

Audit Fees and Audit Quality in Brazil

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Abstract

This article investigates the relationship between audit fees and audit quality in the Brazilian market. To respond to the research question we used a sample of 300 firms listed on the BM&FBovespa, in the period from 2009 to 2012, for which it was possible to identify the amount paid to the auditors, using data gathered from the Economática® database and the website of the Brazilian Securities Commission (CVM). We analyzed the regressions with the aim of confirming or refuting the hypothesis that audit firms that charge less for their service tend to be more relaxed regarding earnings management by their client companies. The results confirm this hypothesis. The main contribution of this article is the possibility of stating that abnormal audit fees are related to abnormal discretionary accruals in the Brazilian capital market, or put another way, more aggressive earnings management occurs predominantly among firms that pay less than expected for audit services. This study evidences the perception of risk by the audit firms and how this is reflected in the abnormal fees charged.

Keywords: Audit fees. Audit quality. Earning Management

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1 INTRODUCTION

This article investigates the relationship between auditors' fees and audit quality in Brazil. This is relevant, since other studies have shown that the total remuneration paid to the independent auditors is associated with firms' performance (Hay et al., 2006; Stanley, 2011). Researchers such as Kinney & Libby (2002) and Eshleman & Guo, (2013) have also examined the effects that audit fees have on the quality of the services rendered.

More specifically, we empirically examine the relationship between audit fees and the quality of the audit services rendered to the 300 largest firms listed on the BM&FBovespa in the period between 2009 and 2012. We obtained the data from the financial statements contained in the Economática® database and the site of the Brazilian Securities Commission (*Comissão de Valores Mobiliários - CVM*).

The fees paid for audit services can be used to measure the quality of the services provided by audit firms (Hallak & Silva, 2012). One of the ways to measure audit quality is permissiveness of the auditor with respect to earnings management. In this context, our research question is: Does the size of the audit fees influence auditing quality?

This theme is still an open one in the Brazilian literature. Indeed, very few studies touching on this question have been published in the literature in general. The theme is of particular interest due to the particularities of the Brazilian institutional setting in relation to that in the United States, with the main difference being the weaker monitoring of audit quality in Brazil.

Among the differences in rules between the countries is the structure and status of the board of directors (Lopez et al., 1998). In practical terms, board members would like yardsticks to measure the effects of the remuneration offered to auditors, as can be seen in the works of Porta et al. (1997) and López et al. (1998).

To analyze our research question, we develop three models. The first aims to identify the determinants of auditors' compensation in Brazil. After estimating these variables, we compute the magnitude of earnings management of a given firm in a year using discretionary accruals as a proxy. After defining the metrics for auditor compensation and audit quality, we contrast them to identify if any perceptible relationship exists.

The rest of the article is organized into four sections. In the next we review the relevant literature, followed by presentation of the methodology in the third section. In the fourth we present and discuss the results, before concluding in the fifth section.

2 THEORETICAL FOUNDATION

As mentioned in the introduction, the aim of this study is to investigate whether the fees paid to auditors influences audit quality. In this section we review the main determinants of audit quality and analyze the contributions from the literature on earnings management in an attempt to understand how audit fees are related to quality.

2.1 Potential determinants of audit quality

The first studies in Brazil covering audit fees date to the 1980s (Hallak & Silva; 2012). Among the pertinent aspects of auditing is obviously the independence of the audit firms. Without independence, the probability of biased findings will obviously be higher (Braunbeck; 2010). For example, audit firms that also render nonaudit consulting services to their clients might be more willing to overlook accounting shortcomings, for fear of losing the additional consulting fees. Also, the audit firm tenure can affect the quality of the service, as auditors become more personally involved with managers and less likely to be critical of poor accounting practices. Both these potential problems have been addressed by regulators in most countries in recent years, by establishing rules on separation of auditing from consulting and mandatory auditor rotation.

Regarding fees, researchers have for some time been curious regarding the effects of audit fees on the quality of the services rendered. Audit firms that are more independent tend to compete to offer personalized services that add value to the client, and can charge higher fees for better quality services (Francis, 1984). In short, audit fees can be used as a metric of the quality of the service (Hallak & Silva; 2012). Hence, it is not enough for the auditor to have expertise, it also must be independent (Deangelo, 1981; Watts & Zimmerman, 1986).

