2006) and Scherer, Teodoro, Kos and Anjos (2012). They similarly corroborate the findings by Cole et al. (2013), except for the dividends received, which the companies these authors surveyed mainly classified in the investment cash flow.

4.3 Application of Correspondence Analysis

The existence of a statistically significant association (sig≤0.05) between the accounting choices analyzed and the corporate characteristics was verified through the χ^2 test, as shown in Table 3. As can be seen in this table, there is a statistically significant association at 5% between the measurement, recognition and classification accounting choices and one or more economic, contractual and institutional characteristics of the companies, during and after the adoption of the IFRS, that is, the variables are not associated in a random way and therefore, there is a pattern of dependence between these variables.

Table 3
Results of χ^2 test for accounting choices and corporate characteristics

	Depreciation rates						**Leasing**					
	During the adoption of IFRS			**After the adoption of IFRS**			**During the adoption of IFRS**			**After the adoption of IFRS**		
Corporate Characteristics	**Value**	**df**	**Sig.**	**Value**	**df**	**Sig.**	**Value**	**df**	**Sig.**	**Value**	**df**	**Sig.**
ROE	5.697	6	0.458	9.257	6	0.160	3.441	4	0.487	10.492	4	0.033*
IND	5.017	6	0.542	37.794	6	0.000*	10.167	4	0.038*	16.374	4	0.003*
SIZ	18.926	6	0.004*	21.168	6	0.002*	1.602	4	0.808	7.574	4	0.108
CLI	13.686	6	0.033*	9.944	6	0.127	1.341	4	0.854	2.812	4	0.590
SUPP	40.314	6	0.000*	38.774	6	0.000*	1.616	4	0.806	15.975	4	0.003*
EMPL	21.309	6	0.002*	39.448	6	0.000*	0.697	4	0.952	5.264	4	0.261
CRED	10.959	6	0.090	35.847	6	0.000*	3.975	4	0.409	8.017	4	0.091
PROP	31.856	6	0.000*	16.990	6	0.009*	6.017	4	0.198	14.166	4	0.007*
CONT	11.697	3	0.008*	11.429	3	0.010*	5.411	2	0.067	9.267	2	0.010*
TYPE_SH	20.542	3	0.000*	8.200	3	0.042*	2.836	2	0.242	4.441	2	0.109
TRAD	29.197	3	0.000*	25.519	3	0.000*	0.486	2	0.784	4.649	2	0.098
SECTOR	192.787	45	0.000*	309.106	45	0.000*	48.322	26	0.005*	133.859	2	0.000*
AUD	23.477	9	0.005*	54.521	9	0.000*	7.170	2	0.028*	19.041	2	0.000*

Corporate Characteristics	Subsidies related to Income						Interests Paid					
	During the adoption of IFRS			After the adoption of IFRS			During the adoption of IFRS			After the adoption of IFRS		
	Value	df	Sig.	Value	df	Sig.	Value	df	Sig.	Value	df	Sig.
ROE	7.660	4	0.105	10.187	4	0.037*	0.767	2	0.681	2.338	2	0.311
IND	1.691	4	0.792	1.338	4	0.855	1.249	2	0.536	0.985	2	0.611
SIZ	7.244	4	0.124	10.479	4	0.033*	9.140	2	0.010*	12.473	2	0.002*
CLI	7.730	4	0.102	3.488	4	0.480	13.600	2	0.001*	6.574	2	0.037*
SUPP	0.620	4	0.961	7.594	4	0.108	3.288	2	0.193	2.119	2	0.347
EMPL	8.886	4	0.064	16.323	4	0.003*	3.380	2	0.185	3.625	2	0.163
CRED	6.692	4	0.153	6.174	4	0.187	1.987	2	0.370	0.193	2	0.908
PROP	2.192	4	0.701	7.534	4	0.110	3.229	2	0.199	0.124	2	0.940
CONT	1.815	2	0.404	0.744	2	0.689	4.674	1	0.031*	6.682	1	0.010*
TYPE_SH	1.394	2	0.498	6.188	2	0.045*	5.936	1	0.015*	0.094	1	0.760
TRAD	0.684	2	0.710	6.940	2	0.031*	3.084	1	0.079*	1.884	1	0.170
SECTOR	17.106	14	0.251	60.722	20	0.000*	34.933	15	0.003*	77.153	15	0.000*
AUD	6.993	4	0.136	15.897	4	0.003*	2.744	3	0.433	6.252	3	0.100

Corporate Characteristics	Dividends and IOOC Paid						Dividends Received					
	During the adoption of IFRS			After the adoption of IFRS			During the adoption of IFRS			After the adoption of IFRS		
	Value	df	Sig.	Value	df	Sig.	Value	df	Sig.	Value	df	Sig.
ROE	4.910	2	0.086	0.093	2	0.955	1.060	2	0.588	0.199	2	0.905
IND	2.712	2	0.258	1.589	2	0.452	1.529	2	0.466	2.108	3	0.348
SIZ	5.604	2	0.061	17.425	2	0.000*	3.898	2	0.142	11.229	2	0.004*
CLI	2.097	2	0.351	7.204	2	0.027*	0.957	2	0.620	2.337	2	0.311
SUPP	1.264	2	0.531	2.972	2	0.226	17.781	2	0.000*	30.554	2	0.000*
EMPL	11.504	2	0.003*	6.393	2	0.041*	1.874	2	0.392	4.312	2	0.116
CRED	10.252	2	0.006*	8.228	2	0.016*	4.670	2	0.097	0.294	2	0.863
PROP	0.814	2	0.666	3.848	2	0.146	4.950	2	0.084	0.956	2	0.620
CONT	3.717	1	0.054*	9.503	1	0.002*	0.792	1	0.374	1.962	1	0.161
TYPE_SH	2.063	1	0.151	4.223	1	0.040*	0.279	1	0.597	0.005	1	0.941
TRAD	5.309	1	0.021*	10.245	1	0.001*	0.330	1	0.566	0.418	1	0.518
SECTOR	13.430	15	0.569	40.794	15	0.000*	21.593	14	0.087	48.400	15	0.000*
AUD	2.102	3	0.551	1.271	3	0.736	3.904	3	0.272	0.726	3	0.867

Obs.: ROE: profitability; IND: indebtedness; SIZ: size; CLI: clients; SUPP: suppliers; EMPL: employees; CRED: short-term creditors; PROP: property structure; CONT: control; TYPE_SH: type of controlling stockholder; TRAD: securities trading in Brazilian market; AUD: auditing; df: degrees of freedom; *Sig ≤ 0.05.
Source: Prepared by the authors.

Based on the test applied and the analysis of the adjusted standardized residues, which demonstrate the characteristic standards of each category of accounting choice according to the surplus or lack of events of its combination with each category of corporate characteristic, the relation of dependence between each pair of categories of the associated variables can be understood. Hence, the main conclusions drawn from the analyses made are presented next.

4.3.1 Concerning the Economic and Contractual Characteristics

As 1.96 is the critical value of the standardized normal distribution for a 95% confidence level, if a certain standardized residue is superior to this value, it can be affirmed that there is no randomness in the association between the categories. What the economic and contractual characteristics are concerned, the standardized residues superior to the critical value resulted in the associations demonstrated in Figure 3.

