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REFLECTIONS OF INCLUDING KEY AUDIT MATTERS IN THE AUDIT QUALITY AND AUDIT FEES OF PUBLICLY TRADED COMPANIES IN BRAZIL

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ABSTRACT

Considering the context of the changes implemented by the revised ISA 700, which required including items such as Key Audit Matters (KAMs), this article aimed to examine the effects of the changes in ISA 700 on audit quality and fees. Accounting and market data, information on the responsible audit firms, and the number of KAMs disclosed by publicly traded companies in Brazil were collected from 2014 to 2017. Overall, the results did not demonstrate evidence of improvement in audit quality after adopting the revised ISA 700. Audit fees also did not show statistically significant changes when comparing the period before and after adopting the new requirement. So, the study concluded that, during the four-year period surrounding the adoption of the new requirements, there was no evidence of an increase in audit quality or auditor fees for publicly traded companies in Brazil. This article expands academic discussions in the Brazilian capital market regarding the implications of including KAMs in audit reports, as well as the analysis of the practical effects of applying standards issued by regulatory bodies.

Keywords: Auditing. Audit Quality. Audit Fees. Key Audit Matters.

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1 INTRODUCTION

After the global financial crisis in 2008, there was an increase in discussions about the role of auditors in the capital market, serving various stakeholders, such as partners, professional investors, individuals, creditors, government, and analysts. This led to the revision of professional auditing standards, creating the revised *International Standard on Auditing 700 (ISA 700)*. The standard introduced several changes, including the disclosure of Key Audit Matters (KAMs) in the auditor's report. The KAMs focus on the risks of the audited entity and the actions taken by the auditors to mitigate the risks of material misstatement related to these matters.

Silviu and Timea (2015) analyzed the comment letters sent to the *International Auditing and Assurance Standards Board (IAASB)* in response to the *Exposure Draft* of the new auditor's report proposal. The authors noted that there was a perception that the changes could not imply improvements in the quality of information for users despite recognizing the importance of revising the reporting standards applicable to audits. Chalmers (2013) points out that although the new standard requires the disclosure of risks already identified and evaluated as an inherent part of the audit process, it may be necessary to perform additional procedures related to quality control and reviews by more senior members of the audit team, which could increase audit fees.

In this context of significant changes in how the auditor communicates the audit process results of the audited entities to the users of the financial statements, it is important to know the possible impacts on the Brazilian environment. Therefore, the problem guiding this article is: what are the effects of changes in ISA 700 in Brazil on audit quality and **fees?** Thus, this article aims to verify the effects of changes in ISA 700 on audit quality and fees.

This objective is justified because, according to DeFond and Zhang (2014), the increasing complexity of operations and accounting standards can enhance the value of an audit. Consequently, it is also reasonable to assume an increase in auditors' costs, given the greater demand for technical competence and the greater number of hours used.

In addition, Brazilian companies, even in the face of challenges, have sought to improve the quality of accounting information in order to expand the investor base. Thus, it is relevant to know the possible effects of the changes implemented with new regulations, such as the new independent auditor's report model and verify its effects on audit quality in the Brazilian capital market.

2 THEORETICAL BACKGROUND

DeAngelo's (1981) seminal study defines audit quality as a joint function of the auditor's competence and independence. Competence refers to the probability of detecting a material misstatement, if any. Independence refers to the likelihood that, having detected a material uncorrected misstatement in the financial statements, the auditor will report it in his report.

Academic studies have investigated the effects of adopting the new independent auditors' report on companies' financial statements, especially due to including Key Audit Matters (KAMs). Such inclusion may affect the perception of the auditors' responsibility, leading them to adjust the planning and execution of the audit work, including testing to comply with the new disclosure requirements, which may impact both the audit quality and the auditors' fees.

The evidence points to significant effects on the perception of the usefulness of the financial statements and the responsibilities of the auditors. Backof et al. (2022) observed an increased perception of the auditor's responsibility resulting from the KAMs. Kachelmeier et al. (2019) found that the auditors' responsibility can be significantly lower depending on the type of KAM, representing a "waiver" of responsibility for the identified high-risk areas. Brasel et al. (2016) and Brown et al. (2016) also show that certain KAMs can reduce the responsibility of auditors, acting as "prior notice" to users that controversial issues are present in the financial statements. Gimbar et al. (2016), when analyzing the impact of the new audit report with KAMs,

bring as an analysis variable the accuracy of the accounting standard and find evidence that the auditor's responsibility increases with KAMs when an accounting issue is directed by a precise accounting standard and the client's accounting treatment is in accordance with the law.