However, higher fees do not necessarily mean stronger scrutiny from the auditor, and hence better audit quality. While some studies have indicated that higher fees translate into stronger commitment and more competent services and that on the other side of the coin, lower fees mean poorer quality, other researchers have argued that higher fees can cause the auditor to lose independence, resulting in more biased audit findings (Eshleman & Guo, 2013). Evidence in this respect was found by Kinney & Libby (2002), indicating that higher (abnormal) audit fees can be a sign of illicit acts by the company and inflated future earnings.

An early study by DeFond et al. (2002) did not find symmetry between abnormal audit fees and auditing quality, while later works did find a relationship in this respect, indicating that higher (abnormal) audit fees are associated with greater discretionary accruals by the client firm (Choi et al., 2010). This is in line with the argument that higher fees tend to cause the auditor to lose independence, and hence produce a more biased opinion of the client's accounting practices (Eshleman & Guo, 2013). Asthana & Boone (2012) found similar evidence regarding the economic dependence of the auditor on the client. In their sample, they noted that clients that spent more on auditing had higher discretionary accruals, mainly for the purpose of meeting analysts' projections.

Asthana & Boone (2012) employed a model to shed light on the fee-quality relationship depending on the signal sent by audit fees. In turn, Gupta, Krishnan & Yu (2012) analyzed whether auditors tolerate earnings management when audit fees are low, to examine the relation between abnormally low audit fees and fraudulent financial statements. Finally, Choi et al. (2010) considered the total value of discretionary accruals to be a proxy of the effectiveness of auditing services.

We used the models of Gupta, Krishnan & Yu (2012), adapted to Brazilian conditions, with earnings management serving as a proxy for audit quality, to investigate the relationship between audit fees and audit quality. More specifically, we tested the hypothesis that *abnormal audit fees create a setting that is more propitious for earnings management*.

3 METHODOLOGY

3.1 Research method

The aim of this study is to investigate whether the compensation of independent auditors influences the quality of their services, by applying quantitative statistical techniques to the data gathered and calculating simple statistics such as percentages, means and standard deviations and applying them in correlation and regression analysis (Richardson, 2010). This study is descriptive in nature, as defined by Barros and Lehfeld (2000, p. 70), seeking “to discover the frequency with which a phenomenon occurs, its characteristics, causes, relations and connections with other phenomena.” More specifically, our aim is to discover and classify the relationship and causality between variables that measure phenomena. The data were obtained from the site of the Brazilian Securities Commission (CVM) and the Economática® database.

3.2 Sample

The initial sample consisted of 566 firms listed on the BM&FBovespa in the period between 2009 and 2012 for which it was possible to identify the amount paid to the independent auditors. But we observed that many of them did not have a proper profile for inclusion in the study. Therefore, we narrowed the sample down to the 300 largest of these firms, as measured by year-end market value, for a total of 1,200 observations. After transforming the data, we organized the variables for panel analysis to investigate the behavior over time of the information on each firm.

3.3 Data collection technique

The data are secondary. Those related to auditors were gathered from the CVM site while the accounting data were obtained from the Economática® database. In the former case, our interest is the amount of audit fees. This information is contained in Section 2 (“Independent Auditors”) of the Reference Form (*Formulário de Referência*, or FR) that all listed companies must file annually with the CVM. These data on audit fees are segregated by type of service. In turn, the Economática® database contains an extensive collection of the standard data on Brazilian firms based on their published financial statements. Here we use the following variables to compose the models: market value, current assets, long-term assets, total assets, current liabilities, long-term liabilities, total liabilities, stockholders’ equity, liabilities + stockholders’ equity, gross revenue, net income, EBIT (earnings before income tax) and EBTIDA (earnings before income tax, depreciation and amortization).

3.4 Data analysis techniques

Based on the theoretical framework, we formulated the models and analyzed the corresponding regressions by using the Eviews econometric software, with application of the control variables identified. These models are those used by Gupta, Krishnan & Yu (2012), adjusted to the Brazilian market reality. The three models are presented below. The first two are estimated by ordinary least squares (OLS) and the third by logistic regression.

3.4.1 Model 1 – Determinants of Auditor Compensation

In this section we set out a model formulated to explain earnings management, based on multiple observations of characteristics of consumers of auditing services, in light of the specialized studies of Simunic (1980), Firth (1997), Ashbaugh et al. (2003) and Sankaraguruswamy & Whisenant (2009).