Economic and Contractual Characteristics	Accounting choices	
	During adoption of IFRS	**After adoption of IFRS**
Low profitability	-0-	Leasing on systematic bases; subsidies as expense deduction
Medium profitability	-0-	Subsidies as revenues
High profitability	-0-	Non-disclosure of subsidy policy
Low indebtedness	Non-disclosure of leasing installment policy	Tax rates; leasing on systematic bases
Medium indebtedness	Straight-line leasing	Straight-line leasing
High indebtedness	-0-	Non-disclosure of leasing recognition policy
Low size	Interests paid on flow of funding	Non-disclosure of subsidy recognition policy; interests paid on flow of funding; dividends received on investment flow
Average size	Regulatory rates	Regulatory and not-disclosed rates; dividends paid on operating flow; dividends received on operating flow
High size	Economic rates	Economic rates; subsidies as deduction; interests paid on operating flow; dividends paid on funding flow

Figure 3 – Associations between economic and contractual characteristics and accounting choices.
Source: Prepared by the authors.

Low indebtedness is a feature associated with the choice of depreciation tax rates and high indebtedness is a feature that is associated with non-disclosure of depreciation rates. This result may be an indication that some sample firms have maintained the use of tax rates for depreciation of their property, plant and equipment after the adoption of IFRS or did not disclose depreciation rates to avoid possible breaches of covenants in debt contracts and the occurrence of contractual costs.

This is justified because, according to the Contract Theory of the Firm and Positive Accounting Theory, many contractual covenants are based on accounting figures, which can be impacted by the value of the depreciation. Changes in depreciation rates have a direct impact on Fixed Assets and costs and / or expenses, which affect the income, causing changes in the equity components. Consequently, indices that can be used as contractual covenants will be affected. Therefore, in the companies surveyed, the characteristic indebtedness can be an incentive for the choice of fiscal depreciation rates, as well as for the choice not to disclose the depreciation rates.

Regarding the choice of economic depreciation rates, the results found corroborate the theoretical forecasts, as the use of rates that reflect the economic useful life of fixed assets (economic rates) is a requirement of current accounting standards (CPC 27, correlated with IAS 16) and, according to the literature, larger companies tend to have more incentives to analyze and select accounting criteria that minimize impacts on the disclosed information (political costs).

Regarding the regulatory depreciation rates, it is important to clarify that these were used by public service concessionaires, notably from the energy sector, who chose to follow the regulator's determinations also in the corporate accounting statements, reflecting the normative and / or coercive influence of a sector under specific regulation or even sectorial mimicking, in which these companies use the same accounting practices to avoid incurring market punishment risks or costs of using a different accounting treatment. In turn, the association between average size and choice not to disclose depreciation rates partially contradicts the theoretical forecasts as, in the sample, medium-sized companies possess Total Assets between 4.9 and 13.1 billion reais, that is, they are large companies that did not disclose relevant information, which can incur political costs.

Profitability and indebtedness indices may be impacted in accordance with the accounting policy chosen to recognize the operating lease installments, as the recognition criterion affects the amount of expenses recorded in the income statement and, consequently, equity elements that make up these indices. In this sense, companies may have chosen a certain accounting policy to recognize this expense that prevents fluctuations in the profitability and indebtedness indices, so as not to affect the stakeholders' expectations on company performance or even avoid reflexes in incentive plans based on accounting figures in the case of profitability, and the commitment of contractual covenants in the case of indebtedness. The results found partially support the theoretical predictions as, among the economic and contractual characteristics analyzed, the size of the company does not seem to be an incentive for the accounting choices made to recognize the operational lease installments in the companies surveyed during and after the adoption of IFRS in Brazil.

In economic terms, the impact of the recognition of income-related subsidies as income or expense deduction is the same, both in income and in equity. In terms of components of the result and information for the purpose of economic and financial analysis, however, there may be an impact, considering that the recognition as revenue offers a clear comparison between expenses not affected by the subsidy, while recognition as a deduction clearly shows which expenditure is incurred and compensated by the subsidy. Generally, it is observed that the economic and contractual characteristics partially explain accounting choices of recognizing the subsidies related to the income in the sample companies after the adoption of the IFRS, as these were associated with the profitability and the size, but not with indebtedness.

It can be seen in Figure 3 that the low size is associated to the classification choice of the interests paid in the financing cash flow, during and after the adoption of IFRS, and the high size is associated with the classification choice of the interest paid in the operating cash flow after the adoption of IFRS. These results partially differ from the literature.

At first, it is verified that the size of the companies analyzed is related to the classification of the interest paid in the CFS, as the studies by Cole *et al.* (2013) and Baik *et al.* (2016) affirm. Baik *et al.* (2016) argue, however, that larger firms have more incentives to increase the operational cash flow by choosing to classify interest paid on the cash flow from financing. This situation occurs in the sample surveyed, however, in relation to the lowest level of size, according to the parameters adopted in the study, during and after the adoption of the IFRS. In turn, the largest companies in the sample chose to classify interest paid in the operating cash flow after the adoption of the IFRS, thus reducing this flow.

No association was found between profitability and the classification choice of the interest paid in the CFS, corroborating the study by Gordon *et al.* (2017), which surveyed European companies, and by Maciel *et al.* (2020), which was focused on Brazilian listed companies. No relationship was found either between indebtedness and this choice of classification, which goes against the findings by Maciel *et al.* (2020), Gordon *et al.* (2017) and Baik *et al.* (2016), which demonstrated that the debt situation is an incentive for ratings that increase the operating cash flow in Brazilian listed companies, in the European and South Korean market, respectively.

As occurred with the classification choices of the interest paid, between the economic and contractual characteristics, only the size was somehow associated with the classification choice of the dividends paid. These results partially resemble the study by Gordon *et al.* (2017), as discussed earlier in relation to the classification choices of interest paid.

Classifying the dividends paid in the cash flow from financing is a choice that increases the operational cash flow and some of the sample companies took this decision, considered the largest, according to the parameters adopted in the study, after the adoption of IFRS. The situation of indebtedness and profitability does not seem to be an incentive to increase the operational cash flow in the companies surveyed though during and after the adoption of the IFRS.

Concerning the association between the accounting choices to classify the dividends received and the economic and contractual characteristics, the findings in the sample surveyed go against the literature forecasts regarding the transition period to IFRS and partially offset these forecasts in the period after the adoption of the IFRS, as there was an association between size and the classification choice of dividends received after the adoption of IFRS.

Therefore, it is also verified that, concerning the accounting choices to classify in the CFS, the economic and contractual characteristics offer incomplete explanations, in accordance with the results found in the sample surveyed, during and after the adoption of the IFRS.

4.3.2 Concerning the Implicit Contractual Characteristics

According to the studies by Bowen *et al.* (1995; 1999), in addition to the explicit contractual requirements (written in the contracts), implicit contractual claims (not written in contracts) on the part of the stakeholders exist in relation to the companies. These implicit contractual claims are based on the reputation hypothesis, that is, companies will seek ways to maintain their reputation towards short-term customers, suppliers, employees and creditors, so that they can meet the demands of these stakeholders, including accounting choices that may reflect the company performance in the long run.

In this sense, the implicit contractual claims of suppliers and employees are associated with the choice of the depreciation rates performed in the companies surveyed during and after the adoption of the IFRS, to a greater or lesser extent (high, medium or low reliance on implicit contractual claims, according to the categorization parameters of the variables adopted in this study). Implicit contractual claims of clients are associated with the choice of depreciation rates during the adoption of IFRS, while the implicit contractual claims of short-term creditors are associated with the choice of depreciation rates after the adoption of IFRS, to a greater or lesser extent, as shown in Figure 4.

