ASSOCIATION BETWEEN INDEPENDENT AUDIT COMPANIES AND ACCOUNTING CHOICES OF BRAZILIAN LISTED COMPANIES

Aline Fernandes Pinto [1]
Sirlei Lemes [2]

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ABSTRACT

The present study aims to verify the association between independent audit firms and accounting choices. The sample consisted of 135 Brazilian listed companies in B3 from 2010 to 2017. The accounting choices regarding the measurement of investment properties, inventory measurement, depreciation rate, depreciation method, operating lease, recognition of purchases or regular sales of financial assets, classification of interest expense, classification of dividends and interest on own capital paid and dividends and interest on own capital received. These choices are selected because they are explicitly contained in the accounting standards and, therefore, are easy to identify in the financial statements. To test the association between audit firms and accounting choices, the Chi-square test was used. The results point to the association of the change of the audit firm with all the accounting choices made, except for the measurement of inventories and the classification of dividends and interest on own capital paid. Additionally, it was verified that the fact that the audit firm is a Big Four is associated with changes in practices related to the measurement of investment properties, inventory measurement and the classification of dividends and interest on own capital paid. Evidence from the study indicates that the audit can be a relevant factor for the understanding of the accounting choices adopted by the companies.

Keywords: Accounting Choices. Audit. Change of Audit Company.

ASSOCIAÇÃO ENTRE AS EMPRESAS DE AUDITORIA INDEPENDENTE E AS ESCOLHAS CONTÁBEIS DE COMPANHIAS BRASILEIRAS LISTADAS

RESUMO

O presente estudo tem como objetivo verificar a associação entre as empresas de auditoria independente e as escolhas contábeis. A amostra foi composta por

[1] Master of Accounting Sciences by Universidade Federal Uberlândia - UFU. Address: Avenida João Naves de Ávila, 2121 – Campus Santa Mônica, Bloco F, Postal Code: 38.408-100 – Uberlândia, MG, Brazil. Phone: +55 34 3239-4176. E-mail: fernandes.aline63@yahoo.com.br
https://orcid.org/0000-0002-6466-5226

[2] PhD in Accounting Sciences by Universidade de São Paulo - USP. Graduate Professor of Accounting Sciences at Universidade Federal de Uberlândia – UFU. Addres: Avenida João Naves de Ávila, 2121 – Campus Santa Mônica, Bloco F, Postal Code: 38.408-100 – Uberlândia, MG, Brazil. Phone: +55 34 3239-4176. E-mail: sirlemes@uol.com.br
https://orcid.org/0000-0003-3334-4240

135 companhias de capital aberto brasileiras, listadas na B3, no período de 2010 a 2017. Foram avaliadas as escolhas contábeis relativas à mensuração de propriedades para investimentos, mensuração dos estoques, taxa de depreciação, método de depreciação, reconhecimento das parcelas do arrendamento mercantil operacional, reconhecimento das compras ou vendas regulares de ativos financeiros, classificação de juros pagos, classificação de dividendos e juros sobre o capital próprio pagos e dividendos e juros sobre o capital próprio recebidos. Essas escolhas foram selecionadas por estarem contidas explicitamente nas normas contábeis e, portanto, serem de fácil identificação nas demonstrações contábeis. Para testar a associação entre as empresas de auditoria e as escolhas contábeis foi utilizado o teste Qui-quadrado. Os resultados apontam a associação da mudança da empresa de auditoria com todas as escolhas contábeis investigadas, exceto a mensuração dos estoques e a classificação dos dividendos e juros sobre o capital próprio pagos. Adicionalmente, verificou-se que o fato de a empresa de auditoria ser uma Big Four está associado à mudança de práticas relativas à mensuração de propriedades para investimentos, mensuração de estoques e classificação de dividendos e juros sobre o capital próprio pagos. As evidências do estudo indicam que a auditoria pode ser um fator relevante para o entendimento das práticas contábeis adotadas pelas empresas.

Palavras-Chave: Escolhas Contábeis. Auditoria. Mudança da empresa de auditoria.

1 INTRODUCTION

Studies in the national and international literature share the identification of factors that can determine accounting choices (Hagerman & Zmijewski, 1979; Cole, Branson & Breesch, 2011; Souza & Lemes, 2016; Silva, 2016). However, a possible association between the audit firm and accounting choices is still little verified. Cole, Branson and Breesch (2013), Souza and Lemes (2016) and Silva (2016) tested whether the audit performed by a Big Four would be associated with companies' accounting choices. Nevertheless, the possibility of changing the audit firm to influence the choices of accounting practices was outside the scope of these studies.

The idea that auditing can be an element that influences the option for one or another accounting practice can be reinforced by Messier, Quick and Vandervelde's (2014) statement that even with the adoption of the International Financial Reporting Standards (IFRS), the judgment of the economic fact can often be made according to the auditor's perception. Also according to the authors, despite the change of accounting standards to a standard based on principles, transactions can still be registered based on the previous standard, based on rules, if this is the auditor's perception. Thus, understanding the role that auditors play in accounting choices can place the topic under a new perspective, namely, that other interests underlie the practices chosen by companies.

Jones and Higgins (2006) emphasize that auditing is considered an important factor in maintaining the quality of financial reports. In addition, auditors can be identified as one of the parties most involved in the IFRS adoption process, acting as consultants or validating financial statements (Jones & Higgins, 2006).

However, it is important to emphasize that the provision of services unrelated to the audit is prohibited to independent auditors. Despite this, for some authors, such as Cole, Branson and Breesch (2013), auditors often assume the role of advisors, directly influencing the preparation of financial statements. Furthermore, with the adoption of IFRS and the increase in the subjectivity of criteria, auditors now play an essential role, since the aforementioned standards determine more complex judgments and estimates in the preparation of financial statements (De George, Li & Shivakumar, 2016).

In circumstances where accounting standards do not provide clear guidance on a particular practice or where the appropriate accounting treatment is unclear, auditors should make a recommendation to the client as to how accounting should proceed (Salterio & Koonce, 1997). The interaction between auditors and their clients can encompass matters related to the conduct of the audit, the resolution of a conflict, an exchange of information and the content of financial reports (Beattie, Fearnley & Brandt, 2000). Thus, the possibility of auditors' participation in the preparation of financial statements is highlighted, helping managers in defining accounting practices and making more complex judgments.

The possibility of the emergence of differences between the auditor and the manager is highlighted (Fields, Lys & Vincent, 2001). According to the authors, the disclosure of accounting information can be understood as a conflict between the manager, who wants to increase the value perceived by the company's investors, and the auditor, who wants to reduce the investors' analysis errors. Conflicts in the relationship between the auditor and the manager can also arise when auditors choose a more conservative accounting practice, that is, an accounting choice that leads to a reduction in the company's results or operating cash flows, and preference manager or by less conservative methods (Defond & Subramanyam, 1998).

DeFond and Subramanyam (1998) verified possible auditor incentives to opt for conservative accounting choices, in addition to investigating whether the auditor's change is related to more conservative accounting choices. The authors noted that discretionary accruals are declining during the auditor's last year and typically irrelevant during the successor auditor's first year. Furthermore, diminishing discretionary accruals are more present among companies that expect to be at greater risk of litigation. In this sense, the authors infer that litigation risks act as an incentive for auditors to demonstrate preference for more conservative accounting choices and that managers tend to opt for changing the auditor with the intention of finding a less conservative auditor.

