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Audit fees: an analysis of the and nonfamily and family business listed on BM&FBovespa

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ABSTRACT

Objective – Examine the relationship between audit fees and the quality of financial information in familiar and non-familiar companies listed on the BM&FBovespa.

Design/methodology/approach – Descriptive, documentary research with application of average test and linear regression model, using data from 2009, 2010 and 2011 of a sample of 133 family businesses and 128 non-familiar BM&FBovespa. The basis for the study was Ghosh and Tang (2015).

Findings - The findings indicate a rejection of the hypothesis through the average test and regression model, in which the variable dependent (family firms) was not statistically significant. This result differs from that obtained by Ghosh and Tang (2015) and makes inference to the characteristics of the companies and the Brazilian market.

Practical implications – Enabled the discussion on the relationship between audit fees and the structure of ownership and control of Brazilian companies, going through the theme of quality of financial information. It also helped the identification of key explanatory variables for audit fees. In family firms included: size, foreign-sales, mergers and/or acquisitions (M&A), Big Four, and in non-family firms: size, regulation, busy-season, Big Four and auditor-tenure.

Keywords – Audit fees; Family firms; Quality of financial information; Independent audit.



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I INTRODUCTION

Many companies in the world are controlled by its founders, or by founders' families and heirs, being thus family businesses. This organization mode is considered the oldest organization form, and can be present in both publicly traded and privately held companies (Burkart, Panunzi, & Shleifer, 2003).

For Mendes-da-Silva and Grzybovski (2006), the family business definition concerns to "business in which ownership and management are part of one or more families, undergoing family influence in decision-making, and where there is intention to transfer the company (ownership and management) for the next generation" (p. 47). In this sense, there is family involvement in the business, in decision and control terms. In the case of non-family businesses, characterized by higher share dilution (Jensen & Meckling, 1976), the gap between agent and principal tends to increase the agency cost, such as the audit fee value paid in order to give validity to financial information made available to stakeholders.

Gorriz and Furnas (1993), in their study of Spanish family businesses efficiency compared with non-family businesses, highlighted the issue about companies' ownership and control relevance, what instigates discussion to numerous issues linked to this research field, with independent audit among them.

One of the specific features shown in the literature, and to which controversial empirical evidence is attributed, is the causality between family businesses and their financial information quality (Ghosh & Tang, 2015). According to Ali, Chen and Radhakrishnan (2007), family businesses have higher quality in their financial information, what is characterized by earnings report quality, which is analyzed by discretionary accruals, for example, as well as higher willingness to disclose negative information.

Dechow's (2006) study found that family businesses are associated with higher results quality, i.e., low earnings management indexes,

and consequently, higher quality in their financial statements. These results were also confirmed in the study of Ali et al. (2007), through lower earnings management propensity evidence from family businesses, higher profit persistence and wide information dissemination, including the negative, suggesting, according to the authors, a higher financial statement quality.

From this perspective, Jiraporn and Dadalt (2007) attributed lower earnings management index in family-controlled companies because these possess concentrated ownership structure, with long-term goals, as well as family reputation that is intended to be passed from generation to generation.

However, Chen, Chen and Cheng (2008) stated that, despite the fact that family businesses have higher information control, these remain internal to the organization, that is, family businesses are less likely to disclose financial information, therefore being more restrictive regarding information disclosure to the general public. This result, according to Chen et al. (2008), can bring harm to transparency levels, and consequently to financial statements quality.

Starting from discretionary *accruals* use as family business financial statements quality proxy, another controversial result is the one obtained by Santos, Cia and Cia (2011). In this study, developed with Brazilian companies, authors found that family businesses tend to more intensely manage their earnings when compared to non-familiar companies surveyed.

Under this gap found in this subject literature, a study by Ghosh and Tang (2015) is highlighted, which was the basis for this study development. Ghosh and Tang's (2015) research was developed with 600 United States family businesses and 1.182 non-family businesses, using data from 2003 to 2010, in order to check whether financial information quality varies between family businesses and non-familiar businesses, through audit fees analysis.

Using independent audit fees perspective involves that the audit opinion on financial

information confirms its validity. Therefore, it brings information quality indicatives, what reduces information asymmetry between agents, and thus represents a cost to the organization (Becker, Defond, Jiambalvo, & Subramanyam, 1998; Bell, Landsman, & Shackelford, 2001; Trapp, 2009).

Given the above, the following guiding question of this study arises: What is the relation between independent auditors' fee value and financial information quality in familiar and non-familiar companies listed on BM&FBovespa?

This way, this study aims to verify the relation between independent auditor fees and financial information quality in familiar and non-familiar businesses listed on BM&FBovespa.

According to Hay, Knechel and Wong (2006), examining how different property forms (for example, family businesses *versus* non-family businesses) affect audit fees brings contributions concerning knowing and discussing how the main factors in each ownership structure mode can impact the audit value, and thus weave reflections about it.