Implicit Contractual Characteristics	**Accounting choices**	
	During the adoption of IFRS	**After the adoption of IFRS**
Low clients	Regulatory rates; interests paid on operating flow	Interests paid on operating flow; dividends paid on financing flow
Medium clients	-0-	-0-
High clients	Interests paid on flow of funding	Interests paid on financing flow; dividends paid on operating flow
Low suppliers	Regulatory rates; dividends received on operating flow	Regulatory rates; dividends received on operating flow
Medium suppliers	-0-	Economic rates; non-disclosure of leasing recognition policy
High suppliers	Fiscal rates; dividends received on investment flow	Non-disclosure of rates; dividends received on investment flow
Low employees	Regulatory rates; dividends paid on financing flow	Regulatory rates; dividend paid on financing flow
Medium employees	-0-	Economic rates; non-disclosure of subsidy recognition policy
High employees	Tax rates; dividends paid on operating flow	Tax rates; subsidies as deduction; dividends paid on flow of funding
Low short-term creditors	-0-	Regulatory rates
Medium short-term creditors	Dividends paid on flow of funding	Economic rates; dividends paid on flow of funding
High short-term creditors	Dividends paid on operating flow	Tax rates and non-disclosure of rates; dividends paid on operating flow

Figure 4 – Associations between implicit contractual characteristics and accounting choices
Source: Prepared by the authors.

The dependence on implicit contractual claims of suppliers, employees and short-term creditors, at medium level and after the adoption of IFRS, is associated with the choice of economic depreciation rates. This result is in line with what the literature predicts, given that, for the companies in the sample, maintaining their reputation towards these stakeholders is an incentive for the use of economic depreciation rates.

High dependence on implicit contractual claims of employees during and after the adoption of IFRS, as well as high dependence on implicit contractual claims of suppliers and short-term creditors during and after the adoption of IFRS, respectively, are associated with the choice of depreciation rates. Similarly, high reliance on implicit contractual claims from suppliers and short-term creditors after the adoption of IFRS is associated with non-disclosure of depreciation rates.

According to these results, there are indications that these stakeholders' high demand on the companies encourages the use of fiscal depreciation rates or non-disclosure of rates, even after the adoption of IFRS. The maintenance of the fiscal depreciation rates or the non-disclosure of the rates suggests that changes in the depreciation values will not affect the companies' economic-financial performance indicators, thus maintaining the companies' status quo. Similarly, it appears that information on depreciation rates is not relevant for these companies to maintain their reputation towards other stakeholders, considering that the use of economic rates would better reflect the pattern of economic benefits of the assets, in addition to the fees the accounting standards in force require.

It is also noted that the low dependence on implicit contractual claims of suppliers and employees during and after the adoption of IFRS and the low dependence on implicit contractual claims of clients and short-term creditors during and after the adoption of IFRS, respectively, are associated with the choice of regulatory depreciation rates. This means that the demands of these stakeholders can influence this accounting choice of measurement. As the use of regulatory depreciation rates is a common practice of the energy industry, as stated above, it is natural for companies to maintain them in order to preserve their reputation towards the stakeholders and contractual relationships established, considering that a change in depreciation rates directly influences the Fixed Assets, the determination of costs and / or expenses, the result, Shareholders' Equity and, indirectly, the total Asset value and several indicators that can be used to evaluate companies' economic-financial situation.

In general, it is noted that the implicit contractual claims of clients, suppliers, employees and short-term creditors offer additional explanations for the choices of depreciation rates (accounting choices of measurement) made in large companies in Brazil during and after the adoption of IFRS.

Concerning the implicit contractual incentives to make accounting choices for the recognition of operating lease, the results of Figure 4 only indicate an association between the medium dependence on implicit contractual claims of suppliers and non-disclosure of the accounting policy for the recognition of operating lease installments after the adoption of IFRS. This suggests that, although the accounting policy has not been disclosed, this non-disclosure does not imply the absence of economic effects resulting from the recognition of operational lease installments towards suppliers.

Therefore, for the sample surveyed, implicit contractual claims from clients, employees and short-term creditors do not seem to offer explanations for the operational lease recognition choices made during and after the adoption of IFRS in Brazil. The implicit contractual claims do not seem to offer explanations for the accomplishment of this accounting choice during the adoption of IFRS in Brazil.

Concerning the implicit contractual incentives for making accounting choices for the recognition of income-related subsidies, the findings suggest that only the implicit contractual claims of employees may provide a complementary explanation for the practice of these accounting choices in large companies in Brazil after the adoption of the IFRS.

As shown in Figure 4, client demands may encourage to a greater extent the classification of interest paid in the cash flow of financing, as a good capacity to generate operating cash flows may reflect in a good reputation towards clients. No associations were found, however, between the classification choice of the interests paid and implicit contractual claims of the other stakeholders analyzed. Thus, there are indications that the stakeholders' implicit contractual claims offer some complementary explanations for the accounting choices made in the classification of interests paid in large companies in Brazil, during and after the adoption of IFRS.

Also, according to the results presented in Figure 4, for the companies in the sample, there are indications that classifying dividends paid in the operating cash flow, causing a decrease in this flow, is irrelevant for their reputation towards clients, employees and short-term creditors, as there is a greater association between the demands of these stakeholders and the classification of dividends paid in the operational flow. Thus, the dependence of implicit contractual claims offers some complementary explanations for large companies' practice of accounting choices concerning the classification of dividends paid in the CFS in Brazil during and after the adoption of the IFRS.

Finally, in the companies surveyed, during and after the adoption of IFRS, clients, employees, and short-term creditors' demands do not seem to be incentives to classify the dividends received in the operating cash flow, which would increase the amount of this flow (Figure 4). In general, the implicit contractual characteristics offer some complementary explanations for the accomplishment of accounting choices to classify the dividends received in large companies in Brazil, during and after the adoption of IFRS.

4.3.3 Concerning the Institutional Characteristics

Considering that the economic depreciation rates reflect the economic useful life of goods and are required in the current accounting standards (CPC / IFRS), the results related to the association of this accounting choice and low concentration of property, trading of securities in the domestic market and 3 of 16 sectors, presented in Figure 5, are in line with the theoretical forecasts, as listed companies with greater shareholding dispersion are more exposed in the market, including in the case of listed companies, subject to the supervision of the regulator (CVM), and tend to use accounting more intensively for accountability purposes.

This conclusion applies only to the transition period to IFRS (2008-2009) though. In addition, the local economic culture (Brazil), reflected in the Brazilian control, influenced the choice of economic depreciation rates after the IFRS. In addition, there is evidence of mimetic isomorphism of the sectors in this choice, during and after the adoption of the IFRS. The Big Four audit reflects the influence of regulatory isomorphism on the choices of economic depreciation rates in the sample companies.