With respect to the models developed by Gupta, Krishnan & Yu (2012), here we use 12 of the 23 variables employed by them to determine audit fees, to adapt the model to Brazilian reality. Therefore, we use the following equation, employing panel data, where β_0 denotes the intercept, ε is the error term and the other variables are as defined in Chart 1.

$$\begin{aligned}
 AFEE_{it} = & \beta_0 + \beta_1 BIG4_{it} + \beta_2 LTA_{it} + \beta_3 MTB_{it} + \beta_4 LEV_{it} + \beta_5 ROA_{it} \\
 & + \beta_6 ARINV_{it} + \beta_7 TENURE_{it} + \beta_8 REPAG_{it} + \beta_9 SEGMENT_{it} + \beta_{10} LAGE \\
 & + \beta_{11} SGROWTH_{it} + \beta_{12} RESTATE_{it} + \varepsilon_{it}
 \end{aligned} \quad (1)$$

Chart 1 – Definition of the variables (observations)

Variables		Data Source
AFEE Natural log from audit fees		CVM
BIG4 Equal 1 if a firm is audited by Deloitte & Touche, Ernst & Young, KPMG, P&W		CVM
LTA log of total asset at end of fiscal year	Natural	Economática
MTB to-book index defined as market value of stocks divided by book value of equity	Market-	Economática
LEV Asset less equity divided by total asset	Total	Economática
ROA profit divided by total assets	Net	Economática
ARINV Receivables and Inventories divided by total assets.		Economática
TENURE Time of the same Auditor firm in years		CVM
REPLAG days between the end of fiscal year and earnings announcement	Number of	CVM
SEGMENT Number of segments in the business		CVM
LAGE Natural log from the age of the enterprise.		CVM
SGROWTH Sales growth rate		Economática
RESTATE Equal 1 if the enterprise, restate his financial statement, and 0 otherwise.		CVM

Source: Authors, based on Gupta, Krishnan & Yu (2012).

This chart presents the definition of the variables and the source of the data.

3.4.2 Model 2 – Performance-Adjusted Discretionary Accruals

As a measure of earnings management, we rely on the model of Kothari et al. (2005), which is the model of Jones adjusted by performance, to estimate abnormal discretionary

accruals. Abnormal accruals have been used by many authors as a metric for earnings management (e.g., Becker et al., 1998; Ashbaugh et al., 2003; Larcker & Richardson, 2004). This model has the following formulation:

$$TA_{it} = \beta_0 + \beta_1 \left(\frac{1}{ASSET_{i,t-1}} \right) + \beta_2 (\Delta VENDAS_{it} - \Delta AR_{it}) + \beta_3 NCA_{it} \quad (2)$$

$$+ \beta_4 ROA_{i,t-1} + \varepsilon_{it}$$

Chart 2 – Definition of the variables (observations)

Variable	Data base
TA Accrual, computed as Earnings before extraordinary itens less cash flow from operations scaled by total ass	Economática
ΔSALES (or VENDAS) Variation on sales between last year and current year, scaled by total assets;	Economática
ΔAR accounts recievable between last year e curent year, scaled by total assets;	Economática
NCA current assets from current year scaled by total assets from previous year;	Economática
ROA (it-1) Return on assets computed as earnings before extraordinary itens divided for total assets.	Economática

Source: Authors.

This chart presents the definition of the variables and the source of the data.

3.4.3 Model 3 – Determinants of Audit Quality (Earnings Management)

The third and last model measures whether or not there is a relationship between abnormal audit fees and earnings management. Following Gupta, Krishnan & Yu (2012), again with adaptations to the Brazilian market, we use 11 variables, by estimating the following model with panel data:

$$DAC_{it} = \beta_0 + \beta_1 BIG4_{it} + \beta_2 LMV_{it} + \beta_3 MTB_{it} + \beta_4 LEV_{it} + \beta_5 LOSS_{it} + \beta_6 CFO_{it} + \beta_7 OPCYCLE_{it} \quad (3)$$

$$+ \beta_8 VOLCFO_{it} + \beta_9 VOLSALE_{it} + \beta_{10} NABAFEE_{it} + \beta_{11} NONAUDIT_FEES_{it} + \varepsilon_{it}$$

Where β_0 is the intercept, ε is the error term and the other variables are as defined in Chart 3.