This research contribution consists of directing the understanding on the identified gap, dealing with ownership and control structure and its consequences in the value paid to audit companies in family and non-family businesses, in the context of Brazilian businesses. Moreover, it is possible to establish a comparison with Ghosh and Tang's (2015) study, through checking convergences or divergences in the findings, given the research sample specific characteristics.

This study is divided into five topics, beginning with this introduction, followed by the theoretical background and the discussion on financial information quality and independent audit, specifically concerning audit fees. This study also deals with family businesses, with Ghosh and Tang's (2015) study being presented, which served as this study basis. Afterwards, the used methodology is shown, followed by results analysis. Finally, there are the study conclusions with references that support it.

2 THEORETICAL BASIS

This topic shows the items that make up this study theoretical basis, in order to support the selected subject, which goes through financial information quality and independent audits, family businesses and Ghosh and Tang's (2015) study description, which was this paper baseline.

2.1 Financial information quality and independent audit

Financial statements are useful to the several economic agents interested in a company economic and financial situation, as this information contributes with these agents market decision-making (Trapp, 2009).

Lambert, Leuz and Verrecchia (2006) pointed out that information quality increase results in a company capital cost reduction. In this sense, Paulo and Martins (2007) see quality accounting information as the one shown in a structured way and that reflects an entity true situation, in which the user can base his/her decision-making. For Antunes and Mendonça (2008), accounting information quality is reflected in the accounting functionality level as resource expropriation deterrent mechanism.

It is noteworthy that one of the aspects covered in the literature that leads to reduced quality is the practice of earnings management, due to the information asymmetry that is generated between principal and agent. According to Paulo and Leme (2009), this practice is used by management to "interfere with the financial information preparation and disclosure process, affecting the accounting information and the understanding about companies' economic and financial reality" (p. 29).

In order to mitigate financial information quality reduction, there is the possibility to use protection mechanisms for users, such as corporate governance and independent audit, which are aimed at transmitting higher security and transparency in their activities (Almeida, 2010).

The Brazilian Institute of Corporate Governance (IBGC, 2009) highlighted that organizations must have their financial statements audited by an independent auditor, whose main task is to verify that the financial statements adequately reflect the company reality.

According to Becker et al. (1998), “the audit reduces the informational asymmetry between managers and stakeholders when enabling the interested parties to check the published financial statements validity.” (p.6). Thus, audit effectiveness is related to its ability to reduce information asymmetry, and thus contain earnings management by managers.

According to Martinez (2001), “for those that protect financial statements quality, attention to financial earning ‘management’ motivational factors is crucial to define the audit procedures.” (p.122). The author was referring to audit risks. According to Ghosh and Tang (2015), audit risk has direct implications to the fee amount charged by auditors. Pittmann and Fortin (2004) argued that companies with independent audit tend to have higher financial statements credibility with their users. In this context, DeAngelo (1981) emphasizes that audit quality depends on audit company size, even when companies have similar technological capabilities.

The audit effort cost, commonly called “fee”, will increase for companies with precarious financial information quality, as auditors will have to work more hours to ensure that financial statements will be well-represented (Bell et al., 2001). Audit fees value is defined by factors such as information type, auditors’ litigation risk, worked hours, among others (Bell et al. 2001, Choi, Kim, Lui, & Simunic 2008, Ghosh & Tang, 2015).

Litigation risk depends on financial report distortion probability, the probability that the audit would not be enough to detect a distortion, and the probability that the auditor would have to incur legal liability due to audit failure (Choi et al., 2008). In the case of family businesses, Ghosh and Tang (2015) emphasized that audit fees may be lower due to lower litigation, or

because auditors need to do lower investments in work hours and staff.

Therefore, audit fees should be higher for companies that are more likely to redisplay financial statements, companies that are more likely to have audit report reservations, companies that have low quality financial statements and companies that have weak internal controls. In this context, auditors increase fees in order to cover potential legal costs. In family businesses, there is a concern about the family image and heritage, what leads them to take actions that mitigate weaknesses in internal controls, therefore lessening the damage to the company image and asset. Thus, audit fees may be lower because auditors would use less work hours to achieve a desired security level (Ghosh & Tang, 2015).

Choi et al. (2008) have also researched about audit fees in 15 different countries and found that audit fees are influenced by the country’s legal system, as well as the audit company size, that is, if it is a *Big Four* or not.

Another aspect discussed by Firth, Rui and Wu (2012) that may reflect in audit fee values refers to independent audit company mandatory rotation. According to findings in the survey conducted by the authors, audit quality is affected by the mandatory rotation, and there are several factors that influence results, such as concern with investors, the stock market and the legal system (Firth, Rui & Wu, 2012).