Considering more accurate accounting standards environments and litigation risks, Pinto and Morais (2018) sought to determine the factors influencing the number of KAMs in companies in the United Kingdom, France, and the Netherlands. The results showed that a greater number of business segments and more accurate accounting standards lead to the disclosure of a greater number of KAMs and that there is a positive association between audit fees and the number of KAMs disclosed.

DeFond and Zhang (2014) defined audit quality as directly linked to the quality of financial statements, a continuous construction influenced by both the inherent characteristics of companies and the systems and processes of preparing financial statements. The literature in the area uses proxies to measure the audit quality associated with the quality of the financial statements. Since the quality of financial statements is a conceptually broad construct, audit quality researchers use this metric to detect opportunistic earnings management. It is understood that there would be less probability or even limitation in opportunistic earnings management in the presence of high audit quality.

In this context, the independent auditors' report, including the KAMs, could influence the audit quality, being more informative to the users of the financial statements. Despite the limitations inherent in audit quality metrics, using the quality of financial statements as a proxy is useful and feasible, according to Reid et al. (2019). This study analyzed the impacts on the quality of financial statements and audit costs after regulatory reforms by the revision of *ISA 700 (revised June 2013)* issued by the *FRC* for the United Kingdom and Ireland. The results show that the new requirements of the auditor's report are associated with a significant improvement in the quality of the financial statements (represented by absolute abnormal accruals) without detecting significant incremental costs. The discussion suggests that these changes are associated with reducing management's opportunistic earnings management.

Gutierrez et al. (2018) also investigated the consequences of adopting the expanded audit report in the United Kingdom on cumulative absolute abnormal returns, auditors' fees, and audit quality, represented by the proxy of absolute discretionary accruals. Unlike the study by Reid et al. (2019), this research did not indicate evidence that the expanded auditor's report is associated with significant changes in audit quality.

Li et al. (2019) investigated the impact of changes in audit reports on audit quality and audit fees in the New Zealand context. The results suggest an improvement in audit quality represented by a reduction in absolute abnormal accruals, but with a significant increase in audit fees. Thus, the evidence suggests that the new auditor report requirements improved audit quality, but this benefit was not cost-neutral.

Lennox et al. (2023) also investigated whether the expanded audit report is more informative for investors in the UK market, noting the market reaction to the auditor's report disclosure event with the inclusion of KAMs. The results pointed to insignificant reactions in the market, consistent with the observations of Gutierrez et al. (2018), suggesting that the informational content of the KAMs was already known before the disclosure of the auditors' reports.

Variability in the effects of adopting audit reports with KAMs is expected in different countries with different regulatory, legal, and market environments (Minutti-Meza, 2021; Ricquebourg & Maroun, 2023). Particularly in the context of emerging economies, audit reports expanded by KAMs may be more informative due to the lower availability of alternative sources of information (PCAOB, 2017). From this perspective, Goh et al. (2023) observed for the Chinese market, among other evidence suggestive of the incremental informative character of KAMs, that the earnings response coefficient is significantly higher after adopting expanded audit reports in

Mainland China, evidence consistent with the perspective that KAMs improve investors' perceptions of the quality of a company's financial disclosure.

Concerning the Brazilian context, Matos (2017) identified and analyzed the KAMs with a focus on disclosures about the risk of discontinuity, having observed that the companies audited by the Big 4 and those listed at different levels of governance presented lower amounts of reported KAMs, although the differences are not significant.

Cruz et al. (2019) sought to identify the determinants of the amount of KAMs. The results indicated that larger, more indebted companies, with higher fees paid to audits, with a greater number of subsidiaries, audited by Big Four, with the issuance of ADR, listed in Novo Mercado, from regulated industries and with the presence of an audit board, have a greater number of KAMs. The inverse relationship was obtained by considering the time the audit performs its functions in the company. There was also a higher volume of KAMs due to using discretionary rules, such as impairment, provisions, recognition of revenues, and taxes. Along the same lines, Venturini et al. (2023) analyzed the determinants of the amount of KAMs of B3's non-financial companies. They concluded that auditors of larger companies, less profitable, and with greater operational risk disclose more KAMs.