Chart 3 – Definition of the variables (observations)

Variables	Source
DAC Discretionary accrual computed using model (2); where 1 indicate income increasing earnings manage	Gupta, Krishnan e Yu (2012)
BIG4 Equal 1 if a firm is audited pela Deloitte & Touche, Ernst & Young, KPMG, Pricewater	Gupta, Krishnan e Yu (2012)
LMV Natural log from market value of stock at end of fiscal year.	Gupta, Krishnan e Yu (2012)
MTB Market-to-book rate computed as the market value of stocks divided per book value form equity.	Gupta, Krishnan e Yu (2012)
LOSS Equal 1 whether a firm reported loss in the current year, and 0 otherwise.	Gupta, Krishnan e Yu (2012)
CFO Cash flow from Operations scaled total assets;	Gupta, Krishnan e Yu (2012)
OPCYCLE Natural log from operational cycle days	Gupta, Krishnan e Yu (2012)
VOLCFO Standard deviation of cash flow form operations from year t-4 to year t;	Gupta, Krishnan e Yu (2012)
VOLSALE Standard deviation of sales scales by asset from year t-4 to year t;	Gupta, Krishnan e Yu (2012)
NABAFEE Equal 1 if abnormal audit fees (err from model 1) is negative and zero otherwise;	Gupta, Krishnan e Yu (2012)
NONAUDIT FEES Equal 1 if there is non audit fees paid to auditor and zero otherwise.	Gupta, Krishnan e Yu (2012)

Source: Authors.

This chart presents the definition of the variables and the source of the data.

4 ANALYSIS OF THE RESULTS

In this section we present the results of each model, starting with analysis of the data through the descriptive statistics and the correlation matrices of the variables.

4.1 Descriptive statistics

The descriptive statistics of the variables included in equations (1) and (3) are presented in Tables 1 and 2, respectively.

TABLE 1

Variables	Descriptive Statistics				
	Mean	Median	SD	25%	75%
AFEE	2,6489	2,6117	0,6038	2,2765	2,9731
BIG4	0,8251	1,0000	0,3800	1,0000	1,0000
LTA	3,4658	3,4658	0,7781	2,9337	3,9891
MTB	1,2558	1,4507	24,6138	0,8241	2,5352
LEV	0,6083	0,5846	0,3394	0,4465	0,7302
ROA	0,0402	0,0346	0,1330	0,0076	0,0727
ARINV	0,3776	0,2879	0,3639	0,1279	0,5057
TENURE	2,8866	2,0000	2,4982	1,0000	4,0000
REPLAG	78,9827	79,0000	47,2757	60,5000	88,0000
SEGMENT	2,6285	1,0000	3,4761	1,0000	2,7500
LAGE	35,8129	36,0000	115,6347	13,0000	43,0000
SGROWTH	0,2543	0,1279	0,9820	0,0070	0,2709

This table presents the descriptive statistics of the variables included in equation (1). The study period is 2009 to 2012.

In the descriptive statistics of equation (1), the mean natural logarithm of the audit fees paid is 2.65. As can be seen in Table 1, most of the observations (firm-year) involved auditing by one of the Big 4, as can be noted by the average of this binary variable, which is 82.51%. The binary nature is because it reflects the occurrence or not of a defined event, namely being audited by one of the Big 4 independent audit firms. The average auditor tenure is 2.88 years and the average age of the audited companies is 35 years, while the number of days between the end of the fiscal year and announcement of the financial statements is 78 days. Finally, approximately 34% of the firms in the sample subsequently published some restatement of financial information.

TABLE 2

Descriptive Statistics					
Variables	Average	Median	SP	25%	75%
DAC	0,1497	0,0000	0,3569	0,0000	0,0000
BIG4	0,8251	1,0000	0,3800	1,0000	1,0000
LMV	0,7831	0,8811	0,7247	0,5483	1,1515
MTB	1,2558	1,4507	24,6138	0,8241	2,5352
LEV	0,6083	0,5846	0,3394	0,4465	0,7302
LOSS	0,3367	0,0000	0,4728	0,0000	1,0000
CFO	0,0555	0,0550	0,1489	0,0027	0,1060
OPCYCLE	2,0890	2,0876	0,4243	1,8708	2,3010
VOLCFO	0,0499	0,0286	0,1298	0,0158	0,0507
VOLSALE	0,0455	0,0216	0,1109	0,0096	0,0475
NABAFEE	0,4591	0,0000	0,4986	0,0000	1,0000
NONAUDIT_FEES	0,3642	0,0000	0,4814	0,0000	1,0000

This table presents the descriptive statistics of the variables included in equation (3). The study period is 2009 to 2012.