Thus, aspects related to independent audit, such as audit company size, the presence of exceptions or not in audit opinions, and audit company rotation system are reported in the literature as points that influence audit quality, in addition to reflecting in audit fee values.

2.2 Family business

Family property has a significant participation in privately and public held companies (Burkart et al., 2003). Donnelley (1967) considers “a family company when it has been linked to a family for at least two generations” (p. 1).

To Bernhoeft (1991), “a family business is one that has its origin and history linked to a family; or one that keeps family members in the business management.”(p. 35). According to the author, one of the most important features in the family business refers to the importance played by mutual trust between members representing the company.

Prencipe, Markarian and Pozza (2008) understand that family businesses are characterized by a close relation between managers and family controllers. In many cases, managers are members of the controlling family or are attached to it by personal relations.

Martin-Reyna and Duran-Encalada (2012) classified family businesses as broad, intermediate or restrict. The authors explained that the company is of broad family type when family members approve the main business strategies, even if they do not participate in their formulation. Intermediate type family business are the ones where founders or their descendants control the company in strategic decisions, besides having some direct involvement in these strategies implementation, i.e., the family is directly involved in the management, but not exclusively. Finally, restrictive family business is when a family has control and active management presence for several generations. Therefore, the family is involved at different management levels and with a very intense presence (Martin-Reyna & Duran-Encalada, 2012).

Family businesses are positively seen in the business market due to having a long-term vision concerning investments, in addition to having reduced agency problems (Martin-Reyna & Duran-Encalada, 2012; Ghosh & Tang, 2015).

Setia-Atmaja, Tanewski and Skully (2009) emphasized that agency conflicts tend to be smaller in family businesses than in non-family businesses, since control and management are usually carried out by the family. In this group of companies, the agency problem is mainly characterized between minority and majority shareholders (Silveira, 2004).

Ghosh and Tang (2015) pointed out that the market is favorable to family businesses because these have less information risk, in addition to disclosing financial statements with higher quality than non-family businesses.

Ali et al. (2007) emphasized that financial statements and disclosure practices quality are higher for family businesses due to the direct monitoring by the controlling families, as they have expert knowledge on business environment, and consequently have reduced financial statements manipulation. The authors added that non-family businesses are more likely to manage accounting information to maximize their remuneration, differently from family businesses, which are less subjected to opportunistic behavior from their managers.

Jiraporn and DaDalt (2007) concluded that family-owned companies tend to manage information on a smaller scale compared to non-familiar companies, as those have an ownership structure that aims at business long-term sustainability, in addition to the family reputation, which is passed from generation to generation.

2.3 Ghosh and Tang (2015) study description

Ghosh and Tang (2015) developed a study based on the controversial relation identified in the literature between financial information quality and ownership structure and control, particularly regarding whether companies are classified as familiar or non-familiar.

The authors focused the study from the independent auditors perspective, whose objective was to determine whether financial information quality varies between family businesses and non-family businesses, through audit fees analysis. The authors also conducted tests to differentiate competing explanations for fee value differences through audit investments and litigation risk analysis between the two company sets.

The study sample comprised 2.000 United States companies. The study period covered 2003 to 2010. After research development data availability was verified, the final sample consisted

of 600 companies classified as family firms (2.798 observations) and 1.182 classified as non-familiar firms (6.393 observations).

Ghosh and Tang (2015) worked with the central hypothesis that independent audit fee

values research was likely to provide distinctive insights on financial information quality between family and non-family businesses assessment. Each model used in the study dependent variables are shown in Table 1, as well as the results found.

TABLE 1 – Study variables and results description

Tested variables	Description	Expected relation	Results
Independent audit fee	Variation between family and non-family business audit fees	If financial reporting quality is high for family businesses, auditors should charge lower fees for family businesses than for non-family businesses. The independent variable (if family business) should be negative and significant.	The coefficient was negative and significant. After controlling factors known to affect audit fees, it was observed that these were 8% lower for family businesses compared to non-family businesses.
Litigation risk	Variation between family and non-family business litigation probability	Auditors charge lower fees because family businesses are less likely to restate its financial statements than non-family companies. The independent variable (if family business) should be negative and significant.	None of the measures used to litigation risk were statistically significant between the two company groups.
Audit time	Variation in the audit opinion presentation time for family and non-family businesses	If the financial reporting quality is high for family businesses, investments by the auditing firm, which are needed to reach a certain security level, are lower. The independent variable (if family business) should be negative and significant.	The coefficient was negative and significant. This result suggests that, compared with non-familiar companies, auditors take about 2.81% less time to complete their work auditing for family companies.

Note. Source: Ghosh, A. A., & Tang, C. Y. (2015). Assessing financial reporting quality of family firms: The auditors' perspective. *Journal of Accounting and Economics*, 60(1), 95-116.