Guedes et al. (2021) analyzed the relationship between corporate governance mechanisms and the KAMs disclosed in the audit reports of companies listed on B3. They observed that the audit committee is a corporate governance control mechanism capable of mitigating the entity's risks and reducing the number of KAMs disclosed. In the case of the dual functions of the CEO, the results are inverse, showing an increase in the number of KAMs.

Additionally, Carvalho et al. (2024) studied the similarity of the KAMs reported for companies listed on B3 over the years, which could indicate standardization and low information content. The research results indicate a high degree of intertemporal similarity (72.91%) and significant differences in similarity depending on the auditing firm, the economic sector, and the corporate governance of the audited entity.

2.1 Development of hypotheses

In Brazil, CFC Resolution No. 1.231/09 was approved in the form of NBC TA 700, which corresponds to *ISA 700* and provides for forming the opinion and issuance of the independent auditor's report on the financial statements. The NBC TA 700 has also been modified since 2009 to the revised 2016 version. This resolution details all mandatory changes in the report format issued by the independent auditors, with the main change being the obligation to inform the KAMs in a specific section.

Concerning the new model of the auditor's report, in the "KAMs" section, the KAMs must be included in a detailed and specific way to inform the users of the financial statements of the areas associated with significant risks of material misstatement, even if no misstatements were identified at that time. Thus, it **is explicit in the auditor's report which significant risks the audited entity is exposed to, considering that this information can be relevant and used as a basis for evaluations and decisions about possible investments**. Also, the sections addressing the responsibilities of management and auditors require greater detail and clarity of the activities performed by the parties involved in the audit process of the financial statements, with adequate emphasis to the user on the scope of action of both.

With the significant changes in the revised *ISA 700*, knowing the effects and implications of the modifications implemented in the independent auditors' reports is important. Therefore, this research investigates whether the audit quality, considering the audit reports that have undergone recent modifications, increased with the inclusion of items considered more informative to the users of the financial statements. To this end, the following hypothesis was developed:

H1: Audit quality increased with adoption of *ISA 700 (revised June 2016)* in Brazil.

DeFond and Zhang's (2014) statement is worth remembering that "the increasing complexity of business transactions and accounting standards increases the potential for auditing to add value." Besides the complexity of increasing the auditors' contribution potential, these new standards may increase the costs associated with the audit, given the need for greater technical competence or more hours by the auditors to maintain audit quality. In a more complex environment, audit quality would be associated with the auditor's competence, independence, reputation, and seriousness in reporting the issues of relevant risks present in the audited companies and significantly influencing the increase in associated costs. Based on this, the following hypothesis was developed:

H2: Audit fees increased due to the changes introduced by the adoption of *ISA 700 (revised June 2016)* in Brazil.

3 RESEARCH METHODOLOGY

3.1 Sample and data

The research adopted a quantitative approach, involving collecting and analyzing data extracted from the financial statements, independent auditors' reports, and reference forms. The sample consists of publicly traded companies in Brazil. The companies issue annual financial statements through the Standardized Financial Statements (DFP) electronic form, which is delivered to the CVM. Data was collected through the Economatica database, from which the consolidated and market accounting data for 2014 to 2017 were extracted.

The names of the audit firms responsible for the reports from 2014 to 2017 were manually collected in consultation with the DFP on the CVM website; the quantities and topics in the KAMs section of the auditors' reports for 2016 and 2017; and the auditors' fees for 2014 to 2017 in the Reference Forms, with some limitations such as the lack of clear segregation between audit and non-audit services, the non-specification of the period covered, and the absence of disclosure of some fees.

To delimit the sample, data from Finance and Insurance and Funds companies were excluded since the accrual quality models were not developed considering these specific sectors, according to Hanlon et al. (2014). Companies with total assets not reported or less than BRL 1,000.00, revenue not reported, negative, or equal to zero, and negative shareholders' equity were also excluded. The resulting sample consisted of 1,554 observations over four years, as shown in Table 1.

Table 1
Sample Selection

	Number of Observations
Publicly-traded companies in Brazil (2011 to 2017)	7,315
(-) Companies with Total Assets not informed	(2,976)
(-) Companies in the "Finance and Insurance" and "Funds" Sector	(780)
(-) Companies with Revenue less than or equal to zero	(521)
(-) Companies with negative Shareholders' Equity	(305)
Total observations (2014 to 2017)	**1,554**

Source: Authors.