In the descriptive statistics of equation (3), the mean of discretionary accruals is approximately 15%. The percentage of firms that reported a loss in the current year is 33% and of these, about 46% made payments for consulting (nonaudit) fees as well as for audit services. The natural logarithm of the year-end market value of the firms is 0.7831.

4.2 Correlation matrices of the variables

The correlation matrices (Spearman correlation coefficient) of the variables included in equations (1) and (3) are shown respectively in Tables 3 and 4, to identify the possible effects of multicollinearity of the variables in the models. It can be seen in Table 3 that the variable BIG4 has a moderate correlation with the variable AFEE, as does LTA with BIG4, and the variable LTA is strongly correlated with AFEE.

TABLE 3: SPEARMAN CORRELATION MATRIX

	AFEE	BIG4	LTA	MTB	LEV	ROA	ARINV	TENURE	REPLAG	SEGMENT	LAGE	SGROWTH	RESTATE
AFEE	1												
BIG4	0,4887	1											
LTA	0,7107	0,4168	1										
MTB	0,0620	0,0102	0,0368	1									
LEV	-0,0281	-0,1543	-0,0137	-0,0352	1								
ROA	0,0517	0,1017	0,0038	0,0636	-0,3460	1							
ARINV	-0,0111	-0,0308	-0,0896	0,0388	0,0517	0,0565	1						
TENURE	0,1212	0,0904	0,0504	0,0326	-0,0243	0,0206	-0,0137	1					
REPLAG	-0,1508	-0,1887	-0,1796	-0,0029	0,1150	-0,1483	-0,0645	-0,0180	1				
SEGMENT	-0,0103	0,0492	-0,0670	0,0174	-0,0565	0,0709	0,0142	0,1105	-0,0232	1			
LAGE	-0,1102	-0,2238	-0,0629	0,0067	0,0379	-0,1156	-0,0115	0,0605	-0,0169	-0,0531	1		
SGROWTH	0,0356	0,0677	0,0015	0,0561	-0,1095	0,1016	-0,0499	-0,0324	0,0101	0,0218	-0,0355	1	
RESTATE	0,1131	0,1299	0,1339	0,0337	0,0640	0,0304	0,0347	0,0508	-0,0604	0,0282	-0,0286	0,0813	1

Table 4 shows there are weak pairwise correlations of the variables CFO and Opcycle with DAC as well as between Volsale and CFO. In turn, there is moderate correlation between the variables LOSS and LEV.

TABLE 4: SPEARMAN CORRELATION MATRIX

	DAC	BIG4	LMV	MTB	LEV	LOSS	CFO	OPCYCLE	VOLCFO	VOLSALE	NABAFEE	NONAUDIT FEES
DAC	1											
BIG4	-0,0587	1										
LMV	-0,0310	-0,0023	1									
MTB	-0,0512	0,0102	-0,3846	1								
LEV	0,0774	-0,1543	-0,2661	-0,0352	1							
LOSS	0,0024	-0,2397	-0,2483	0,0115	0,2994	1						
CFO	-0,3738	0,1261	0,0956	-0,0890	-0,2397	-0,2513	1					
OPCYCLE	0,2105	-0,0714	0,0220	-0,0293	0,0331	0,0191	-0,2763	1				
VOLCFO	0,0708	0,0244	-0,1028	0,2439	-0,0110	0,0643	0,2507	0,0049	1			
VOLSALE	0,0529	-0,0171	-0,1163	0,1967	0,0933	0,0184	0,3014	-0,0166	0,4900	1		
NABAFEE	0,1253	0,0128	0,0475	0,0214	-0,0343	-0,0340	-0,0121	0,0683	0,0490	0,0319	1	
NONAUDIT FEES	-0,0413	0,2725	0,0788	-0,0192	-0,0647	-0,1873	0,0490	-0,0955	-0,0250	-0,0649	-0,1791	1

4.3 Regression analysis

In this topic we present and analyze the results obtained by the regressions of models (1) and (3), which are reported in sections a and b, respectively, of Table 5.

4.3.1 Determinants of Audit Fees

With respect to the model for determination of auditors' compensation, the results in Table 5 indicate that the model formulated has predictive power of approximately 54.02%, and of 54.87% when including controls for the four main economic segments.