The study analysis was initially focused in sample characterization and information analyzed between groups overview (family and non-family businesses), highlighting means, medians, standard deviation and third and first quartile. Afterwards, the author conducted a univariate analysis between independent audit values and companies' characterization regarding their ownership and control structure (family/non-family business). Subsequently, multiple linear regressions were performed, aimed at controlling analyzed companies variables, such as size, in addition to typical independent audit variables.

Moreover, the author also conducted logistic regression, and this variable was included in the linear model in order to explain litigation risk consequences and the time spent in performing the audit, respectively, in the independent audit fee values.

Thus, the study provided evidence that, *ceteris paribus*, auditors charged lower fees for family businesses due to their financial reporting higher quality, and not due to lower litigation risk. In this sense, there is interest in reviewing this context in another business environment, such as the Brazilian, enabling inferences regarding ownership structure and financial information quality through results management, from the independent audit fee perspective.

3 METHODOLOGY

In order to investigate the relation between independent auditor fee values and financial information quality in family and non-family companies listed on BM&FBovespa, multiple linear regression regarding independent auditor

fee values was used as basis, which was made by Ghosh and Tang (2015). The other additional tests conducted by the author, with regard to litigation risk and audit performance time, were not addressed in this study. Thus, this study is characterized as a descriptive, documentary research with a quantitative approach.

3.1 Population and sample

The same criteria adopted by Ghosh and Tang (2015) was used in the sample design, which was based on the fact that the founder and/or a descendant was occupying a position in the company's top management, was being part of the board, or was one of the largest shareholders in order to classify a firm as family business. This information was verified by the available Reference Form on BM&FBovespa website.

A total amount of 344 non-financial companies listed on BM&FBovespa in July 2012 was verified, where 167 were classified as family and 177 as non-family businesses. After data collection, it was found that some of these companies had no information on the period under review, what determined a sample of 133 family businesses and 128 non-family businesses.

The analysis period covers 2009, 2010 and 2011, which enabled a total of 399 family businesses observations and 384 non-family businesses observations. It is noteworthy that this period choice differs to that used by Ghosh and Tang (2003-2010) due to audit fee values disclosure requirement being initiated in the Brazilian context from 2009, through Instruction No. 480/09 (Transferable Securities Commission [CVM], 2009), which adopted a new information disclosure model, called Reference Form.

3.2 Data collection and analysis

The necessary data for research execution were obtained from two sources, according to information availability and quality, with Economática® database being used for economic and financial data, and the Reference Form being used for information related to independent audit.

Data were tabulated and compiled in a spreadsheet and then calculated using the SPSS 20.0 version *software*. For data analysis, descriptive statistics, means and median test and linear regression model were used.

3.3 Hypothesis and research variables

In order to verify the relation between independent audit fees and financial information quality through results management in family and non-family companies, as well as to enable results comparison with Ghosh and Tang's (2015) study, the study hypothesis description is shown, along with the expected result and variables used for its achievement, aligned with Ghosh and Tang's (2015) study.

H₁ Auditors charge lower fees for family businesses in relation to non-family companies, due to their financial information higher quality.

It is expected to conclude on this hypothesis that audit fee values will be lower in family businesses compared to non-family businesses due to these companies higher financial information quality. In order to reach the study hypothesis, the regression model developed by Ghosh and Tang (2015) was used as basis, being adapted to sample companies' available data.

$$\begin{aligned}
 \text{Audit fee} = & \alpha + \beta_1 \text{Family business} + \beta_2 \text{Size} + \beta_3 \text{Current assets} - \text{Total assets} \\
 & + \beta_4 \text{Current assets} - \text{Current liability} + \beta_5 \text{Leverage} + \beta_6 \text{Assets return} + \beta_7 \text{Loss} \\
 & + \beta_8 \text{Foreign sales} + \beta_9 \text{Sector} + \beta_{10} \text{Geographical Segment} + \beta_{11} \text{Regulated sector} \\
 & + \beta_{12} \text{Merger or incorporation} + \beta_{13} \text{Growth} + \beta_{14} \text{Discontinuity} + \beta_{15} \text{Fiscal Year} \\
 & + \beta_{16} \text{Discretionary accruals} + \beta_{17} \text{Big Four} + \beta_{18} \text{Opinion} + \beta_{19} \text{Audit change} \\
 & + \beta_{20} \text{Specialized auditor} + \beta_{21} \text{Audit time length} + \varepsilon
 \end{aligned}$$

In addition to the independent variable (if it is a family or non-family company), the model also includes control variables in order to

mediate company characteristics and independent audit effect. According to this classification, the description of each variable is shown in Table 2.