It reinforces the relevance of investigating the relationship between accounting choices and the performance of audit firms, considering the importance of accounting choices for the reliable representation of accounting information, as well as auditing in the validation process of financial statements. That said, this research aims to verify the association between independent audit firms and accounting choices. Additionally, it is intended to observe whether companies tend to adopt more or less conservative accounting choices.

For Paulo (2007) audited financial statements would be less exposed to distortions, presenting a better informational content when compared to unaudited statements. However, by adopting an accounting practice indicated by the auditor, the manager can leave out the most appropriate accounting practice, thus impacting the quality of the accounting information. Thus, understanding the factors that can influence the decision of managers in decision-making by a given accounting method is relevant, since accounting choices can directly affect the quality of accounting information that will be reported to investors and other users.

It is worth noting that, according to Instruction No. 308 of the Comissão deValores Mobiliários (CVM) , the auditor cannot provide services to the same company for a period exceeding five years, making the rotation of auditors and audit firms mandatory in Brazil . Thus, this study also intends to contribute to the literature by investigating whether the rotation of audit firms tends to cause frequent changes in the accounting practices of Brazilian companies, resulting in a reduction in the consistency and comparability of financial reports.

The change of the audit firm as a factor associated with accounting choice, as far as it was possible to observe, was considered only by Defond and Subramanyam (1998). However, to test this association, the authors resorted to accruals, not focusing on accounting choices per se. In this sense, this study intends to expand the scope of the accounting choices literature, highlighting the possibility that the role of auditors is associated with the chosen accounting practice, in addition to investigating the association between the change of the audit firm and the changes in accounting choices.

2 THE ROLE OF AUDIT IN ACCOUNTING CHOICES

Accounting choices are defined by Watts (1992) as the decision of a company manager to use one accounting method over another. The choices present in accounting standards can be justified, according to Cole, Branson and Breesch (2013), by the existing differences between companies, such as the country of origin, environmental factors, industry, different business models, which may determine different accounting treatments. Thus, accounting choices can be understood as a way to increase the trustworthy representation of accounting information, since managers can choose the accounting method that best represents the company's economic and financial reality.

Kothari, Ramanna and Skinner (2010) understand that when accounting standards are based on principles, the application of accounting policies usually tends to be carried out through the use of work rules. Thus, the way in which principles-based accounting standards are applied can significantly interfere with the quality of companies' financial statements (Kothari, Ramanna & Skinner, 2010). According to Francis, Pinnuck and Watanabe (2014), the quality of accounting information allows users to verify differences and similarities in the financial results of companies, however, this comparability can be impacted by other economic and institutional factors, highlighting, among these factors, the audit.

Audit firms often have a set of internal work rules that guide and standardize the performance of the audit and the application of accounting standards by clients (Francis, Pinnuck & Watanabe, 2014). It is understood that audit firms adopt different audit styles among themselves, consequently presenting differences in the interpretation of accounting standards, as well as in their audit approaches. Thus, according to the authors, the financial statements of companies audited by the same audit firm tend to be more comparable with each other, since clients would be following the same guidelines as the auditors when preparing the financial statements.

As pointed out by Holthausen and Leftwich (1983), the option for an accounting choice may involve economic consequences. According to the authors, changes made in the choices used to calculate accounting numbers can affect the distribution of the company's cash flows or the distribution investors' profits, who use financial information for decision making. The identification of factors that can influence the manager's decision to make an accounting choice is widely discussed in the accounting literature (Hagerman & Zmijewski, 1979; Missonier-Piera, 2004; Waweru, Ntui & Mangena, 2011; Christensen & Nikolaev, 2013; Ali & Ahmed, 2017). In this context, identifying the factors that can affect the decision of managers by one accounting method or another becomes relevant, given the impact of accounting choices on the companies' results. Watts and Zimmerman (1990) point out that most studies related to accounting choices admit that managers tend to opt for an accounting method to transfer wealth to themselves at the expense of other parties. However, this study intends to address another factor that also affects managers' decisions: the audit firm.

Hagerman and Zmijewski (1979) sought to detect economic variables that may influence the option for an accounting choice. The authors identified that company size, risk and capital intensity are positively related to the chance of a company opting for accounting practices that reduce profit. Furthermore, the authors state that, if the company has a profit-sharing plan, the probability that the manager will opt for a choice that increases results is greater. In addition to identifying determinants of accounting choices, the authors indicate that managers use different economic variables when deciding on an accounting choice, that is, managers do not base their decisions on the same economic variables.

Missonier-Piera (2004) verified the economic determinants related to accounting choices in Swiss companies. The results showed that managers tend to opt for accounting methods that reduce debt costs and increase their remuneration. It was identified in the study that leverage, the nature of the debt (public or private), the existence of investment opportunities, the ownership structure and the specifics of assets are factors positively associated with the managers' option for less conservative accounting choices, that is, those that raise the company's results. On the other hand, the author showed that company size and workforce intensity are negatively associated with less conservative accounting choices.

It is possible to point out that the decision for an accounting choice can be influenced by several economic factors, which is corroborated by Waweru, Ntui and Mangena (2011). These authors identified the determinants of accounting choices in Tanzania, obtaining evidence that financial leverage was not a factor that was related to accounting choices. The authors also state that the intensity of the workforce and the proportion of managers who are not executives of the company are negatively associated with more conservative accounting choices, and companies that need more internal financing opt for less conservative choices, since, to get more financing, you need to show investors a greater result. The authors also detected that larger companies tend to opt for less conservative accounting choices, and, for this specific item, the result was in contrast to that found by Missonier-Piera (2004).

Cole, Branson and Breesch (2013) examined whether European companies make use of accounting choices and which determinants influence these choices. The authors investigated a group of 31 choices present in IFRS. Of the choices analyzed, they identified that nine are used by less than 10% of companies in a European context, and 22 choices are adopted differently by European companies. As for the determinants of accounting choices, according to the authors, in general, they are influenced by the company's country of origin, sector and type of audit firm (Big Four or not Big Four).

Souza and Lemes (2016) investigated the degree of comparability of accounting choices in the subsequent measurement of fixed assets; intangible assets and PPI of publicly-held companies belonging to Brazil, Chile and Peru; and the characteristics that could influence the accounting choices of the managers of these entities. The results suggest, in general, that there was an increase in the comparability of fixed and intangible assets and that the factors country, profitability, relevance of assets on the balance sheet, sector of activity, time since IFRS adoption, audit by the Big Four, size of the company and indebtedness can influence accounting choices related to fixed assets. The influence of the Big Four audit firm on accounting choices stands out for this study.

Silva (2016) diagnosed corporate characteristics associated with making multiple accounting choices in large companies in Brazil. The study showed that economic, contractual and institutional characteristics are associated with one or more accounting choices made in the companies analyzed during and after IFRS adoption. Among the institutional characteristics investigated by the author, there is an association between the type of audit (Big Four or not Big Four) and measurement choices (depreciation rate), and recognition (government subsidies and operational leasing).

Ali and Ahmed (2017) found the determinants of accounting choice for listed companies in South Asia. Company size, investment opportunities and leverage are negatively associated with opting for less conservative accounting choices, while being a publicly traded company is positively associated with less conservative accounting choices (Ali & Ahmed, 2017).