From this table, we can highlight that the variables BIG4, CHANGE_AUD, CORPGOV, LTA, SEGMENT, TENURE and LAGE are significant according to the t-statistic. The coefficients show a positive relation between BIG4 and the natural logarithm of audit fees, as well as with the natural logarithm of total assets, the market-to-book ratio, LEV, ARINV, SEGMENT and SGROWTH. The variables that are negatively correlated with audit fees are the proxy for performance (ROA), the number of days between the year end and release of the financial statements, age of the audited firm and later restatement of the results, indicating an inverse relationship with audit fees.

Table 5 shows a positive correlation between BIG4 and the size of audit fees paid, indicating that the Brazilian branches of the four largest audit firms tend to charge higher fees than their smaller peers. There is also a positive correlation between audit fees and size of the audited company (natural logarithm of year-end assets - LTA). This is understandable, because larger firms on average require more work by the auditor due to their greater complexity and volume of data.

The MTB variable is positively correlated with audit fees. A possible explanation is that firms with higher market than book value tend to be exposed to more risk, requiring more thorough analysis by auditors, and commensurately higher fees. The variable LEV is also positively correlated with audit fees, but not significantly so.

The variable ROA, indicating profitability, is negatively correlated with audit fees, but the p-value is not significant. Therefore, it cannot be said that more profitable Brazilian firms pay lower audit fees.

ARINV is positively and significantly correlated with audit fees. An explanation for this result is that auditors have to work harder to examine the accounts of firms with higher accounts receivable and inventories, due to the need for more tests of the creditworthiness of customers and inventory counts.

The positive correlation with the TENURE variable is surprising because it indicates that the longer the relationship lasts between a firm and its auditors, the more the latter tend to charge for their services.

The SEGMENT variable is significant at 10%, meaning that the greater the number of business segments in which a company operates, the more the auditor tends to charge. Company age has a negative sign, indicating that older firms are more consolidated and tend to pose a lesser challenge to their auditors, so that the lower risk means they can charge less. In contrast, newer companies have more uncertainties, with higher risk, possibly prompting auditors to charge more.

4.3.2 Determinants of Auditing Quality (Earnings Management)

In relation to the determinants of earnings management, used here as an inverse proxy for audit quality, the results in Table 4 (section B) show that the model has predictive power of approximately 45.00% considering the R^2 value.

With respect to the results of Table 5, the NABAFEE variable stands out. It is highly significant, indicating that firms that pay their auditors less than expected or below normal tend to manage earnings more, generally to increase income. This confirms that auditors that charge less tend to be more tolerant of earnings management by their clients.

The variable representing fees for consulting (nonaudit) services has a positive coefficient with significance of 0.0800, which is satisfactory at the 10% level, indicating that firms that render nonaudit services are more likely to be tolerant of earnings management by their clients.

With respect to the control variables, Loss stands out: the greater the loss suffered, the lower the probability of aggressive earnings management to boost income. In other words, companies that suffer losses, rather than using discretionary accruals to minimize the losses, do the opposite, so that the results will look comparatively better in the following period. This is in line with the “take a bath accounting” hypothesis.

The cash flow variable is negatively correlated with earnings management, indicating that companies with higher cash flow feel less need to manage earnings, while those with lower cash flow tend to manage earnings more aggressively.

The operational cycle variable is not significant, but sales volatility is, indicating that companies whose sales have greater seasonal variability tend to use discretionary accruals more aggressively to smooth income.