3.2 Models

Due to the limitations in the direct observation of audit quality, it was measured through the proxy for the quality of the financial statements, following Reid et al. (2019), who used absolute abnormal accruals (ABS_ACC) and audit fees (LN_FEE) as a proxy for the auditors' compensation.

3.2.1 Audit Quality — Independent Auditor's Report — ISA 700 Revised

In order to verify the reflexes after adopting the new audit report on audit quality, the following model was used to calculate the absolute abnormal accruals (ABS_ACC):

$$ABS\_ACC_{i,t} = \beta_0 + \beta_1 POST_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LOSS_{i,t} + \beta_5 MB_{i,t} + \beta_6 LEVERAGE_{i,t} + \beta_7 PRIOR\_ACC_{i,t} + \beta_8 CFO_{i,t} + \beta_9 VOLATILITY_{i,t} + \beta_{10} BIG4_{i,t} + IND\_FE_{i,t} \quad (1)$$

The description and calculation method of all variables used in the models in this article are detailed in Table 2.

It is expected that when the absolute abnormal accruals (ABS_ACC) are lower, this reflects less opportunistic management behavior and higher audit quality. The variable of interest, POST, is equal to 1 for the years ended on or after December 2016, when the adoption of the new auditor's report by companies in Brazil became mandatory, or zero otherwise. The coefficient of this variable is expected to be positive and significant. Characteristics at the firm level were used as control variables, as they demonstrate an impact on abnormal accruals, according to Carcello and Li (2013), in addition to the inclusion of fixed industry effects to capture differences between industries.

For absolute abnormal accruals (ABS_ACC), there is no universality in the calculation or in the metrics used to evaluate the quality of the financial statements or audit. According to Hope (2013), two models established in the literature are used to determine the proxy: Kothari et al. (2005) derived from the Jones Model (1991) and Dechow and Dichev (2002) modified by McNichols (2002), in addition to the quality models of revenue accruals by Stubben (2010) and the percentage of magnitude of cash flow accruals by Burgstahler et al. (2006).

The first model applied was that of Kothari et al. (2005), in which the value of discretionary accruals (ABS_ACC1), adjusted for performance, is given by:

$$TA_{i,t} = \beta_0 + \beta_1 \left(\frac{1}{AT_{i,t-1}}\right) + \beta_2 \Delta REC_{i,t} + \beta_3 PPE_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where total accruals are calculated according to Kothari et al. (2005).

The second model applied was that of Dechow and Dichev (2002), modified by McNichols (2002) to calculate abnormal accruals using the variable ABS_ACC2:

$$TA_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REC_{i,t} + \beta_5 PPE_{i,t} \quad (3)$$

Where total current accruals and cash flow from operating activities are calculated according to McNichols (2002).

The third model applied was that of Stubben (2010), based on discretionary revenues to calculate abnormal accruals, represented by the variable ABS_ACC3 and was obtained by the following regression:

$$\Delta CTASREC_{i,t} = \beta_0 + \beta_1 \Delta REC_{i,t} + \varepsilon_{i,t} \quad (4)$$

The fourth model applied was that of Burgstahler et al. (2006), where ABS_ACC4 is the quality measure obtained by the log of the magnitude of the value of absolute accruals in relation to cash flows:

$$ABS\_ACC4_{i,t} = (LOG\ LOG\ |\frac{TA_{i,t}}{CFO_{i,t}}| * (-1)\ (5)$$

Additionally, in line with the tests applied by Reid et al. (2019), this article investigated whether the intention or disclosure of KAMs influences the quality of financial statements since additional audit procedures reflect a greater number of effectively-identified risks. Thus, the variable NUM_RISKS was included in Equation (1), corresponding to the number of KAMs disclosed in the auditors' reports in the first and second years of adoption and zero for previous years. Also, in this same model, the control variable NUM_RISKS was replaced by NUM_RISKS_SIZE, which is the ratio of the amount of KAMs to the ln of the assets. The variable NUM_RISKS_SIZE aims to minimize possible misstatements using the nominal values of the numbers of KAMs, equalizing the possible occurrence of a significant amount of KAMs for relatively smaller companies in terms of total assets.

Despite the divergent results in the literature, the voluntary or mandatory replacement of the audit firm may impact the audit quality. This quality may increase due to the independent review of the risks of the audited companies. However, it may also decrease, especially in the first years of operating in a new client, due to the lack of familiarity with the institutional and systemic factors of the audited companies. In the evaluation of the audit quality measured indirectly by the proxy of the absolute abnormal accruals of Equation (1), a variable that captures recurring changes of the audit firms, MUD_AUD, was also included, which assumes a value equal to 1 when there is a change of audit firm, and zero, otherwise. It should be noted that including this control variable that considers the possible effects of changes in audit firms was not applied in the study by Reid et al. (2019).