TABLE 2 – Study variables

Category	Variables	Description	
Dependent	γ Audit fees	Independent audit monetary value logarithm.	
Independent	χ_1 Family firm	Attributed (1) to family and (0) non-family companies.	
	χ_2 Size	Total assets logarithm.	
	χ_3 Current assets / Total assets	Current assets total in relation to assets total.	
	χ_4 Current assets/ Current liability	Relation between current assets and current liability.	
	χ_5 Leverage	Relation between the sum of long-term and short-term debt on total assets.	
	χ_6 Assets return	Relation between operating profit and total assets.	
	χ_7 Loss	Attribute (1) for loss and (0) for profit.	
	χ_8 Foreign sales	Total sales foreign market sales proportion.	
	χ_9 Sector	Number of industrial segments in which the firm operates.	
	Control variables (firm)	χ_{10} Geographical segment	Number of company units (in countries).
		χ_{11} Regulated sector	Attribute (1) in case the company operates in a regulated sector and (0) if not.
		χ_{12} Merger or incorporation	Attribute (1) in case the company has undergone merger or incorporation and (0) if not.
		χ_{13} Growth	Revenue increase percentage in t1 – t0 year.
		χ_{14} Discontinuity	Attribute (1) when the company reports discontinuous operations and extraordinary items and (0) when not.
		χ_{15} Fiscal year	Attribute (1) in case the company fiscal year is 31th december and (0) if not.
χ_{16} (results management)		Annual total assets total increase, where total <i>accruals</i> are measured using Jones’s model (1991).	
χ_{17} Big Four		Attribute (1) if the audit company is a <i>Big four</i> and (0) if not.	
χ_{18} Audit opinion		Attribute (1) to a report without exceptions and (0) with exceptions.	
Control variables (independent audit)		χ_{19} Audit company change	Attribute (1) if there is independent audit company change and (0) if not.
	χ_{20} Specialized auditor	Auditor market share (sector) based on client sales. Example: (Ernst & Young clients sector X sales sum / Ernst & Young clients total sales sum).	
	χ_{21} Audit company period length	Audit company years of work with the firm.	

Note. Source: Ghosh, A. A., & Tang, C. Y. (2015). Assessing financial reporting quality of family firms: The auditors’ perspective. *Journal of Accounting and Economics*, 60(1), 95-116.

Regression model and *dummy* variables were used for the analyzed years, in which 1 was assigned if the observation was for a given year and 0 if not. These *dummies* have the assignment of controlling each year effects.

It is noteworthy that, although Ghosh and Tang's (2015) study was used as basis, only audit fees dependent variable was delimited in order to achieve the objective proposed in this study. The reasons for this delimitation surround the audit fees variable central focus, exposed by Ghosh and Tang (2015), in which financial reporting quality is higher in family businesses and, because of this, auditors should charge lower fees for family businesses than for non-family businesses. Due to certain information required by litigation and investment variables unavailability, it was chosen to only use the audit fees variable.

Another delimitation of this study, compared to Ghosh and Tang (2015), refers to not using certain variables in the regression model, such as inventory, H-index; stock market, monetary update, internal controls effectiveness and weaknesses. The reason for not using these variables is primarily guided by the difficulty of obtaining such data in the studied sample, what would bring a significant sample reduction. Another important aspect is the inclusion of *Big four* variable in the model, while Ghosh and Tang's (2015) study only researched companies audited by *Big four* companies. In the present study context, this position would also bring a significant sample reduction. Discretionary *accruals* control variable was also included (Jones's model, 1991), once it is a proxy for reporting quality and brings aspects related to audit risk to analysis, which in Ghosh and Tang's (2015) model received specific modeling and treatment.

4 DESCRIPTION AND RESULTS ANALYSIS

This study topic intends to present the research findings. Initially, researched sample

characterization is performed. Afterwards, differences between family and non-family businesses are shown, especially with regard to audit fees amount. Finally, the tested study explanatory model is analyzed for each business set separately, family and non-family businesses.

4.1 Sample characterization and means test

The study sample was characterized using descriptive statistics with mean and standard deviation for each analyzed groups' variable (family and non-family businesses). It is observed that sample family businesses are smaller and pay lower audit fee values compared to non-family businesses. These variables standard deviation also indicates higher data dispersion around the mean for non-family businesses group.

It was also identified that mean values for liquidity, leverage, assets return, foreign sales, number of geographic segments, activity sector, merger or incorporation, growth, fiscal year and discretionary *accruals* indicators in family businesses are higher than non-family businesses mean values. These findings, while indicating higher family business economic and financial stability, also indicate higher geographic dispersion, activity complexity (given operation in more than one activity) and higher result management practice (discretionary *accruals* 0.5091), bringing direct impact on audit fee values.

Higher loss occurrence was observed in non-family companies, as well as more companies in this group work on regulated activities in relation to family businesses.