Institutional characteristics	**Accounting choices**	
	During adoption of IFRS	**After adoption of IFRS**
Low property	Economic rates	Non-disclosure of leasing recognition policy
High property	Regulatory rates and non-disclosure of rates	Tax and regulatory rates
Brazilian control	Regulatory rates; interests paid on operating cash flow	Economic rates; straight-line leasing; interests paid on operating flow; dividends paid on operating flow
Foreign control	Interests paid on funding flow	Non-disclosure of rates; leasing on systematic bases; interests paid on flow of funding; dividends paid on flow of funding
Private stockholder	Interests paid on funding flow	Dividends paid on operating flow

Institutional characteristics	Accounting choices	
	During adoption of IFRS	After adoption of IFRS
Public stockholder	Regulatory rates; interests paid on operating cash flow	Regulatory rates; subsidies as revenues; dividends paid on flow of funding
Listed company	Economic and regulatory rates; dividends paid on flow of funding	Regulatory rates; subsidies as deduction; dividends paid on flow of funding
Unlisted company	Tax rates and non-disclosure of rates; dividends paid on operating cash flow	Tax rates and non-disclosure of rates; dividends paid on operating flow
Audited Big Four	Economic rates; straight-line leasing	Economic rates; straight-line leasing
Audited others	Leasing on systematic bases	Tax rates; leasing on systematic bases
Not audited	Tax rates	Tax rates
Auditing not disclosed	Non-disclosure of rates	Tax rates; non-disclosure of leasing recognition policy; subsidies as deduction
Wholesaling	Non-disclosure of rates	Dividends received on investment
Automobile industry		Interests paid on operating flow; dividends received on investment
Consumption goods	Tax rates	Non-disclosure of leasing recognition policy; non-disclosure of subsidy recognition policy
Communication	Non-disclosure of rates	- 0 -
Electronics		Interests paid on flow of funding
Energy	Regulatory rates	Regulatory rates; straight-line leasing; dividends received on operational
Construction industry	Economic rates	Interests paid on flow of funding; dividends paid on operational
Mining	Economic rates	Non-disclosure of leasing recognition policy; subsidies as deduction
Paper and pulp	Leasing on systematic bases	Leasing on systematic bases; subsidies as deduction
Agricultural production	Non-disclosure of rates	Tax rates; non-disclosure of rates; dividends paid on operational
Chemical and petrochemical	Non-disclosure of leasing recognition policy	Interests paid on operating flow; dividends received on investment
Services	Tax rates; leasing on systematic bases	Tax rates; leasing on systematic bases
Iron and steel	-0-	Subsidies as deduction
Telecommunication	-0-	Dividends received on operational
Transport	Economic rates	Dividends received on investment
Retailing	Leasing on systematic bases; interests paid on funding	Economic rates; interests paid on funding

Figure 5 – Associations between institutional characteristics and accounting choices.
Source: Prepared by the authors.

The results regarding the choice of tax rates or non-disclosure of depreciation rates may reflect lesser companies' exposure to the market (high stockholder concentration and unlisted company), little or no supervision by the regulator (CVM), little or no regulatory pressure of an audit, sector mimicking and / or maintenance of the status quo and economic indicators that may be impacted by a change in depreciation rates. The latter results partially support the literature, that is, there are indications that unlisted companies with a high stockholder concentration and with less (or no) normative influence of large audits use accounting less for accountability, as their owners have easy access to internal company information (management information).

In addition, there is an association between the characteristics: high ownership concentration, state-owned controlling stockholder, listed company and energy sector and choice of regulatory depreciation rates, during and after the adoption of IFRS. Brazilian control is associated with the choice of regulatory depreciation rates during the adoption of IFRS. As already mentioned, these results denote the characteristics of regulated companies, especially in the energy sector.

In general, in the companies surveyed, institutional characteristics offer additional explanations for the choices of depreciation rates (accounting choices of measurement) made during and after the adoption of IFRS in Brazil, that is, they seem to offer more explanations than the economic and contractual obligations in the two periods mentioned.

It can be observed in Figure 5 that, in the case of the accounting choices of operational lease recognition, coercive isomorphism possibly exerts influence, coming from the ownership and control structure, from normative isomorphism, audits, and from mimetic isomorphism or even coercive / normative isomorphism, derived from sectors, including the (regulated) energy sector. In general, the institutional characteristics offer additional explanations for the accounting choices made to recognize the operating lease installments in the companies surveyed during and after the adoption of the IFRS, that is, there are indications that the institutional characteristics offer more explanations for that choice than economic and contractual characteristics.

In the case of accounting choices to recognize subsidies, it is important to remember that disclosure of this accounting policy is required by CPC 07 (item 39 "a") and is, by its nature, relevant accounting information, but some companies did not disclose such information. The possible existence of coercive, mimetic and normative isomorphism in relation to the companies studied, the controlling shareholder, the industry and the audit firm, which, although not disclosed, nevertheless exerted pressure on the accounting choice to recognize the subsidies analyzed (Figure 5).

In general, it should be noted that the institutional characteristics seem to offer additional explanations for the realization of accounting choices to recognize the income-related subsidies in the companies studied, after the adoption of IFRS in Brazil. This means that these choices are more related to institutional characteristics than to economic and contractual characteristics.

In Figure 5, it can be observed that the results regarding the classification of interest rates paid are in line with the studies by Gordon *et al.* (2017) and Cole *et al.* (2013), which state that the disclosure environment and / or the country and industry may affect these choices. Thus, we verified the possible occurrence of coercive isomorphism, coming from the control and the type of controlling stockholder, and of mimetic isomorphism, deriving from the sectors in the sample surveyed. On the other hand, no association was found between the trading of securities in the Brazilian market and the classification of interest paid, which differs from the conclusion by Gordon *et al.* (2017), which pointed out that companies that access capital markets more frequently tend to make classifications that increase operating cash flow. In general, the institutional characteristics offer additional explanations for the classification choices of interest paid in the CFS of the companies surveyed, during and after the adoption of IFRS.

As shown in Figure 5, institutional, coercive and mimetic pressures can influence the classification choices of dividends paid in the sample surveyed, as Gordon *et al.* (2017) and Cole *et al.* (2013) also identified, noting that some characteristics of the disclosure environment may affect accounting choices to classify in the CFS. Thus, it is noted that the institutional characteristics offer additional explanations for the sample companies' accounting choices to classify dividends paid in the CFS, especially in the period after the adoption of the IFRS.

In addition, as shown in Figure 5, four of the 16 sectors in the sample are associated with the choice to classify dividends received in the investment cash flow, while two of the 16 sectors are associated to the classification of the operational flow after the adoption of the IFRS. Therefore, there are signs that the adoption of IFRS increased the possibility for companies to make similar accounting choices in the same economic sector, according to the mimetic isomorphism of Institutional Theory. The relationship between sector and accounting choices to classify in the CFS has also been demonstrated in studies by Cole *et al.* (2013) and Gordon *et al.* (2017). In general terms, the institutional characteristics present partial explanations for the accounting choices of the dividends received in the analyzed companies, after the adoption of the IFRS, considering that only the sector was associated with those choices.

4.4 Conclusions on the Study Hypotheses

Based on the results obtained through the χ^2 test, concerning all of the accounting choices analyzed and the corporate characteristics, conclusions can be drawn about the rejection or non-rejection of the study hypotheses. Whenever a corporate characteristic was not associated with any accounting choice within each type of choice (measurement, recognition and classification), the hypothesis was rejected and, whenever a corporate characteristic was associated with one or more accounting choices in each type of choice, the hypothesis was not rejected. These conclusions are valid for the two periods analyzed (during and after the adoption of IFRS).

4.4.1 Hypotheses of Economic and Contractual Characteristics

In Figure 6, the conclusions are summarized regarding the first set of assumptions, which involves the economic and contractual characteristics and the measuring, recognition and classification accounting choices made during and after the adoption of the IFRS.

Hypothesis	**Accounting choices**	**Accounting Choice Types**	**Conclusions**	
			During the adoption of IFRS	**After the adoption of IFRS**
H1(a): Profitability	No significant association	Measuring	Rejects	Rejects
	Leasing Subsidies	Recognition	Rejects	Does not reject
	No significant association	Classification	Rejects	Rejects
H1(b): Indebtedness	Depreciation (rates)	Measuring	Rejects	Does not reject
	Leasing**	Recognition	Does not reject	Does not reject
	No significant association	Classification	Rejects	Rejects
H1(c): Size	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Subsidies	Recognition	Rejects	Does not reject
	Interests paid** Dividends paid* Dividends received*	Classification	Does not reject	Does not reject

Figure 6 – Conclusions of first set of hypotheses
*Association after adoption of IFRS; **association during and after adoption of IFRS.
Obs.: N/A: not applicable.
Source: Prepared by the authors.