3.2.2. Audit fees

In order to verify the effects of adopting the new audit report on the audit costs assessed by the auditors' fees, the following model was used:

$$\begin{aligned} LN\_FEE\_A_{i,t} = {} & \beta_0 + \beta_1 POST_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LOSS_{i,t} + \beta_5 MB_{i,t} \\ & + \beta_6 LEVERAGE_{i,t} + \beta_7 PRIOR\_ACC_{i,t} + \beta_8 CFO_{i,t} + \beta_9 VOLATILITY_{i,t} \\ & + \beta_{10} BIG4_{i,t} + IND\_FE_{i,t}\ (6) \end{aligned}$$

Equation (6) considers the same variables of interest and control as Equation (1) but includes the dependent variable LN_FEE_A, representing the natural logarithm of audit fees. As mentioned above, the modifications required for the auditor's report may affect audit costs, reflecting an increase in fees. Additional tests were also performed using the model in Equation (6), including the control variables NUM_RISKS, NUM_RISKS_SIZE, and MUD_AUD.

Table 2

Variables used in the models

Dependent variables	
ABS_ACC1	absolute abnormal accruals obtained by the model by Kothari *et al*. (2005) derived from the Jones Model (1991)
ABS_ACC2	absolute abnormal *accruals* obtained by the Dechow and Dichev Model (2002) modified by McNichols (2002)
ABS_ACC3	absolute abnormal accruals obtained by the Stubben Model (2010)
ABS_ACC4	absolute abnormal accruals obtained by the model by Burgstahler *et al*. (2006)
LN_FEE	natural logarithm of audit fees for year t.

Variables of Interest	
BIG4	1 if the company is audited by a "Big 4" audit firm and 0 otherwise
BUSY	1, if the company's fiscal year ends in December and zero otherwise
CFO	operating cash flow obtained from the result of continued operations, plus depreciation/amortization expenses, minus the variation in current assets disregarding the variation in cash and cash equivalents, plus the variation in current liabilities disregarding the variation in current loans and financing and the variation in taxes payable. The amount obtained was divided by total assets at the end of year t-1
$\varepsilon_{i,t}$	random error, which includes influences on the behavior of the dependent variable that cannot be explained linearly by the behavior of the other variables
IND_FE	fixed effects of the industry based on the creation of dummies for each of the 19 economic sectors disclosed in the Economatica database
INV	total inventories divided by total assets at the end of year t
LEVERAGE	value of loans and financing divided by total assets at the end of year t
LOSS	1 if the company's net income is less than zero and 0 otherwise
MB	ratio of the company's market value to the value of shareholders' equity at the end of year t
MUD_AUD	1 when the change of audit firm was observed and 0 otherwise
NUM_RISKS	number of KAMs disclosed in the auditors' reports in the first and second years of adopting new report, and zero for previous years
M_RISKS_SIZE	number of KAMs disclosed by the natural logarithm of the total asset at the end of year t
PRIOR_ACC	year-end accruals (income or net income from continuing operations plus depreciation and amortization expense, less operating cash flow) divided by total assets at the end of year t-1
POST	1 for the years ended on or after December 2016 in the mandatory adoption of the new auditor's report by companies in Brazil or 0 otherwise
T_CTASREC	total accounts receivable for total assets at the end of year t
ROA	income or net income from continuing operations of year t divided by average assets
SIZE	the natural logarithm of total assets at the end of year t
VOLATILITY	the standard deviation of net revenue for the last three years by total assets at the end of t-1

Source: Authors.