It is observed, in the studies mentioned, that, in general, the type audit firm (Big Four or not Big Four) is the determining factor for accounting choice. Changing the audit firm as a possible determinant of accounting choice was considered only by Defond and Subramanyam (1998). However, to test this possible association, the authors resorted to accruals, with the opportunity, therefore, to analyze the problem and focus on the accounting choices themselves and their changes, based on the change in the audit firm.

The audit process is considered by Beattie, Fearnley and Brandt (2000) as essential for maintaining the integrity of financial reports and investor confidence. Therefore, the Independent Audit Technical Standard - 200 (NBC TA 200 R1) emphasizes, as the objective of the audit, to raise the level of users' confidence in the financial statements, by issuing an auditor's opinion regarding the preparation of the statements and whether they comply with the applicable financial reporting framework.

Firmino, Damacesna and Paulo (2010) reiterate that, even though the audit is exposed to subjective aspects, from the point of view of information users, the auditor's opinion demonstrates conviction about the economic and financial reality of companies. Users of financial statements trust the role of auditing, as the auditor has independence as the basis of his profession, and must be impartial in relation to the audited company (Martinez, 2010). Quick and Warming-Rasmussen (2009) point out that, if recipients of financial information assume that the auditor is not independent, they may show little confidence in the audited company's financial statements.

Beattie, Fearnley and Brandt (2000) mention that managers tend to seek auditor support in matters related to internal control and guidance on accounting principles. However, non-audit-related services, such as consultancies, threaten the auditor's independence as a result of the auditor-client economic link (Quick & Warming-Rasmussen, 2009). After corporate scandals, such as Enron and WorldCom, questions emerged by regulators about auditor independence (Daniels & Booker, 2011). As a result of these questions, in 2002 the Sarbanes-Oxley Act (SOX) was approved, which prohibited audit firms from providing other services not related to auditing.

With the adoption of IFRS, accounting standards began to be based on principles, making the work of auditors, theoretically, to be performed with greater effort and detail, consequently increasing the risk of litigation for auditors, since these can no longer be guided by specific guidelines or rules as a form of defense against possible litigation (De George, Li & Shivakumar, 2016). However, as mentioned above, for Messier, Quick and Vandervelde (2014), even with the adoption of IFRS, the foundation in principles can lead to the recording of transactions based on the previous standard, based on rules, if this is the perception of the controller.

When auditors negotiate with clients, they need to deal with the need to maintain a good relationship and, at the same time, ensure that the financial statements are free from material errors and distortions (Perrealt & Kida, 2011). Hatfield and Mulles (2015) argue that, although the preparation of the financial statements is a responsibility of the administration, they can be the result of the joint effort of the administration and the auditors, besides, eventually, being the product of possible negotiations between the two parts. Corroborating this statement, Cole, Branson and Breesch (2013) postulate that, in addition to offering restrictions to the inappropriate use of accounting criteria, auditors also play the role of consultants, influencing the preparation of financial statements. According to these authors, during the adoption of IFRS, several companies sought suggestions from their auditors and audit firms usually provide their clients with models for the preparation of financial statements, in addition to disclosure checklists.

DeFond and Jiambalvo (1992) point out that the auditor's preferences tend to prevail over those of management, since auditors must report, in their opinion, situations in which management chose to adopt an accounting choice that differs from the auditor's judgment. Therefore, auditors adopt a more conservative posture, resisting the adoption of choices that increase results (Defond & Jiambalvo 1992). For Defond and Subramanyam (1998), auditors reduce litigation risks by suggesting that management opt for more conservative accounting choices, as these choices reduce company results – an idea reinforced by Watts

(2003), who states that the litigation risk is greater when companies' earnings and net assets are higher. Perrealt and Kida (2011) emphasize that auditors tend to recommend adjustments to the financial statements to clients that result in a reduction in the result that would be reported, but that clients may resist making the recommended adjustments, as they prefer to present higher results.

It is understood that there is a conflict between auditors who seek to protect themselves from litigation, suggesting changes to the financial statements in order to reduce the result to be presented, and managers who seek to demonstrate greater results. Defond and Subramanyam (1998) confirm this idea when they point out that divergences between auditors and clients usually occur when the auditor chooses an accounting method that will result in a lower gain than when applying the method intended by management, generating a result more conservative than expected by this one.

Based on the literature discussed here, it is noteworthy that auditors play an important role in the reporting process of the companies to which they provide services. Even with the impediment of external auditors from performing other services besides auditing, some studies (Defond & Subramanyam, 1998; Perrealt & Kida, 2011; Cole, Branson & Breesch, 2013; Hatfield & Mulles, 2015) defend the idea that auditors may be acting as consultants to companies and who in that role tend to suggest that companies adopt more conservative accounting choices. According to DeFond and Subramanyam (1998), the audited company can choose to change the auditor, if it considers that another auditor will be less conservative. That said, the hypothesis of this study is described below:

H1: Changes in accounting choices are positively associated with changes in audit firms.

With the results obtained from the study hypothesis test, it is expected to identify that audit firms have influenced the decision of companies by one or another accounting method.

3 METHODOLOGICAL ASPECTS

The study sample is composed of Brazilian publicly traded companies listed on B3 from 2010 to 2017. Companies in the finance and insurance sector were excluded from the sample due to their specificities and their own legislation. Taking into account a population of 335 companies, the sample was calculated by proportion, considering a confidence level of 95%, a margin of error of 5% and a probability of occurrence of 0.3. The sample size calculated was 135 companies. Table 1 shows the composition of the sample.

Table 1
Sample Composition

Description	Companies
Total of active listed companies on B3 according to the Economatica® software	369
Exclusion of companies in the Finance and Insurance sector	34
Sample without Finance and Insurance companies	335
Final sample calculated by proportion	135

Source: Prepared by the authors.

To carry out the study, the sector classification of the Economatica® software was used. In order to guarantee the representativeness of each sector, the same proportionality in the sample that exists in the population was maintained. To calculate the representativeness of each sector, the number of companies in the sector in the population was divided by the size of the population. Then, the representativeness of the sector was multiplied by the sample size to find the number of companies per sector in the sample. The number of companies in the sample by sector is shown in Table 2.

Table 2
Definition of the sample by sector

Sector	Companies by sector	Sample by sector	Representativeness of the sector
Agriculture and Fishing	5	2	1.49%
Food and drinks	15	6	4.48%
Commerce	21	8	6.27%
Construction	23	9	6.87%
Eletronics	5	2	1.49%
Electricity	45	18	13.43%
Industrial machines	6	2	1.79%
Mining	5	2	1.49%
Non-Metallic Minerals	3	1	0.90%
Others	95	38	28.36%
Paper And Cellulose	5	2	1.49%
Oil and Gas	9	4	2.69%
Chemistry	11	5	3.28%
Steel & Metallurgy	20	8	5.97%
Software e Data	6	2	1.79%
Telecommunications	9	4	2.69%
Textile	19	8	5.67%
Transport and Services	19	8	5.67%
Vehicles and Parts	14	6	4.18%
Total	335	135	100,00%

Source: Prepared by the authors.

After calculating the number of companies per sector, the companies present in the sample were randomly defined by drawing lots.