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TABLE 5: Regression Results

Dependent Variable	Section A		Section B	
	(1 ^a) AFFE	(2 ^a) AFFE	(1 ^a) DAC	(2 ^a) DAC
ARINV	0.0706 (1.81**)	0.0912 (1.97**)		
BIG4	0.3073 (6.78***)	0.2957 (6.46***)	0.4225 (0.78)	0.6332 (1.12)
CFO			-29.3556 (-9.52***)	-29.477 (-8.78***)
CHANGE_AUD	-0.0740 (-2.11***)	-0.0720 (-2.05**)		
CHEMISTRY		0.1500 (2.25***)		-1.1686 (-0.91)
CONSTRUCTION		-0.0034 (-0.41)		-0.0232 (-0.30)
CORPGOV	0.0797 (2.44***)	0.0848 (2.57***)	0.1654 (0.41)	0.0252 (0.06)
FOOD_AND_DRINK		0.0226 (1.47)		-0.0047 (-0.03)
FULL_IFRS	-0.0536 (-1.61*)	-0.0589 (-1.76*)	-0.3689 (-0.99)	-0.3121 (-0.82)
LAGE	-0.0015 (-1.87**)	-0.0017 (-1.98**)		
LEV	0.0476 (1.04)	0.0232 (0.50)	-1.7043 (-1.92**)	-1.8641 (-1.96**)
LMV			0.3421 (1.46)	0.3858 (1.57*)
LOSS			-1.8054 (-3.83***)	-1.7503 (-3.57***)
LTA	0.4701 (21.69***)	0.4713 (21.55***)		
MTB	0.0003 (0.37)	0.0002 (0.19)	0.0904 (2.62***)	0.1019 (3.07***)
NABAFEE			1.0688 (3.37***)	1.0833 (3.34***)
NONAUDIT_FEES			0.4922 (1.49)	0.4088 (1.21)
OPCYCLE			-0.4615 (-1.20)	-0.3937 (-0.88)
ROA	0.0460 (0.44)	0.0379 (0.36)		
SEGMENT	0.0082 (1.97**)	0.0067 (1.59***)		
TENURE	0.0125 (1.82**)	0.0141 (2.04**)		
TEXTILE		-0.0081 (0.82**)	(-	-0.1927 (-1.4873)
TRADE		0.0232 (1.96**)		-0.1712 (-1.08)
TRANSPORTATION_AND_SERVI		0.0240 (1.16)		0.0279 (0.11)
VEHICLES_AND_PARTS		0.0240 (1.16)		0.0279 (0.11)
VOLCFO			-0.9962 (-0.43)	-1.5256 (-0.63)
VOLSALE			4.7221 (2.07**)	6.5548 (2.33***)
CONSTANT	0.7736 (8.75***)	0.7682 (8.59***)	0.7574 (-0.71)	-0.9195 (-0.79)
R²	0.5402	0.5487	0.4569	0.4664
TOTAL PANEL (UNBALANCED)	837	837	727	727

5 CONCLUSIONS

This article investigates the relationship between audit fees and audit quality in the Brazilian market. The regression models used were adapted from those of Gupta, Krishnan & Yu (2012) and Kothari et al. (2005). To respond to the research question we used a sample of 300 firms listed on the BM&FBovespa, in the period from 2009 to 2012, for which it was possible to identify the amount paid to the auditors, using data gathered from the Economática® database and the website of the Brazilian Securities Commission (CVM).

We analyzed the regressions with the aim of confirming or refuting the hypothesis that **audit firms that charge less for their service tend to be more relaxed regarding earnings management by their client companies.** The results confirm this hypothesis.

The main contribution of this article is the possibility of stating that abnormal audit fees are related to abnormal discretionary accruals in the Brazilian capital market, or put another way, more aggressive earnings management occurs predominantly among firms that pay less than expected for audit services. This study evidences the perception of risk by the audit firms and how this is reflected in the abnormal fees charged.

Chart 4 summarizes the main findings.

MAIN FINDINGS
Confirmation of the expected positive relation between abnormal audit fees and positive discretionary accruals.
Confirmation of the expected positive relation between nonaudit fees and positive discretionary accruals.
Confirmation of the expected positive relation between the variable BIG4 and the amount paid to the auditor.
Confirmation of the expected negative relation between the cash flow of the audited company and earnings management.

The results of this study have implications for regulators, such as the CVM, whose mission is to protect investors and facilitate capitalization of companies in Brazil. Independent auditing plays a fundamental role in both the capital and financial markets. The results also have implications for the members of the audit committee and senior management in general in their negotiation of audit fees. Although from managers' standpoint it may be tempting to contract an auditor willing to accept a low fee, they must realize that audit firms have a cost structure, and abnormally low fees can mean the auditors will cut corners in performing their services, negatively impacting the audit quality and leading to an analysis of the financial statements that is more permissive of earnings management.

Likewise, the results of this study are relevant to financial analysts in their judgment of the quality of earnings for the purpose of making investment recommendations. Companies that pay lower than expected audit fees might not be receiving the proper care to prevent risks of poor quality of the earnings reported.

The main limitation of this study is the concentration only on large listed companies, so future studies could broaden the universe to include unlisted firms and/or smaller

companies. Future studies could also focus on types of earnings management, such as to reduce the variability of earnings (income smoothing) or make the results look worse than they really are so as to increase the chances of showing strong recovery in subsequent periods (taking a bath).

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