As shown, the hypothesis H1 (a), about the link between profitability and accounting choices, was rejected during the adoption of IFRS and partially rejected after the adoption of IFRS. In the companies analyzed, the results suggest that managers were encouraged to use certain recognition accounting policies after the adoption of IFRS, to achieve the stakeholders' expectations on the performance of companies or even to increase their own remuneration, in accordance with the Contract Theory of the Firm and the Positive Theory of Accounting.

Otherwise, profitability did not seem to be an incentive for the managers of the surveyed companies to make accounting choices during the adoption of IFRS, nor to make measurement and classification choices after the adoption of IFRS. In other words, depreciation rates and CFS classifications that could increase the operating cash flow were not used in the companies analyzed in order to achieve the company's performance expectations or to increase managers' remuneration after the adoption of the IFRS.

The hypothesis H1 (b), which discusses the association of indebtedness with the accounting choices was partially rejected, during and after the adoption of IFRS. Thus, in the companies analyzed, there are indications that managers were encouraged to use certain accounting policies recognized during and after the adoption of IFRS, and certain accounting policies for measurement and recognition after the adoption of IFRS, in order to avoid possible violations of contractual covenants and, consequently, costs of financial difficulties, according to the forecasts of the Contract Theory of the Firm and the Positive Theory of Accounting. On the other hand, there is no evidence that indebtedness was an incentive to make accounting choices in the companies during and after the adoption of the IFRS, that is, classifications in the CFS that could increase the operational cash flow were not employed in the sample companies to avoid possible violations of contractual covenants and costs of financial difficulties.

Hypothesis H1 (c), which addresses the association of size with accounting choices, was partially rejected during the adoption of IFRS, and was not rejected after the adoption of IFRS. Thus, in this study, the results indicate that company size was an incentive for managers to make certain measurement and classification accounting choices during and after the adoption of IFRS, as well as an incentive to make some accounting choices for recognition and classification after the adoption of IFRS, in order to avoid political costs, according to the literature.

In general, based on the Contract Theory of the Firm and Positive Accounting Theory, economic and contractual incentives, reflected in corporate characteristics, offer partial explanations for the practice of accounting choices of measurement, recognition and classification in large companies in Brazil, during and after the adoption of IFRS. These conclusions are similar to previous studies on accounting choices, such as those obtained by Missonier-Piera (2004), Astami and Tower (2006), Quagli and Avallone (2010), Lourenço and Curto (2010), Martínez *et al.* (2011), Lorencini and Costa (2012), Costa *et al.* (2013), Murcia *et al.* (2013), Costa and Freitas, (2014), Israeli (2015), Baik *et al.* (2016) and Gordon *et al.* (2017). Additionally, in the companies surveyed, there are indications that the economic and contractual incentives offer more explanations in the period after the adoption of the IFRS.

4.4.2 Hypotheses of Implicit Contractual Characteristics

The conclusions regarding the second set of assumptions, which encompasses the reliance on implicit contractual claims of clients, suppliers, employees and short-term creditors, and the measurement, recognition and classification accounting choices, during and after the adoption of IFRS, are demonstrated in Figure 7.

Hypothesis	Accounting choices	Accounting Choice Types	Conclusions	
			During the adoption of IFRS	After the adoption of IFRS
H2(a): Clients	Depreciation (rates)	Measuring	Does not reject	Rejects
	No significant association	Recognition	Rejects	Rejects
	Interests paid** Dividends paid*	Classification	Does not reject	Does not reject
H2(b): Suppliers	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Leasing	Recognition	Rejects	Does not reject
	Dividends received	Classification	Does not reject	Does not reject
H2(c): Employees	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Subsidies	Recognition	Rejects	Does not reject
	Dividends paid	Classification	Does not reject	Does not reject
H2(d): Short-term creditors	Depreciation (rates)	Measuring	Rejects	Does not reject
	No significant association	Recognition	Rejects	Rejects
	Dividends paid	Classification	Does not reject	Does not reject

Figure 7 – Conclusions of second set of hypotheses
* Association after adoption of IFRS; **association during and after adoption of IFRS.
Obs.: N/A: not applicable.
Source: Prepared by the authors.

The hypothesis H2 (a), which deals with the association between implicit contractual claims of clients and accounting choices, was partially rejected during and after the adoption of IFRS, as the implicit contractual claims of clients are associated with certain choices and are not associated with the accounting choices of recognition. In this sense, it is verified that the expectations of clients in relation to the companies were incentives to achieve certain accounting choices of measurement and classification, aiming to improve the company's reputation to maintain relationships with the clients. On the contrary, there was no evidence that customer demands are incentives to make certain accounting recognition choices, that is, accounting choices capable of altering the amounts of income and equity components were not used in order to maintain or improve the reputation towards the clients.

Similarly, hypothesis H2 (d), which deals with the association between the contractual claims of short-term creditors and the accounting choices, was partially rejected during and after the adoption of the IFRS because the implicit contractual claims of creditors were not associated with the accounting recognition choices. Thus, as in hypothesis H2 (a), the conclusions obtained regarding hypothesis H2 (d) suggest that certain measurement and classification accounting choices were made to improve the reputation of the companies surveyed towards their short-term creditors in both periods analyzed, and that accounting recognition choices were not made for this purpose. The conclusions about the hypotheses H2 (b) and H2 (c), which refer to the association between the implicit contractual claims of suppliers and employees, respectively, and the accounting choices made during and after the adoption of IFRS, also point to the partial rejection of both in the analyzed periods.

It is observed that the contractual claims of suppliers and employees were associated to certain accounting choices of measurement, recognition and classification in the two periods analyzed. This finding implies that some accounting choices of measurement, recognition and classification were made in the sample companies during the specified periods, aiming to improve the companies' reputation and to maintain relationships with suppliers and employees.

As a result, the contractual relations of companies with their clients, suppliers, employees and short-term creditors include implicit claims that offer complementary explanations for the accounting choices made in large companies in Brazil, during and after the adoption of the IFRS. This means that the practice of accounting choices in these companies can be encouraged by the stakeholders' expectations regarding the companies, even if these expectations are not written in the contracts, as pointed out in Bowen *et al.* (1995, 1999). The analysis of the hypotheses also indicates that these stakeholder claims mentioned offer further explanation in the period after the adoption of the IFRS.

4.4.3 Hypotheses of Institutional Characteristics

Finally, we have the hypotheses that relate institutional characteristics to the accounting choices, based on the mechanisms of institutional isomorphism treated in the Institutional Theory. The conclusions obtained regarding these hypotheses are presented in Figure 8.

Hypothesis	Accounting choices	Accounting Choice Types	Conclusions	
			During the adoption of IFRS	After the adoption of IFRS
H3(a): Property structure	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Leasing	Recognition	Rejects	Does not reject
	No significant association	Classification	Rejects	Rejects
H3(b): Control	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Leasing	Recognition	Rejects	Does not reject
	Interests paid*** Dividends paid**	Classification	Does not reject	Does not reject
H3(c): Type of controlling stockholder	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Subsidies	Recognition	Rejects	Does not reject
	Interests paid* Dividends paid**	Classification	Does not reject	Does not reject
H3(d): Securities trading in the Brazilian market	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Subsidies	Recognition	Rejects	Does not reject
	Dividends paid	Classification	Does not reject	Does not reject
H3(e): Sector	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Leasing *** Subsidies**	Recognition	Does not reject	Does not reject
	Interests paid*** Dividends paid** Dividends received**	Classification	Does not reject	Does not reject
H3(f): Auditing	Depreciation (rates)	Measuring	Does not reject	Does not reject
	Leasing *** Subsidies**	Recognition	Does not reject	Does not reject
	No significant association	Classification	Rejects	Rejects

Figure 8 – Conclusions of third set of hypotheses
*Association during adoption of IFRS; **association after adoption of IFRS; ***association during and after adoption of IFRS.
Obs.: N/A: not applicable.
Source: Prepared by the authors.