According to Instruction No. 308 of the Comissão de Valores Mobiliários (CVM), the independent auditor cannot provide services to the same client for a period exceeding five years, as mentioned above. Thus, data were collected from the financial reports over a period of eight years, in order to capture changes in audit firms. Nine accounting choices were tested, classified by Cole, Branson and Breesch (2013) as clear or explicit, which, according to the authors, are those that are clearly set out in accounting standards and easily identified in financial statements. Clear choices can be related to the measurement, recognition, classification, presentation and timing of recognition of a standard (Silva, 2016). The measurement choices observed in the study were: investment property measurement, inventory measurement, and the depreciation rate. Choices regarding recognition were: the depreciation method, recognition of operating lease installments, and recognition of regular purchases and sales of financial assets. The classification choices relate to interest paid, dividends and interest on equity paid and dividends and interest on equity received.

According to Silva (2016), accounting choices regarding measurement are related to choosing an accounting method to measure an economic event. Investment properties (IP) are properties held for the purpose of obtaining rental income or capital appreciation (CPC, 28). According to Pronunciamento Técnico CPC 28, initially, IP must be measured at cost. After the initial measurement, companies can choose to measure at cost or fair value, and must apply the chosen choice to all their IP. With regard to the classification of accounting choice, in this work, the historical cost was considered a more conservative choice – a position also adopted by Botinha (2017), who justifies the position by the effect of the practice in reducing the reported result.

When it comes to measuring inventories, Pronunciamento Técnico CPC 16 clarifies that, when the identification of costs is not appropriate, an inventory valuation criterion must be used. The options offered by CPC 16 are First In, First Out (FIFO) and weighted average cost. The average cost is established based on the weighted average of the cost of similar items at the beginning of the period and the costs of items purchased or produced in the period (CPC 16). Under the FIFO method, the issue of inventories occurs for items that were purchased or produced first. Regarding the accounting choice classification, as well as Missonier-Piera (2004), the present study understands that the option for the weighted average cost method leads to a reduction in the company's result, being considered, therefore, a more conservative choice.

Regarding the depreciation rate, Pronunciamento Técnico CPC 27 does not clearly establish the options for the use of one or another specific depreciation rate. However, it is mentioned in the Pronouncement that the depreciation must be carried out in line with the estimated useful life of the asset. The treatment of the depreciation rate as a choice related to measurement is justified, according to Silva (2016), by the direct impact of depreciation on fixed assets. Thus, in Brazil, companies can choose to depreciate their assets using the economic and fiscal rate and, in some specific cases, such as those of companies in the electricity sector, the depreciation rate is regulated by an agency of the sector, such as the ANEEL (Silva, 2016). In the present work, the use of the economic depreciation rate is considered as a less conservative option, an idea reinforced by Dichev and Li (2013). The authors mention that companies that have fixed assets with a longer useful life tend to opt for less conservative accounting choices.

Regarding recognition accounting choices, Silva (2016) argues that they are linked to how to recognize a certain economic event and its effect on the financial statements. When referring to the depreciation method, CPC 27 allows companies to choose three methods: the straight-line method, the units of production method, and the declining balance method. The straight-line method leads to the recognition of a constant expense over the useful life of the asset, assuming that its residual value remains the same. Under the units produced method, the depreciation expense is based on production. And finally, the declining balance method leads to a declining depreciation expense over the asset's useful life (CPC 27). With regard to the classification of the depreciation method, this paper considers the straight-line method as less conservative – a position also adopted by Astami and Tower (2006). According to the authors, the choice of the straight-line method for depreciation leads to an increase in results, when compared to other depreciation methods. Therefore, the option for the linear method can be considered as less conservative.

Pronunciamento Técnico CPC 06 describes, as operational leasing, a lease in which all the risks and benefits intrinsic to the property are not transferred, that is, the risks and benefits remain with the lessor. Regarding the recognition of operating lease installments, CPC 06 establishes that these must be recognized on a straight-line basis in income, unless another systematic basis is more representative. Therefore, it is understood that recognition in a linear fashion leads to an increase in results, since the expense recognized monthly is constant and, therefore, considered, in this study, as less conservative.

The regular purchase and sale of financial assets is one in which the terms that require the asset to be delivered on time are established in contracts. Typically, these terms are determined by regulations or conventions of the relevant market (CPC 38). Pronunciamento Técnico CPC 38 allows for the recognition of regular purchases and sales of financial assets on the trade date or settlement date. In this study, it was understood as more conservative the option for recognition on the negotiation date, since it is the date on which the company commits to buy or sell the asset.

Accounting classification choices are related to the arrangement and aggregation of elements in the financial statements (Silva, 2016). As for the classification of interest paid and dividends and interest on equity (IE) paid, the Pronunciamento Técnico CPC 03 allows its classification in operating cash flows or financing cash flows. As for dividends and interest on equity(IE) received, these can be classified as operating and investment cash flows. Gordon et al. (2017) mention that, to increase operating cash flows, companies tend to classify dividends and interest on equity(IE) received in operating activities, and interest paid and dividends and interest on equity(IE) paid in cash flows from financing activities. In this sense, it is considered here that the classification of interest paid and dividends, and interest on equity(IE) paid in financing activities and the classification of dividends and interest on equity(IE) received in investment activities as less conservative accounting choices, since there will be an increase in operating cash flows.

Table 3 shows the accounting choices addressed in the survey and their impact on results and operating cash flow.

Table 3
List of accounting choices covered in the survey

Type of choice	Accounting Choices	More conservative practice	Less conservative practice
Measurement Choices	IP	Historical cost	Fair value
	Stocks	Weighted Average Cost	FIFO
	Depreciation Rate	Economic/Regulatory Rate	Fiscal
Recognition Choices	Depreciation Method	Decreasing Balances/Produced Units	Linear
	Operating Lease Installments	Linear	Systematic basis
	Regular Purchases or Sales of Financial Assets	Trading Date	Settlement Date
Ranking Choices	Interest paid	Operating Cash Flow	Financing cash flow
	Dividends and IE Pagos	Operating Cash Flow	Cash Flow Financing
	Dividends and IE Received	Cash Flow Investment	Operating Cash Flow

Source: Prepared by the authors.

Data collection was done manually in order to identify, in the financial statements, the accounting choices, the audit firm and whether the audit firm is a Big Four (KPMG, PricewaterhouseCoopers, Deloitte Touche Tohmatsu and Ernst & Young) or not. The accounting choices listed in Table 3 were verified for each type of choice observed, that is, based on the explanatory notes of the companies in the sample, the practice adopted in each type of choice was identified. Additionally, the option “does not mention” was considered when the company had the item in the financial statements, but did not show the form of recognition, measurement or classification in the explanatory notes. The option “not applicable” was also considered when, for the assessed practice, no information was found, neither in the financial statements nor in the explanatory notes.

To identify the change in accounting choice, the options “does not mention” and “not applicable” were disregarded, taking into account only the companies that disclosed the option for one or another accounting method. In addition, if the company adopted either method in the year after the year in which the choice was treated as “not mentioned” and “not applicable”, this was considered a change in accounting practice. In addition, dichotomous variables, change of audit firm and Big Four were used. "1" was defined as the change in the audit firm and "0" when there was no change in the audit firm. For the Big Four variable, it was classified as "1" when the detected audit company was a Big Four and "0" when the identified audit firm was not a Big Four.