Regarding audit specific variables, it is observed that 80% of non-family businesses are audited by *Big four* auditing firms, while the occurrence is of 75% of the sample in family businesses. The audit firm change mean index is also higher for non-family businesses in relation to family businesses. On average, non-family companies remain with the same audit firm for four years, while in family businesses this period approaches 5 years.

It was observed that 94% of the analyzed family businesses showed financial statements audit opinion without exceptions, compared with 92% of non-family businesses. Regarding audit specialization level, a higher mean rate for family

businesses was observed when comparing with non-family businesses. These characteristics can likewise bring consequences to audit fees value, given the risk and effort spent in the service.

TABLE 3 – Descriptive Statistics and Means Test

Variables	Family firms (399)		Non-family firms (384)		T test
	Mean	Standard Deviation	Mean	Standard Deviation	
χ_1 Audit fees (R\$)	942.154,97	1.688.222,38	1.185.475,66	2.980.719,40	0.030
χ_2 Size	6.1396	0.73877	6.3351	0.80688	0.459
χ_3 CA/TA	0.4029	0.24271	0.3432	0.58818	0.595
χ_4 CA /CL	1.8484	2.79587	1.6343	2.48355	0.914
χ_5 Leverage	0.1650	0.30735	0.1592	0.27594	0.318
χ_6 Assets return	3.5877	12.98356	3.3820	22.57677	0.007
χ_7 Loss	0.1880	0.39118	0.1953	0.39696	0.602
χ_8 Foreign sales	0.0762	0.16162	0.0662	0.14943	0.185
χ_9 Sector	1.7945	1.77585	1.5755	1.53447	0.001
χ_{10} Geographical segment	2.3509	3.53478	2.3203	4.77308	0.787
χ_{11} Regulated sector	0.0226	0.14867	0.2891	0.45392	0.000
χ_{12} Merger or incorporation	0.0251	0.15651	0.0208	0.14301	0.430
χ_{13} Growth	1.1076	4.23778	1.0227	2.71861	0.483
χ_{15} Fiscal Year	0.9850	0.12186	0.9766	0.15149	0.087
χ_{16} Discretionary accruals	0.5091	0.43685	0.2166	2.48739	0.001
χ_{17} Big Four	0.7519	0.43246	0.8073	0.39494	0.000
χ_{18} Audit opinion	0.9449	0.22854	0.9243	0.26489	0.020
χ_{19} Audit firm change	0.0526	0.22358	0.1250	0.33115	0.000
χ_{20} Specialized auditor	0.2260	0.32188	0.2064	0.28603	0.000
χ_{21} Audit company period length	4.9474	2.42883	4.0156	2.56808	0.349

It is observed through the mean test, shown in Table 3, that there is statistical difference for a 95% confidence interval between audit fees mean values paid by family businesses and non-family businesses.

Regarding sample companies characteristic control variables, the mean test indicated significant differences between analyzed groups

for assets return, activity sector, regulated sector and discretionary *accruals* variables. As for control variables related to the audit, significant difference was observed for *Big Four*, audit opinion, audit firm change and specialized auditor variables.

These results provide indications that family businesses, as supposed by Ghosh and Tang (2015), pay lower audit fee amounts compared

to non-family businesses. However, different than predicted by Ghosh and Tang (2015) and Ali et al. (2007), family businesses had higher discretionary accruals level means than non-family businesses. This finding counters the idea that lower audit fee values for family businesses results from higher financial information quality submitted by this group of companies. Thus, the study hypothesis that auditors charge lower fees for family businesses in relation to non-family businesses due to higher financial information quality is rejected.

Although this finding differs from Ghosh and Tang (2015), it is in line with survey results of Santos et al. (2011), carried out with Brazilian companies. The authors used discretionary *accruals* as proxy of financial statements quality in family businesses and found that family businesses tend to more intensely manage their results compared with non-family businesses. In this sense, a characteristic of the Brazilian stock market is observed, where proximity between principal and agent, often featured in family businesses in the figure of a same person or family, is not necessarily a sign of lower results management practices.

4.2 Multiple linear regression analysis

The mean test led to rejection of the hypothesis that auditors charge lower fees for family firms over non-family firms, assuming their financial reporting highest quality. In this sense, the variables that best explain audit fee values in the surveyed Brazilian companies are shown in Table 4.