Hypothesis H3 (a), which involves the association between ownership structure and accounting choices, was partially rejected during and after the adoption of the IFRS, as the ownership structure is associated with the measurement and recognition accounting choices, but is not associated with the accounting choices of classification. In other words, coercive pressures arising from firms' reliance on resources in relation to their owners (or sole owner) are incentives for making accounting choices in the sample firms. In the case of accounting choices of classification, there were no indications that the institutional pressure the company owners exerted influences CFS classifications that seek to increase the operational cash flow.

Hypothesis H3 (b), which discusses the association of the control with the accounting choices, was also partially rejected during the adoption of the IFRS and was not rejected after the adoption of the IFRS, observing that the control is associated with certain accounting choices of recognition and classification. Thus, evidence has been found that coercive pressures from the local economic culture of each country are incentives for the achievement of accounting choices of measurement, recognition and classification in large companies in Brazil during and after the adoption of IFRS.

Hypotheses H3 (c) and H3 (d), which deal with the association of the type of controlling shareholder and the trading of securities in the Brazilian market, respectively, with the making of accounting choices, were partially rejected during the adoption of IFRS and were not rejected after the adoption of IFRS. In other words, for the companies surveyed, there are indications that coercive pressures, originating in the controlling shareholder (private or public) and in the status of listed or unlisted company, encouraged certain accounting choices, that is, the accounting choices were not always guided by economic rationality only, as the institutional context companies operate in can influence their decisions. Thus, shared laws, greater or lesser exposure in the market and enforcement, for example, may lead companies to adopt accounting policies, seeking legitimacy in society, as stated in the Institutional Theory.

Based on the research results, we can conclude that hypothesis H3 (e), which deals with the association of the sector with the accomplishment of accounting choices, was not rejected in either of the two periods studied. It should be noted that the sector has been associated with all the accounting choices of measurement and recognition analyzed in the study, after the adoption of IFRS. During the adoption of IFRS, the sector was not associated with the accounting choices of recognition of the subsidies related to the income and with the accounting choices to classify the dividends paid and received. Thus, the practice of accounting choices of measurement, recognition and classification in the sample companies in the specified periods, seems to have suffered coercive and normative influence of the sector, especially in those sectors where there is specific regulation, or has acted in a way that imitates accounting practices considered legitimate in the sector, according to the mimetic isomorphism of the Institutional Theory, avoiding market penalties and costs of innovation.

Finally, it can be concluded that hypothesis H3 (f), which deals with the association of the audit with the accounting choices, was partially rejected during and after the adoption of the IFRS. From this perspective, evidence was found that normative pressures, derived from professional groups, such as auditors, are incentives for the achievement of accounting choices of measurement and recognition during and after the adoption of IFRS. No indications were found, however, that these same institutional pressures encourage the classification of interest and dividends in the CFS in the mentioned companies during the established periods of analysis.

Therefore, it is verified that institutional characteristics reflect incentives for the achievement of certain measurement, recognition and classification choices in large companies in Brazil, during and after the adoption of IFRS, denoting that the accounting choices can be made to meet the institutional isomorphism, in the search for legitimation. These conclusions approach the results found in the studies by Jaafar and Mcleay (2007), Collin *et al.* (2009), Martínez *et al.* (2011), Cole *et al.* (2013), Haller and Wehrfritz (2013), Nobes and Perramon (2013) and Stadler and Nobes (2014). In addition, it should be pointed out that, in this study, the sector is the characteristic that was associated to a greater number of accounting choices analyzed, during and after the adoption of the IFRS, corroborating previous studies, such as Collin *et al.* (2009), Martínez *et al.* (2011) and Cole *et al.* (2013).

In general terms, it is noticed that the institutional characteristics are associated with a larger number of accounting choices after the adoption of IFRS and that these characteristics seem to explain, to a greater extent, the practice of accounting choices in large companies in Brazil during and after the adoption of IFRS. This can be verified by the number of associations between the institutional characteristics and the accounting choices, when compared to the other characteristics analyzed and their respective hypotheses.

5 FINAL CONSIDERATIONS

Accounting standards provide flexibility for companies to make accounting choices so that they can reliably represent their economic and financial condition through the financial statements. This flexibility is necessary because the disclosure environment is dynamic and varies according to the development of the markets and the legal, tax and regulatory systems, aspects that render the existence of completely uniform accounting standards impossible or unfeasible. The adoption period of the IFRS characterizes an institutional change, requiring much more judgment from the appliers of this international accounting standard, as its norms are based on principles and not on specific rules.

The development of this research permitted the identification of multiple accounting choices regarding the measurement, recognition, classification and presentation of 75 large companies (listed and unlisted) in Brazil during and after the adoption of IFRS. The companies analyzed here, although in the same disclosure environment (Brazil), have different institutional characteristics, which can also make them use different accounting policies.

Based on the analyses developed, it can be concluded that the economic, contractual and institutional characteristics are corporate characteristics associated to the accounting choices of measurement, recognition and classification in large companies in the two-phase process of adopting the IFRS, as occurred in Brazil. These corporate characteristics reflect economic, contractual and institutional incentives for the preparation and disclosure of accounting information.

In addition, contrary to most previous studies on accounting choices, there is evidence that institutional characteristics are associated to a greater practice of accounting choices than economic and contractual characteristics, both during the transition period and after the adoption of IFRS. It was found that accounting choices did not always follow economic rationality. Although the IFRS is directed especially at the capital markets, in the companies analyzed, accounting choices can be explained, jointly and not in isolation, by economic and contractual characteristics, but partially and to a lesser extent when compared to the institutional characteristics. Given the conclusions about the hypotheses raised, the accounting choices in the companies surveyed may have been carried out to address aspects of efficiency or even manager opportunism, but there is evidence that they were more encouraged by institutional pressures and the search for legitimacy of accounting practices.

Possible explanations for this result may be related to the development level of the Brazilian market and to the institutional accounting learning curve. In addition, as discussed in the Introduction, the incentives for making accounting choices present in the two phases of IFRS adoption in Brazil were different. At first, there were many uncertainties regarding the legal and tax aspects related to the application of international accounting standards in Brazil and it is known that these aspects have always strongly influenced accounting in this country. The change in the corporate law, which led to the convergence with the IFRS, caused the need for a change of position in relation to the preparation of financial statements, putting attendance to the tax authorities to the background. In this sense, it is considered natural that the accounting choices in the companies surveyed were more encouraged by corporate characteristics (economic, contractual and institutional), after the adoption of IFRS, when the uncertainties and initial difficulties of the transition period to the international accounting standards were over.

The main limitation of this study is the impossibility to generalize its results, as no statistical analysis technique was used to permit inference of the results, being these limited to the research sample. This does not diminish the contributions of the research though, as knowledge is constructed in stages and this study starts from what exists in the literature thus far to seek methodological improvements necessary for the advance of the knowledge about accounting choices made in companies.

Therefore, further research is possible, using tools and improvements that permit inferences of the results. In general terms, it is suggested that institutional variables be included in future studies on accounting choices, in Brazil and in other countries, especially countries that have gone through a process of institutional change, such as the change deriving from the adoption of IFRS.