For the treatment, the non-parametric Chi-square test was used, which allows analyzing whether two or more samples are statistically different in any category (Levine et al., 2000). The level of significance adopted for rejection or acceptance of the hypotheses was a = 5%.

4 ANALYSIS AND DISCUSSION OF RESULTS

Table 4 presents the accounting choices related to measurement adopted by the companies in the sample.

Table 4
Accounting choices related to measurement in the sample

		2010	2011	2012	2013	2014	2015	2016	2017	Total
IP	Cost	16	22	24	20	16	16	18	19	151
	Fair value	2	1	2	1	2	3	3	3	17
	Does not mention	7	4	4	5	6	5	5	5	41
	Not applicable	110	108	105	109	111	111	109	108	871
	Total	135	135	135	135	135	135	135	135	1080
Stocks	Custo médio ponderado	83	85	88	87	89	88	87	84	691
	FIFO	1	0	0	0	0	0	0	0	1
	Does not mention	3	3	3	4	3	4	4	6	30
	Not applicable	48	47	44	44	43	43	44	45	358
	Total	135	135	135	135	135	135	135	135	1080
Depreciation Rate	Economic rate	48	50	51	52	51	53	52	52	409
	Tax rate	53	57	57	55	57	53	54	51	437
	Regulatory fee	7	6	6	5	5	5	5	4	43
	Does not mention	12	7	7	7	6	7	6	9	61
	Not applicable	15	15	14	16	16	17	18	19	130
	Total	135	135	135	135	135	135	135	135	1080

Source: Prepared by the authors.

It can be seen (Table 4) that 80% (871 out of 1,080) of the companies in the sample do not have IP recognized in their financial statements. The companies in the sample that have IP predominantly opted for cost measurement. This result was also identified by Botinha (2017), according to which most companies that have IP, both those listed on the BM&FBOVESPA and the NYSE, opted for the cost method. Thus, although CPC 28 provides a recommendation for companies to adopt the fair value method, companies prefer the cost method.

With regard to inventories, it is observed that 63.98% (691 out of 1,080) of the companies opted for measurement, using the weighted average cost. Only one company measured its inventories using FIFO. The results observed by Silva (2016) were similar: of the 75 companies verified by the author, only one used the FIFO to measure stocks.

Regarding the depreciation rate, it can be seen that 40.46% (437 out of 1,080) of the companies opted for the tax rate and 37% (409 out of 1,080) for the economic rate. Furthermore, in the period observed, on average, five companies depreciated their assets using the regulatory rate. The results differ from those found by Silva (2016). The author identified greater use of economic rates by the companies in her sample.

Table 5 shows the accounting choices related to recognition adopted by the verified companies.

Table 5
Accounting choices related to recognition in the sample

		2010	2011	2012	2013	2014	2015	2016	2017	Total
Depreciation method	Linear	108	107	108	107	109	107	106	106	858
	Declining balances	0	0	0	0	0	0	0	0	0
	Units produced	2	2	2	2	2	2	2	2	16
	Does not mention	12	12	11	10	8	9	9	9	80
	Not applicable	13	14	14	16	16	17	18	18	126
	Total	135	135	135	135	135	135	135	135	1080
Operating lease installments	Linear	32	37	38	35	30	31	30	33	266
	Systematic basis	4	5	4	1	1	0	0	0	15
	does not mention	7	5	6	6	5	5	6	6	46
	Not applicable	92	88	87	93	99	99	99	96	753
	Total	135	135	135	135	135	135	135	135	1080
Regular purchases and sales of financial assets	Data de negociação	44	45	46	47	44	48	46	49	369
	Data de liquidação	2	3	3	3	2	1	1	0	15
	Does not mention	0	1	0	0	0	0	1	0	2
	Not applicable	89	86	86	85	89	86	87	86	694
	Total	135	135	135	135	135	135	135	135	1080

Source: Prepared by the authors.

As for the depreciation method, 79.44% (858 out of 1080) of the companies in the sample chose to depreciate their assets using the straight-line method. In addition, no company opted for the declining balance method and only two companies opted for the units produced method. The results found by Lemes, Costa and Martins (2018) are similar to those of the present study, that is, the linear method was the most used.

With regard to operating lease installments, approximately 25% (266 out of 1,080) of the companies opted for the straight-line method for recognition in income. On average, three companies opted for another systematic basis. The linear method was also the most used by European companies analyzed by Cole, Branson and Breesch (2013), with about 97% of companies adopting the linear method.

As for the regular purchases and sales of financial assets, 34.16% (369 out of 1,080) of the companies recognize them on the trade date. In the period examined, on average, two companies chose to recognize purchases and sales on the settlement date. Silva (2016) identified the preference of companies to carry out recognition on the negotiation date.

Table 6 shows the accounting choices related to the classification adopted by the companies in the sample.

Table 6
Accounting choices related to sample classification

		2010	2011	2012	2013	2014	2015	2016	2017	Total
Interest paid	Operational	47	49	48	51	51	54	53	53	406
	Financing	25	28	35	38	40	38	40	38	282
	Does not mention	54	50	44	38	37	36	35	36	330
	Not applicable	9	8	8	8	7	7	7	8	62
	Total	135	135	135	135	135	135	135	135	1080
Dividends e IE paid	Operational	0	0	0	2	1	1	1	1	6
	Investimento	0	0	0	0	1	1	1	2	5
	Financiamento	105	106	106	104	102	103	101	99	826
	Does not mention	1	1	1	2	1	1	2	1	10
	Not applicable	29	28	28	27	30	29	30	32	233
	Total	135	135	135	135	135	135	135	135	1080
Dividends e IE received	Operacional	18	18	17	21	22	16	17	15	144
	Investimento	33	39	43	41	40	45	47	46	334
	Financiamento	3	2	2	2	3	3	1	3	19
	Does not mention	4	5	4	3	3	4	5	5	33
	Not applicable	77	71	69	68	67	67	65	66	550
	Total	135	135	135	135	135	135	135	135	1080

Source: Prepared by the authors

As for the interest paid, 37% (406 out of 1,080) of the companies in the sample chose to classify it in the operating cash flow. About 26% (282 out of 1080) of companies rated interest paid on financing activities. The results obtained by Cole, Branson and Breesch (2013) were similar to those identified in this study, indicating the classification of interest paid in operating cash flows by 77% of companies, while in financing cash flows the classification was adopted by 20 % of European companies.

With regard to dividends and interest on equity paid, the predominant choice was the cash flow from financing with 77% (826 out of 1,080) of the companies. The results corroborate those found by Costa et al. (2019). The authors identified that approximately 94% of companies rated dividends and interest on equity paid on financing cash flows.

With regard to dividends and interest on equity received, it can be seen that approximately 31% (334 out of 1,080) of the companies opted for their presentation in the investment cash flows. In addition, in the entire period verified, on average, two companies presented dividends and interest on equity received in financing cash flows. No information was found in the explanatory notes regarding the classification of dividends and interest on equity, which differs from what is proposed by the accounting standard. For dividends and interest on equity received, the results of Costa et al. (2019) are similar to those found in this study, demonstrating that 21% of the companies in their sample classify dividends and interest on equity received in investment cash flows.

Table 7 indicates the list of companies under study that are audited by Big Four and non-Big Four audits.