TABLE 4 – Difference regression between Family and Non-Family Businesses Audit Fees

Model	R ² : 57.2%	F: 46.1	Sig: 0.000.
No. of observations		783	
Variables	Coefficient	t	Sig
α Constant	2.461	11.427	0.000
χ ₁ Family business	-0.016	-0.470	0.639
χ ₂ Size	0.460	17.107	0.000
χ ₃ Current assets / Total assets	0.118	2.295	0.022
χ ₄ Current assets/ Current liability	-0.012	-1.522	0.129
χ ₅ Leverage	0.019	0.342	0.732
χ ₆ Assets return	0.000	-0.196	0.845
χ ₇ Loss	0.098	2.225	0.026
χ ₈ Foreign sales	0.288	2.612	0.009
χ ₉ Sector	-0.008	-0.837	0.403
χ ₁₀ Geographical segment	0.010	2.744	0.006
χ ₁₁ Regulated sector	-0.240	-4.928	0.000
χ ₁₂ Merger or incorporation	0.197	1.975	0.049
χ ₁₃ Growth	-0.005	-0.908	0.364
χ ₁₅ Fiscal Year	-0.270	-2.391	0.017
χ ₁₆ Discretionary Accruals	0.016	1.288	0.198
χ ₁₇ Big Four	0.353	5.952	0.000
χ ₁₈ Audit opinion	0.138	2.186	0.029
χ ₁₉ Audit firm change	-0.016	-0.282	0.778
χ ₂₀ Specialized auditor	-0.005	-0.062	0.951
χ ₂₁ Audit company period length	0.017	2.678	0.008

* 5% significance coefficient.
 χ₁₄ variable: Discontinuity – excluded from model



It is observed in Table 2 that family business variable had a negative coefficient (-0.016), which implying that the analyzed sample audit fee values is lower for family businesses in relation to non-family businesses. However, this relation is not significant, i.e., it is not a variable with explanatory power for audit fee values. The same occurs for the discretionary *accruals* variable, which showed, as expected, a positive signal, indicating that results management practice increases audit fee values, although not being significant to point explain audit fee values variation in the studied sample. This result converges with the study hypothesis rejection.

In addition, multiple linear regression was carried out in order to verify the study model applied to each of the analyzed groups explanatory power (family and non-family businesses), as well as the variables with the highest statistical inference in this relation.

Anova calculation results confirm the model 5% significance for the two regressions performed, what indicates that the reviewed model has statistically significant variables. Results showed that the research model has audit fee values explanatory capacity of 57.8% in family businesses and of 58.9% in non-family businesses. Table 5 shows the analyzed model values.

TABLE 5 – Family and Non-Family Businesses Regression Model

Variables	Family businesses (399)		Non-family businesses (384)	
	R ² :57.8%	Anova: F 24.53 Sig 0.000	R ² :58.9%	Anova: F 24.66 Sig 0.000
	Coefficients	Sig	Coefficients	Sig
α_0 Constant (LOG)	2.234	0.000	2.595	0.000
χ_2 Size (LOG)	0.438	0.000	0.465	0.000
χ_3 CA/TA	0.104	0.341	0.111	0.093
χ_4 CA /CL	-0.011	0.438	-0.012	0.323
χ_5 Leverage	0.041	0.608	-0.038	0.674
χ_6 Assets return	0.001	0.748	0.000	0.764
χ_7 Loss	0.087	0.164	0.065	0.349
χ_8 Foreign sales (LOG)	0.301	0.033	0.273	0.145
χ_9 Sector	-0.001	0.969	-0.017	0.243
χ_{10} Geographical segment	0.013	0.062	0.008	0.112
χ_{11} Regulated sector	-0.061	0.664	-0.261	0.000
χ_{12} Merger or incorporation	0.365	0.006	-0.037	0.810
χ_{13} Growth	-0.002	0.829	-0.007	0.433
χ_{15} Fiscal year	-0.004	0.983	-0.343	0.023
χ_{16} Discretionary <i>Accruals</i>	0.006	0.914	.016	0.266
χ_{17} Big Four	0.483	0.000	0.226	0.010
χ_{18} Audit opinion	0.151	0.116	0.160	0.066
χ_{19} Audit firm change	-0.018	0.853	-0.002	0.982
χ_{20} Specialized auditor	0.166	0.120	-0.155	0.157
χ_{21} Audit company period length	0.001	0.882	0.033	0.001

χ_{14} variable: Discontinuity – excluded from model

It is observed in Table 5 that audit fee value is explained by company size (0.438), foreign sales

(0.301), mergers and/or incorporations (0.365) and the fact that the company is being audited by an auditing firm ranked as *Big Four* (0.483) for family businesses. All these statistically significant variables for the model applied to family businesses showed a positive relation, i.e., these are factors that explain audit fee values increase in a given period. Merger and/or incorporation in a year, for example, can increase audit fee values in 36.5% for the period.

In non-family companies, the audit fee value explanatory model is related with company size (0.465), the fact that the company's sector is regulated (-0.261), with the fact that company has a fiscal period that closes on December 31 of each year (-0.343) and the fact that the company is being audited by an auditing firm ranked as *Big Four* (0.226). The audit firm permanence period in providing the service (0.033) is also named as an explanatory factor for the audit amount charged in a given moment. Regarding the signs shown by explanatory variables in the non-family businesses model, it is observed that if the company operates in a regulated sector, *ceteris paribus*, it reduces independent audit fees by 26.1%. In contrast, audit service completion by a company classified as *Big four*, *ceteris paribus*, increases the fee value in 22.6% in for the period.