REFERENCES

Astami, E. W., & Tower, G. (2006). Accounting-policy choice and firm characteristics in the Asia Pacific region: An international empirical test of Costly Contracting Theory. *The International Journal of Accounting*, *41*, pp. 1-21. DOI: https://doi.org/10.1016/j.intacc.2005.12.004

Baik, B., Hyunkwon, C., Wooseok, C., & Kwangjin, L. (2016). Who classifies interest payments as financing activities? An analysis of classification shifting in the statement of cash flows at the adoption of IFRS. *J. Account. Public Policy*, *35*(4), pp. 331-351. DOI: https://doi.org/10.1016/j.jaccpubpol.2015.11.003

Bowen, R. M., DuCharme, L., & Shores, D. (1995). Stakeholders' implicit claims and accounting method choice. *Journal of Accounting and Economics*, *20*, pp. 255-295. DOI: https://doi.org/10.1016/0165-4101(95)00404-1

Bowen, R. M., DuCharme, L., & Shores, D. (1999). Economic and industry determinants of accounting method choice. *Permanent Working Paper*. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=182888 or http://dx.doi.org/10.2139/ssrn.182888 (acessed 01 December 2014).

Caixe, D. F., & Krauter, E. (2013). A influência da estrutura de propriedade e controle sobre o valor de mercado corporativo no Brasil. *Revista Contabilidade & Finanças*, *24*(62), pp. 142-153. DOI: https://doi.org/10.1590/S1519-70772013000200005

Carpenter, V. L., & Feroz, E. (2001). Institutional theory and accounting rule choice: an analysis of four US state governments' decisions to adopt generally accepted accounting principles. *Accounting, Organizations and Society*, *26*(7-8), pp. 565-596. DOI: https://doi.org/10.1016/S0361-3682(00)00038-6

Cavalheiro, R. T., Gimenes, R. M. T., & Binotto E. (2019). As Escolhas Contábeis na Mensuração de Ativos Biológicos estão Associadas ao Perfil do Profissional Contábil? *Sociedade, Contabilidade e Gestão, 14*(3), pp. 43-64. DOI: https://doi.org/10.21446/scg_ufrj.v0i0.22029

Cieslewicz, J. K. (2014). Relationships between national economic culture, institutions, and accounting: Implications for IFRS. *Critical Perspectives on Accounting*, *25*, pp. 511-528. DOI: https://doi.org/10.1016/j.cpa.2013.03.006

Coase, R. H. (1990). Accounting and the Theory of the Firm. *Journal of Accounting and Economics, 12*, pp. 3-13. DOI: https://doi.org/10.1016/0165-4101(90)90038-6

Cole, V., Branson, J., & Breesch, D. (2013). Determinants Influencing the IFRS Accounting Policy Choices of European Listed Companies. *Working Paper*. Available at: http://ssrn.com/abstract=2217498 or http://dx.doi.org/10.2139/ssrn.2217498 (acessed 01 december 2014).

Collin, S. Y., Tagesson, T., Andersson, A., Cato, J., & Hansson, K. (2009). Explaining the choice of accounting standards in municipal corporations: Positive accounting theory and institutional theory as competitive or concurrent theories. *Critical Perspectives on Accounting*, *20*, pp. 141-174. DOI: https://doi.org/10.1016/j.cpa.2008.09.003

Costa, F. M., & Freitas, K. C. (2014). Escolhas contábeis na adoção inicial das normas internacionais de contabilidade no Brasil: direcionadores da aplicação do custo atribuído para ativos imobilizados. *Revista Contabilidade Vista & Revista*, *25*(3), pp. 38-56.

Costa, T. A., Silva, A. H. C., & Laurencel, L. C. (2013). Escolha de práticas contábeis: um estudo sobre propriedades para investimento em empresas brasileiras não financeiras de capital aberto. *Revista de Contabilidade e Organizações*, *7*(18), pp. 25-36. DOI: https://doi.org/10.11606/rco.v7i18.55429

Dillard, J.F., Rigsby, J.T., & Goodman, C. (2004). The making and remaking of organization context - Duality and the institutionalization process. *Accounting Auditing & Accountability Journal*, *17*(4), pp. 506-542. DOI: https://doi.org/10.1108/09513570410554542

Dimaggio, P. J., & Powell, W. W. (1983). The iron cage reviseted: institutional isomorphism and collective rationality in organization fields. *American Sociological Review*, *48*(2), pp. 147-160. DOI: https://doi.org/10.2307/2095101

Domenico, D. D., Magro, C. B. D., & Klann, R. C. (2014). Impactos da adoção das normas contábeis internacionais completas (full-IFRS) nos indicadores econômico-financeiros de empresas listadas na Bovespa. *Revista de Informação Contábil*, *8*(1), pp. 52-70. DOI: https://doi.org/10.34629/ric.v8i1.52-70

Fávero, L. P., Belfiore, P., & Fouto, N. M. M. D. (2006). Escolha de meios de pagamento por populações de média e baixa renda: uma abordagem sob a perspectiva da análise fatorial e de correspondência. *Revista de Economia e Administração*, *5*(2), pp. 184-200. DOI: https://doi.org/10.11132/rea.2002.121

Fávero, L. P., & Belfiore, P. (2015). *Análise de Dados: técnicas multivariadas exploratórias com SPSS® e Stata®*. São Paulo: Atlas.

Fields, T. D., Lys, T. Z., & Vincent, L. (2001). Empirical research on accounting choice. *Journal of Accounting and Economics*, *31*, pp. 255-307. DOI: https://doi.org/10.1016/S0165-4101(01)00028-3

Francis, J. (2001). Discussion of empirical research on accounting choice. *Journal of Accounting and Economics*, *31*, pp. 309-319. DOI: https://doi.org/10.1016/S0165-4101(01)00017-9

Gordon, E. A., Henry, E., Jorgensen, B., & Linthicum, C. L. (2017). Flexibility in cash flow classification under IFRS: determinants and consequences. *Review of Accounting Studies*, *22*(2), pp. 839-872. DOI: https://doi.org/10.1007/s11142-017-9387-1

Guerreiro, M. S., Rodrigues, L. L., & Craig, R. (2012). Voluntary adoption of International Financial Reporting Standards by large unlisted companies in Portugal – Institutional logics and strategic responses. *Accounting, Organizations and Society*, *37*, pp. 482-499. DOI: https://doi.org/10.1016/j.aos.2012.05.003

Haller, A., & Wehrfritz, M. (2013). The impact of national GAAP and accounting traditions on IFRS policy selection: Evidence from Germany and the UK. *Journal of International Accounting, Auditing and Taxation*, *22*, pp. 39-56. DOI: https://doi.org/10.1016/j.intaccaudtax.2013.02.003

Holthausen, R. W., & Leftwich, R. W. (1983). The economic consequences of accounting choice - implications of costly contracting and monitoring. *Journal* *of Accounting and Economics, 5,* pp. 77-117. DOI: https://doi.org/10.1016/0165-4101(83)90007-1

Holthausen, R. W. (1990). Accounting method choice: opportunistic behavior, efficient contracting and information perspective. *Journal of Accounting and Economics, 12,* pp. 207-281. DOI: https://doi.org/10.1016/0165-4101(90)90047-8

Israeli, D. (2015). Recognition versus disclosure: evidence from fair value of investment property. *Review of Accounting Studies, 20*(4), pp. 1457-1503. DOI: https://doi.org/10.1007/s11142-015-9335-x

Jaafar, A., & Mcleay, S. (2007). Country Effects and Sector Effects on the Harmonization of Accounting Policy Choice. *Abacus, 43*(2), pp. 156-189. DOI: https://doi.org/10.1111/j.1467-6281.2007.00224.x

KPMG, & Von Keitz, I. (2006). *The application of IFRS*: choices in practice. London: KPMG.