Table 7
Audit companies Big Four

Year	2010	2011	2012	2013	2014	2015	2016	2017	Total
Big Four	91	106	92	91	92	91	87	82	732
No Big Four	44	29	43	44	43	44	48	53	348
Total	135	135	135	135	135	135	135	135	1080

Source: Prepared by the authors

During the period analyzed, around 68% (732 out of 1,080) of companies were audited by Big Four companies. The 2011 was the year in which more companies were audited by them. The year in which the fewest companies were audited by a Big Four was 2017.

To test the hypothesis of association between change in accounting practice and change in the audit firm, the Chi-square test was used for each accounting choice under study. Through the Chi-square test, it was also verified whether the fact that the audit firm is a Big Four is associated with the change in the analyzed accounting choices. The identification of the change in accounting choice with the audit firm is related to the quality of the audit service attributed by investors. As stated by DeAngelo (1981) and Francis and Yu (2010), the size of the audit firm may be linked to a higher quality auditing service and, according to Rusmin (2010), the magnitude of earnings management is significantly smaller in companies audited by a Big Four. In this sense, the result identified in this study may be linked to the idea that the Big Four audit firms provide higher quality auditing services.

Table 8 presents the results of the Chi-square test for the accounting choices regarding the IP measurement, inventory measurement and the depreciation rate.

Table 8
Change of the audit firm in the measurement of IP, inventories and depreciation rate

		Did not change audit firm		Change audit firm		Total	
Measurement of IP	Did not change the choice	114	94.21%	39	82.98%	153	91.07%
	Changed the choice	7	5.79%	8	17.02%	15	8.93%
	Total	121	100%	47	100%	168	100%
Inventory Measurement	Did not change the choice	518	99.04%	166	98.22%	684	98.84%
	Changed the choice	5	0.96%	3	1.78%	8	1.16%
	Total	523	100%	169	100%	692	100%
Depreciation Rate	Did not change the choice	666	97.94%	195	93.30%	861	96.85%
	Changed the choice	14	2.06%	14	6.70%	28	3.15%
	Total	680	100%	209	100%	889	100%

Source: Prepared by the authors

The Chi-square test (p-value = 0.022) shows that there is an association between changing the audit firm and changes in the measurement of IP in the companies in the sample. It is verified that 17.2% of the companies (Table 8) changed the practice related to the measurement of IP when they changed the audit firm, and 39 companies did not change the practice when they changed the audit firm. However, it is noticed that of the companies that maintained the accounting practice, 94.21% remained with the same audit firm. This result corroborates the idea of DeFond and Jiambalvo (1992) that auditors tend to suggest that the company adopt more conservative accounting choices, considering that the historical cost tends to be more conservative in relation to fair value, since it is less subject. manipulations and is more verifiable when compared to fair value.

Regarding the measurement of inventories, it was detected (Table 8) that only three companies (1.78%) changed the accounting choice when they changed the audit firm. The Chi-square test (p-value = 0.386) does not show an association between the change in choice regarding the measurement of inventories and the change of the audit firm. It is possible to identify that, when measuring their inventories by the weighted average cost, companies are opting for a more conservative option, since, when compared to FIFO, the weighted average cost tends to reduce the company's result.

The Chi-square test (p-value = 0.001) points out (Table 8) that the change in accounting practice related to the depreciation rate is associated with the change of the audit firm. Of the companies analyzed, 14 (6.70%) chose to change the depreciation rate when there was replacement of the audit firm. However, most companies (97.94%) chose to make the same accounting choice while being audited by the same audit firm. It is noteworthy that 40% of the companies analyzed tended to opt for the tax depreciation rate, a choice that is presumed to be more conservative – a result that also reinforces the idea that auditors tend to suggest accounting practices that lead to a reduction in the result.

Table 9 shows the results of the Chi-square test for the accounting choices regarding the depreciation method, operating lease installments and operating lease installments.

Table 9
Change of the audit firm in the depreciation method, operating lease installments and operating lease installments

		Did not change audit firm		Changed the audit firm		Total	
Depreciation method	Did not change the choice	660	99.10%	202	97.12%	862	98.63%
	Changed the choice	6	0.90%	6	2.88%	12	1.37%
	Total	666	100%	208	100%	874	100%
Operating lease installments	Did not change the choice	201	93.93%	57	85.07%	258	91.81%
	Changed the choice	13	6.07%	10	14.93%	23	8.19%
	Total	214	100%	67	100%	281	100%
Regular purchases and sales of financial assets	Did not change the choice	270	93.43%	74	77.89%	344	89.58%
	Changed the choice	19	6.57%	21	22.11%	40	10.42%
	Total	289	100%	95	100%	384	100%

Source: Prepared by the authors.

Regarding the depreciation method, the Chi-square test (p-value = 0.032) points out (Table 9) the existence of an association between the change in the audit firm and the recognition of the depreciation method. The number of companies that changed the depreciation method and, at the same time, the audit company, is only six companies. It is noticed that 660 companies (99.10%) maintained the same accounting practice during the period in which they continued with the audit firm. It is noteworthy that the sample companies predominantly adopted the straight-line method to depreciate their assets. This preference indicates the option for a less conservative accounting choice, since the linear method tends to increase the result when compared to the declining balance and units produced method. Silva (2016) states that the propensity of companies to depreciate their assets using the straight-line method can be explained by the preference for keeping the accounting practice used before IFRS adoption, when accounting standards were linked to tax standards in Brazil.

Through the Chi-square test (p-value = 0.021), it was identified (Table 9) the existence of an association between the change in the recognition of operating lease installments and the change in the audit firm. It is possible to notice that 14.93% of the companies verified changed the accounting choice when they also changed the audit firm. However, the percentage of companies that maintained the same accounting practice while retaining the audit firm is 93.93%. Complementarily, the companies' preference for the straight-line method in the recognition of operating lease installments stands out – a choice that can be considered less conservative. The preference of companies for adopting the straight-line method in recognizing operating lease installments can be explained by the recommendation in CPC 06 for adopting this practice.

With regard to the recognition of regular purchases and sales of financial assets, (Table 9) 21 companies (22.11%) that changed the audit also changed their accounting practice. The Chi-square test (p-value = 0.000) reveals an association between changing the audit firm and changing the choice of recognizing regular purchases and sales of financial assets. However, as for the choices previously verified, it is clear that, predominantly during the period in which the companies kept the same audit firm, they also remained with the same accounting choice. Recognition on the negotiation date is highlighted as a preponderant choice, a choice considered more conservative as it tends to reduce results. This result strengthens DeFond and Jiambalvo's (1992) idea that auditors suggest the adoption of more conservative accounting choices.

Table 10 indicates the results of the Chi-square test for the accounting choices regarding the classification of interest paid, classification of dividends and interest on equity paid, and classification of dividends and interest on equity received.

Table 10
Change in the audit firm and classification of interest paid, dividends and interest on equity paid and dividends and interest on equity received

		Did not change the audit firm		Changed the audit firm		Total	
Interest paid	Did not change the choice	491	93.52%	140	85.89%	631	91.72%
	Changed the choice	34	6.48%	23	14.11%	57	8.28%
	Total	525	100%	163	100%	688	100%
Dividends e IE paid	Did not change the choice	625	96.60%	186	97.89%	811	96.89%
	Changed the choice	22	3.40%	4	2.11%	26	3.11%
	Total	647	100%	190	100%	837	100%
Dividends e IE received	Did not change the choice	333	87.40%	91	78.45%	424	85.31%
	Changed the choice	48	12.60%	25	21.55%	73	14.69%
	Total	381	100%	116	100%	497	100%

Source: Prepared by the authors.