Results observed in the tested model for family and non-family businesses show to be in line with Hay et al. (2006), as they show that audit fees are associated with audited company size, the risk assumed by the audit firm and audited company complexity proxies.

Comparing with Ghosh and Tang's (2015) study, it was observed in the base study that family businesses pay lower audit fee values in relation to non-family companies due to financial information quality. It stands out in their results that family businesses have around 8% lower values compared to non-family businesses in relation to audit fee value.

These findings verified in Ghosh and Tang's (2015) study were not identified in this study, which was applied to BM&FBovespa

companies, where the hypothesis was rejected by mean test and regression model, which showed no significant factor regarding audit fee values in relation to the company being a family business or not.

Concerning Ghosh and Tang's assumption (2015) that lower fee values charged from family businesses in relation to non-family businesses are due to higher financial information quality, different results were found. The findings of this study differ from those obtained by Ghosh and Tang (2015) when, for example, indicate that the result management practice, through discretionary *accruals*, was higher in family businesses compared to non-family businesses.

It appears, therefore, that in Brazil the audit fee values do not significantly differ between family and non-family companies. It is noteworthy that these fees explanation occurs by other factors, such as the volume and characteristics of the work to be developed, in addition to trade relations between audited and audit firms, and not due to financial statements quality, as was presupposed by Ghosh and Tang (2015).

Given the differences between Ghosh and Tang's (2015) and the present study results, the justification is the analyzed sample distinct characteristics in Ghosh and Tang's (2015) study. The distinction with regard to stock market development is also highlighted, given that the Reference Form implementation, which approximates Brazilian rules to internationally recommended standards in the stock market, occurred only in 2009, through Instruction No. 480/09 (CVM, 2009). The Brazilian stock market differs from the United States in terms of size, maturity and capital concentration, as well as it is also necessary to observe the institutional differences between surveyed samples.

Audit fees research advancement, analyzing local institutional structures impact in terms of financial arrangements, legal taxes, education and other aspects that impact the audit service (Hay et al., 2006) are also reported to bring impacts on audit value, thus integrating the suggestion agenda for future research on the topic.

5 CONCLUSIONS

This study aimed to investigate the relation between audit fees and financial information quality using discretionary *accruals* as proxy, being observed in BM&FBovespa family and non-family companies. The research was characterized as descriptive, with survey and quantitative approach, with a sample of 133 family businesses and 128 non-family businesses.

The analysis covers the period of 2009, 2010 and 2011, and the total of 399 family businesses observations and 384 non-family businesses observations, with Ghosh and Tang's (2015) study being used as basis.

Research results show that Brazilian family businesses disburse a mean of R\$ 942,154.97 in audit fees. The mean amount paid by non-family businesses surrounds the R\$ 1,185,475.66 amount. Mean test indicates statistical difference for the two analyzed groups. Regarding mean fees paid by family businesses, it was found that these were of R\$ 241,219.90, what is lower than those paid by non-family businesses.

However, although also indicating statistical difference for discretionary *accruals* variable between family and non-family businesses, it was observed that earnings management practice was higher in the group of family companies than in the group of non-family companies in the research sample. This result differs from the assumption in of Ghosh and Tang's (2015) study, and refers to reject the study hypothesis that auditors charge lower fees for family firms over non-family firms due to the higher financial information quality.

Ghosh and Tang's (2015) model application to audit fee explanation also signaled to reject the study hypothesis, since the family business dependent variable was not significant in the model, although the coefficient had expected ratio signal (indicating that a family company has reduced audit fee).

Additionally, model application individually to each analysis group (family and non-family businesses) indicated that the main

explanatory variables for audit value in family businesses are: company size (0.438), foreign sales (0.301), mergers and/or incorporations (0.365), and being audited by *Big Four* (0.483). Regarding non-family companies, explanatory variables were: company size (0.465), regulated sector (-0.261), fiscal period (-0.343), *Big Four* (0.226), and the audit firm permanence period in providing this service to the researched company (0.033).

Thus, models tested in family and non-family businesses results demonstrate that audit fees in the Brazilian context are linked to audited company size, the risk taken by the auditing firm and the audited company complexity (Hay et al. 2006).

With regard to the hypothesis rejection that auditors charge lower fees to family firms over non-family firms due to the higher financial information quality, differences between analyzed samples in terms of stock market development and other institutional setting stand out as possible justification for divergence towards Ghosh and Tang's (2015) study. It is suggested to carry out further research in order to understand the impact that structures and institutions may have on the audit fee values.

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