Lorencini, F. D., & Costa, F. M. (2012). Escolhas contábeis no Brasil: identificação das características das companhias que optaram pela manutenção versus baixa dos saldos do ativo diferido. *Revista Contabilidade & Finanças, 23*(58), pp. 52-64. DOI: http://dx.doi.org/10.1590/S1519-70772012000100004

Maciel, F. F. de S., Salotti, B. M., & Imoniana, J. O. (2020). Incentivos para escolhas contábeis na Demonstração dos Fluxos de Caixa. *Revista Contabilidade & Finanças, 31*(83), pp. 244-261. DOI: https://doi.org/10.1590/1808-057x201908670

Marques, T. A., Guimarães, T. M., & Peixoto, F. M. (2015). A concentração acionária no Brasil: análise dos impactos no desempenho, valor e risco das empresas. *Revista de Administração Mackenzie, 16*(4), pp. 100-133. DOI: http://dx.doi.org/10.1590/1678-69712015/administracao.v16n4p100-133

Martínez, J. A., Martínez, F. G., & Diazaraque, J. M. M. (2011). Optional accounting criteria under IFRSs and corporate characteristics: evidence from Spain. *Spanish Accounting Review, 14*(1), pp. 59-85. DOI: https://doi.org/10.1016/S1138-4891(11)70022-X

Missonier-Piera, F. (2004). Economic Determinants of Multiple Accounting Method Choices in a Swiss Context. *Journal of International Financial Management and Accounting, 15*(2), pp. 118-144. DOI: https://doi.org/10.1111/j.1467-646X.2004.00104.x

Murcia, F. D. R., Souza, M. M., Wuergues, A. F. E., & Duarte, G. (2013). Realização ou estorno da reserva de reavaliação: fatores determinantes da escolha das companhias abertas no Brasil após o advento da Lei 11.638/07. *Advances in Scientific and Applied Accounting, 6*(1), pp. 112-133. DOI: https://doi.org/10.14392/asaa.201361112-133

Nobes, C. (2006). The survival of international differences under IFRS: towards a research agenda. *Accounting and Business Research*, *36*(3), pp. 233-245. DOI: https://doi.org/10.1080/00014788.2006.9730023

Nobes, C. (2013). The continued survival of international differences under IFRS. *Accounting and Business Research*, *43*(2), pp. 83-111. DOI: https://doi.org/10.1080/00014788.2013.770644

Nobes, C., & Perramon, J. (2013). Firm size and national profile of IFRS policy choice. *Australian Accounting Review*, *23*(66), pp. 208-215. DOI: https://doi.org/10.1080/00014788.2013.770644

Nogueira, E., Jucá, M. N., Macedo, M. A. S., & Corrar, L. J. (2012). Início da adoção das IFRS no Brasil: os impactos provocados na relação entre o lucro e o fluxo de caixa operacional. *Revista Contabilidade Vista & Revista*, *23*(1), pp. 47-74.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, *16*, pp. 145-179. DOI: https://doi.org/10.2307/258610

Penno, M., & Simon, D. T. (1986). Accounting Choices: Public versus Private Firms. *Journal of Business Finance and Accounting*, *13*, pp. 561-569. DOI: https://doi.org/10.1111/j.1468-5957.1986.tb00518.x

Pinto, M. J. T, Martins, V. A., & Silva, D. M. (2015). Escolhas contábeis: o caso brasileiro das propriedades para investimento. *Revista Contabilidade & Finanças*, *26*(69), pp. 274-289. DOI: https://doi.org/10.1590/1808-057x201512280

Pires, C. O., & Decourt, R. F. (2015). Os impactos da fase final de transição para o IFRS no Brasil. *Revista Brasileira de Gestão e Negócios*, *17*(54), pp. 736-750. DOI: https://doi.org/10.7819/rbgn.v17i54.1475

Quagli, A., & Avallone, F. (2010). Fair Value or Cost Model? Drivers of Choice for IAS 40 in the Real Estate Industry. *European Accounting Review*, *19*(3), pp. 461-493. DOI: https://doi.org/10.1080/09638180.2010.496547

Santos, E. S. (2012). Análise dos impactos dos CPCs da primeira fase de transição para o IFRS no Brasil: um exame dos ajustes aos resultados nas DFPs de 2008. *Revista de Contabilidade e Organizações*, *6*(15), pp. 23-43. DOI: https://doi.org/10.11606/rco.v6i15.52655

Santos, E. S., Ponte, V. M. R., & Mapurunga, P. V. R. (2014). Adoção obrigatória do IFRS no Brasil (2010): índice de conformidade das empresas com a divulgação requerida e alguns fatores explicativos. *Revista de Contabilidade & Finanças*, *25*(65), pp. 161-176. DOI: https://doi.org/10.1590/S1519-70772014000200006

Scherer, L. M., Teodoro, J. D., Kos, S. R., & Anjos, R. P. (2012). Demonstração dos Fluxos de Caixa: análise de diferenças de procedimentos de divulgação entre empresas listadas nas bolsas de valores de São Paulo, Frankfurt, Milão e

Londres. *Revista de Contabilidade e Controladoria*, *4*(2), pp. 37-51. DOI: http://dx.doi.org/10.5380/rcc.v4i2.29025

Silva, D. M., Martins, V. A., & Lemes, S. (2016). Escolhas Contábeis: reflexões para a pesquisa. *Revista Contemporânea de Contabilidade, 13*(29), pp. 129-156. DOI: https://doi.org/10.5007/2175-8069.2016v13n29p129

Stadler, C., & Nobes, C. W. (2014). The Influence of Country, Industry, and Topic Factors on IFRS Policy Choice. *Abacus*, *50*(4), pp. 386-421. DOI: https://doi.org/10.1111/abac.12035

Sunder, S. (2014). *Teoria da Contabilidade e do Controle*. São Paulo, Atlas.

Telles, S. V., & Salotti, B. M. (2015). Divulgação da informação contábil sobre depreciação: o antes e o depois da adoção das IFRS. *Revista Universo Contábil*, *11*(2), pp. 153-173. DOI: https://doi.org/10.4270/RUC.2015216

Torres, E. T., & Costa, F. N. (2012). BNDES e o Financiamento do Desenvolvimento. *Economia e Sociedade*, *21*(NE), pp. 975-1009. DOI: https://doi.org/10.1590/S0104-06182012000400011

Watts, R. L., & Zimmerman, J. L. (1986). *Positive Accounting Theory*. Prentice Hall, Englewood Cliffs.

Watts, R. L., & Zimmerman, J. L. (1990). Positive Accounting Theory: a ten year perspective. *The Accounting Review*, *65*(1), 131-156.

Watts, R. L. (1992). Accounting Choice Theory and Market-Based Research in Accounting. *British Accounting Review*, *24*, pp. 235-267.

AUTHORS' CONTRIBUTIONS

Contributions	Denise Mendes da Silva	Vinícius Aversari Martins	Luiz Paulo Lopes Fávero
1. Idealization and conception of the research subject and theme	✓		
2. Definition of the research problem	✓		
3. Development of Theoretical Platform	✓		
4. Design of the research methodological approach	✓		✓
5. Data collection	✓		
6. Analyses and interpretations of collected data	✓		
7. Research conclusions	✓		
8. Critical review of the manuscript		✓	✓
9. Final writing of the manuscript, according to the rules established by the Journal.	✓	✓	
10. Research supervision		✓	✓