Regarding the classification of interest paid, the Chi-square test (p-value = 0.002) demonstrates an association between the change in the classification of interest paid and the change of the audit firm. It can be seen (Table 10) that 23 companies (14.11%), when they changed their audit firm, also changed their accounting practice. However, 491 companies kept the same audit firm and maintained the same accounting practice. However, 85.89% of the companies kept the same accounting practice even though they changed the audit firm. The classification of interest paid as operating cash flow was the most adopted by the verified companies. This option is considered more conservative as it leads to a reduction in operating cash flows, a result that also corroborates DeFond and Subramanyam (1998), indicating that auditors may prefer more conservative accounting methods.

As for the classification of dividends and interest on equity paid, it could be identified that only four companies (2.11%) changed the accounting practice when they changed the audit firm. Through the Chi-square test (p-value = 0.366) an association was not observed between the change in the audit firm and the change in the classification of dividends and interest on equity paid. It is noteworthy that 186 of the companies chose to change the accounting choice during the period in which they did not change the audit firm. However, most companies that kept the accounting practice also kept the audit firm. In addition, most companies opted to classify dividends and interest on equity paid as financing cash flow – a choice considered less conservative.

Regarding the classification of dividends and interest on equity received, the Chi-square test (p-value = 0.021) indicates (Table 10) an association between the change in the classification of dividends and interest on equity received and the change in the audit firm. It is noted that 25 of the companies changed the accounting practice when they changed the audit firm. However, 333 companies (87.40%), while maintaining the audit firm, also maintained the same accounting practice, and 78.45% of the companies kept the accounting practice even with the change of the audit firm. The classification of dividends and interest on equity received as cash flow from investments was the most adopted practice by the companies under study. Such result indicates a preference of auditors for choices that reduce the result, corroborating the statements of DeFond and Subramanyam (1998).

In general, the results obtained on the relationship between accounting choices and auditing show the existence of an association between changes in audit firms and changes in accounting choices, since the Chi-square test indicated an association for seven of the accounting choices studied, namely: the measurement of IP, the depreciation rate, the depreciation method, the recognition of operating lease installments, the recognition of regular purchases and sales of financial assets, the classification of interest paid and the classification of dividends and IE received. In addition, it was identified that five (IP measurement, inventory measurement, depreciation rate, classification of interest paid and classification of dividends and interest on equity received) out of the nine verified accounting choices indicate the predominance of the option by the most conservative criterion. This result may be an indication that auditors tend to suggest the option for a more conservative accounting choice, since, of the five practices investigated in which the option was the most conservative method, four are associated with changing the audit firm. It is also noteworthy that the accounting choices that have a predominance of option for a conservative criterion are linked to the measurement of accounting events and the classification of items in the DFC, that is, they refer to items that directly impact the result and the flow operating cash flow.

Next, the Chi-square test was performed in order to verify whether the fact that the audit firm is a Big Four is associated with changing accounting choices.

Table 11 shows the results of the Chi-square test for the change in the measurement of IP, measurement of inventories and depreciation rate and the Big Four.

Table 11
Big Four or not Big Four and change in the measurement of IP, inventories and depreciation rate

		Not Big Four		Big Four		Total	
IP Measurement	Did not change the choice	60	96.77%	93	87.74%	153	91.07%
	Changed the choice	2	3.23%	13	12.26%	15	8.93%
	Total	62	100%	106	100%	168	100%
Inventory measurement	Did not change the choice	232	100%	452	98.26%	684	98.84%
	Changed the choice	0	0%	8	1.74%	8	1.16%
	Total	232	100%	460	100%	692	100%
Depreciation Rate	Did not change the choice	264	97.06%	597	96.76%	861	96.85%
	Changed the choice	8	2.94%	20	3.24%	28	3.15%
	Total	272	100%	617	100%	889	100%

Source: Prepared by the authors.

The Chi-square test (p-value = 0.047) shows (Table 11) that there is an association between the fact that the audit firm is a Big Four and changes in the measurement of IP in the analyzed companies. It appears that 13 of the companies that changed the practice related to the measurement of IP were audited by a Big Four. In addition, 93 companies (87.74%) that maintained the accounting practice are audited by a Big Four. Of the companies that are not audited by Big Four companies, around 96.77% (60 companies) chose not to change the practice related to the measurement of IP. As observed with the change in audit firms, it is clear that the companies under study predominantly prioritize maintaining the same accounting practice in the case of measuring IP.

Regarding the measurement of inventories, the Chi-square test (p-value = 0.043) reveals (Table 11) an association between the change in measurement of inventories and the Big Four audit. It is noticed that all eight companies that changed their accounting practices were audited by a Big Four. However, 100% of the companies maintained the accounting practice when they were not audited by a Big Four. Although few companies have made different accounting choices, the results show that, for the measurement of inventories, the audit firm being a Big Four can be a factor that is associated with the decision for an accounting method, since when companies were not audited by a Big Four all maintained the same option.

As for the change in the depreciation rate, it could be identified (Table 11) that 20 of the companies that changed their accounting practice had a Big Four as their audit firm. The Chi-square test (p-value = 0.813) does not demonstrate an association between the change in depreciation rate and the Big Four audit. It is noteworthy that 264 of the companies that chose to maintain the previous accounting practice had a Big Four as their audit firm. However, it is clear that

97.06% of companies not audited by a Big Four made the same accounting choice. This result differs from that found by Silva (2016). The author found an association between the depreciation rate and the Big Four audit. In addition, the companies analyzed by the author showed preference for the economic rate, a result that differs from that observed in the present study, whereby the companies in the sample mostly adopted the tax rate. A possible explanation for the choice of most companies for the tax rate may be related to the influence of tax rules on accounting in Brazil.

Table 12 presents the results for the Chi-square test for the Big Four audit and the change in the depreciation method, operating lease installments and regular purchases and sales of financial assets.

Table 12
Big Four or not Big Four and change in depreciation method, operating lease installments and regular purchases and sales of financial assets

		Not Big Four		Big Four		Total	
Depreciation Method	Did not change the choice	263	98.50%	599	98.68%	862	98.63%
	Changed the choice	4	1.50%	8	1.32%	12	1.37%
	Total	267	100%	607	100%	874	100%
Operating lease installments	Did not change the choice	27	87.10%	231	92.40%	258	91.81%
	Changed the choice	4	12.90%	19	7.60%	23	8.19%
	Total	31	100%	250	100%	281	100%
Regular purchases and sales of financial assets	Did not change the choice	92	90.20%	252	89.36%	344	89.58%
	Changed the choice	10	9.80%	30	10.64%	40	10.42%
	Total	102	100%	282	100%	384	100%

Source: Prepared by the authors.

The Chi-square test (p-value = 0.833) points out (Table 12) the non-existence of an association between the audit performed by a Big Four and the change in the depreciation method. Although the Chi-square test does not indicate an association between the audit performed by a Big Four and the change in the depreciation method, it is clear that 1.32% of the companies observed adopted a different accounting practice when audited by a Big Four. However, the percentage of companies that maintained the same practice related to the depreciation method is 98.68%. We highlight the considerable percentage of 98.50% of companies that were not audited by a Big Four and maintained the same accounting choice.

The Chi-square test (p-value = 0.310) points out (Table 12) that there is no association between the fact that the audit firm is a Big Four and changes in the recognition of operating lease installments in the analyzed companies. It appears that 19 of the companies opted for a different practice, related to the recognition of installments of the operational leasing when they were audited by a Big Four. In addition, it is clear that 231 of the companies (92.40%) that maintained the same accounting practice were audited by a Big Four. Of the companies that were not audited by Big Four companies, around 87.10% chose not to change their accounting practices.

As for the recognition of regular purchases and sales of financial assets, it was possible to identify (Table 12) that 30 of the 40 companies that changed their accounting practices were audited by a Big Four company. By the result of the Chi-square test (p-value = 0.813) no association was observed between the Big

Four audit firm and the change in the recognition of regular purchases and sales of financial assets. It is noteworthy that most companies (89.36%) that chose not to change the accounting practice were audited by a Big Four. In addition, it is clear that of the companies that were not audited by a Big Four, about 90.20% maintained the same practice related to the recognition of regular purchases and sales of financial assets.

Table 13 shows the results of the Chi-square test for accounting choices regarding the classification of interest paid, dividends and interest on equity paid and dividends and interest on equity received.

Table 13
Big Four or not Big Four and classification of interest paid, dividends and interest on equity paid and dividends and interest on equity received

		Not Big Four		Big Four		Total	
Interest paid	Did not change the choice	93	93%	538	91.50%	631	91.72%
	Changed the choice	7	7%	50	8.50%	57	8.28%
	Total	100	100%	588	100%	688	100%
Dividends and IE paid	Did not change the choice	178	94.18%	633	97.69%	811	96.89%
	Changed the choice	11	5.82%	15	2.31%	26	3.11%
	Total	189	100%	648	100%	837	100%
Dividends and IE received	Did not change the choice	76	85.39%	348	85.29%	424	85.31%
	Changed the choice	13	14.61%	60	14.71%	73	14.69%
	Total	89	100%	408	100%	497	100%

Source: Prepared by the authors.

Regarding the classification of interest paid, the Chi-square test (p-value = 0.614) indicated (Table 13) that there is no association between the change in the classification of interest paid and the Big Four audit. It is noticed that, of a total of 57 companies that changed their accounting practices, 50 were audited by a Big Four. When not audited by a Big Four, 7% of companies adopted a different accounting practice, and 93% (538 companies) maintained the previous practice.

The Chi-square test (p-value = 0.015) demonstrates that there is an association between the fact that the audit firm is a Big Four and changes in the classification of dividends and interest on equity in the analyzed companies. It is verified that 2.31% (15 companies) of the companies that changed the choice related to the classification of dividends and interest on equity were audited by a Big Four. Additionally, it is noticed that 633 companies (97.69%) that maintained the accounting practice are audited by a Big Four. About the companies that are not audited by Big Four companies, around 94.18% did not change the practice of classifying dividends and interest on equity.

As for the classification of dividends and interest on equity received, it was possible to identify (Table 13) that out of 73 companies that changed their accounting practices, 60 (14.71%) were audited by a Big Four. The Chi-square test (p-value = 0.981) shows that an association between the Big Four audit firm and the change in the classification of dividends and interest on equity received was not verified. It is noticed that 348 (85.29%) of the companies that chose not to change the accounting practice were audited by a Big Four. In addition, it is possible to verify that about the companies that were not audited by a Big Four, around 85.39% maintained the choice related to the classification of dividends and interest on equity received.

Regarding the change in accounting choice and the Big Four audit, it is clear that, of the nine choices investigated, the choices related to the measurement of PPI, measurement of inventories and classification of dividends and interest on equity paid demonstrated to be associated with the fact that the company audit whether or not a Big Four. It is interesting to note that the accounting choices that were not associated with changing the audit firm are associated with the fact that the audit is a Big Four, which may indicate that the Big Four can defend, for their clients, accounting practices that are similar.

5 FINAL CONSIDERATIONS

The audit plays an important role in the companies' management process, as it validates the financial information prepared by the administration. However, for users to maintain confidence in the information disclosed, the audit must be considered independent. There is the possibility that the auditors act as consultants in the companies they audit, being able to directly influence the preparation of the financial statements and, consequently, the decision for one or another accounting method. Furthermore, it is understood that auditors tend to suggest that companies adopt more conservative accounting choices, as these choices reduce the risk of litigation for auditors. However, if the audited company considers that another auditor is less conservative, it may choose to change the auditor. This research aimed to identify the association between independent audit firms and accounting choices, considering the practice of audit firms to also participate in the process of preparing the financial statements.

In general, there was evidence of an association between changes in the companies responsible for auditing and changes in accounting practices, given the possibility of choices, confirming the study's hypothesis. For nine choices that were the focus of the study, it was identified, by the Chi-Square Test, that seven accounting choices were changed with the change of the audit firm, namely: the IP measurement, the depreciation rate, the depreciation method, recognition of operating lease installments, recognition of regular purchases and sales of financial assets, classification of interest paid and classification of dividends and interest on equity received.

Based on the effect on results and cash flow, the investigated choices were classified as more conservative or less conservative. Thus, it was possible to identify that, of the nine accounting choices verified, five (measurement of IP, measurement of inventories, depreciation rate, classification of interest paid and classification of dividends and interest on equity received) were more conservative and four of these are associated with the change in audit firm. This evidence indicates that changing the audit firm can lead to more conservative practices at first, with effects on results and operating cash flow.

In order to verify the participation of the Big Four audit firms in the changes in accounting choices, it was found that four of the nine choices investigated are related to whether the audit firm is a Big Four or not, in addition to companies audited by a Big Four did not change accounting choices.

Overall, the findings of the study have some theoretical and practical implications. First, it is an indication that, in Brazil, the role of the auditor may be going beyond the assessment of the financial statements, through participation in the preparation of these statements based on the influence on the client's accounting choice. The second implication is the tendency, in the change of audit company, for accounting choices to be more conservative, signaling that the change of audit may not be motivated by the agreement with practices that would increase the result and the clients' cash flow. Finally, it became clear that the Big Four audit firms would not promote changes in accounting practices when taking on a new client.

These results allow us to estimate that there are standards of accounting practices adopted by this group of audit firms, which, indirectly and improperly, regarding the role of the auditor, ends up promoting comparability and, consequently, the convergence of accounting practices within the country. As a whole, the evidence from the study allows us to infer that the Big Four being associated, in the literature, with the best quality of audit services and less management of results, better quality of audited reports, and consequently, greater market reliability, it is it is assumed that the practices adopted by companies audited by the Big Four can be validated as being of quality. Even though this research is not intended to indicate the best accounting choice for companies, the prevalence of the same practices by companies audited by the Big Four may refer to a standardization of accounting practices certified by audit and considered of quality.

The need for caution in generalizing the results is highlighted, given the number of accounting choices verified. Additionally, the presumed association between auditors and accounting choices was detected only based on published financial statements, that is, no interviews or other structured contact were carried out with these professionals. The relationship between the choices made by the companies, mediated by the audit, and the quality of accounting information was not the focus of the research, giving rise to more studies about the subject.

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AUTHORS' CONTRIBUTIONS

Contributions	Aline Fernandes Pinto	Sirlei Lemes
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		✓