4 RESULTS

4.1 Descriptive statistics

Table 3 presents the descriptive statistics of the study variables:

Table 3

Descriptive statistics

	N	Mean	SD	1st Quartile	Median	3rd Quartile
Dependent variables:						
ABS_ACC1	1176	-0.06377	0.06452	-0.08497	-0.04256	-0.01913
ABS_ACC2	785	-0.05656	0.05509	-0.07543	-0.04061	-0.01644
ABS_ACC3	1224	-0.02785	0.03662	-0.03321	-0.01510	-0.00696
ABS_ACC4	1411	0.88539	1.41083	0.10919	0.88256	1.62985
LN_FEE	1434	6.11094	1.39326	5.16459	6.07110	6.93828
Variables of interest:						
SIZE	1554	14.51078	1.97441	13.53277	14.61493	15.70310
ROA	1477	0.02506	0.08245	0.01129	0.02455	0.06569
MB	899	16.07487	104.16270	0.54834	1.13272	2.19556
LEVERAGE	1553	0.32057	0.20486	0.14944	0.33420	0.45946
PRIOR_ACC	1411	-0.01579	0.08293	-0.05623	-0.01198	0.02425

CFO	1411	0.09974	0.20808	0.01056	0.09186	0.18920
VOLATILITY	1340	0.07561	0.08745	0.02587	0.05171	0.08961
INV	1554	0.06294	0.09590	-	0.00588	0.10766
T_CTASREC	1548	0.13128	0.12877	0.03677	0.09570	0.17882
NUM_RISKS	1554	1.33505	1.67620	-	-	3.00000
NUM_RISKS_SIZE	1554	0.09064	0.11181	-	-	0.17708

For all continuous variables, the *winsorize* technique was used at the 1st and 99th percentile levels, except for those in logarithmic form. SD is the standard deviation. N is the number of useful observations for each variable.

Source: Authors.

The unbalanced panel used in this article resulted in a general sample of 1,554 observations considering the four-year period. Regarding the auditors' compensation paid by publicly traded companies in Brazil, it is observed that 94% were concentrated in the "Big 4" (KPMG — 31%; Ernst & Young — 20%; PwC — 26%; and Deloitte — 18%) and the remaining 6% distributed among 68 audit firms. In terms of concentration in the market, measured by the total audited assets, it appears that 91% were concentrated in the "Big 4" (KPMG — 38%; PwC — 27%; Deloitte – 13%; and Ernst & Young – 13%) and the remaining 9% distributed among the 68 audit firms.

The number of companies and KAMs was calculated and segregated by economic sector, as disclosed in the Economatica database, which presented the financial statements with the reports of the independent auditors in accordance with the revised *ISA 700*. The sample is concentrated in sectors such as Electricity, Transport and Services, Construction, Trade, Textiles, and Steel and Metallurgy, representing 53.2% of the total companies analyzed. The KAMs concentrated in the sectors of Electricity, Transport and Services, Construction, Trade, and Food and Beverage, representing 51.0% of the total companies analyzed.

Regarding the matters of the KAMs most frequently addressed in the independent auditors' reports, it was identified that the most cited topics are the assessment of "Reduction for impairment of assets," followed by "Revenues," "Provisions and Contingent Liabilities," and "Taxes and Tax Matters." Measuring the amounts to be recorded in these topics generally involves uncertainties, either subjectivity in adopting assumptions and projections or operational challenges related to data processing.

4.2 Results of the regressions

4.2.1 Audit Quality — Independent Auditor's Report

Table 4 shows the regression result for the H1 test. In Panel A are the results for the model of Equation (1); Panel B demonstrates the results of the same model by adding the number of disclosed KAMs, and Panel C demonstrates the results by adding the change of audit firm. The ABS_ACC values were multiplied by -1 to facilitate the interpretation of the results. Thus, the coefficient of the variable of interest POST is expected to demonstrate higher audit quality when positive and significant.

Table 4

Audity quality

Panel A: Quality metrics based on accruals				
	ABS_ACC1	ABS_ACC2	ABS_ACC3	ABS_ACC4
POST	**-0.00662**	**0.00212**	**0.00325**	**-0.192****
	(-1.460)	(0.416)	(1.303)	(-2.059)
Constant	-0.175***	-0.0991***	-0.107***	1.242**
	(-6.298)	(-3.658)	(-6.293)	(2.488)

R^2	0.132	0.201	0.159	0.129
N	662	465	662	841
Panel B: Quality metrics based on accruals — Includes NUM_RISKS				
	ABS_ACC1	ABS_ACC2	ABS_ACC3	ABS_ACC4
POST	**-0.000874**	**0.00827**	**0.0105****	**-0.0447**
	(-0.096)	(0.715)	(2.281)	(-0.224)
	(0.423)	(1.815)	(0.239)	(-0.564)
NUM_RISKS	**-0.00192**	**-0.00202**	**-0.00242***	**-0.0498**
	(-0.729)	(-0.572)	(-1.757)	(-0.888)
Constant	-0.180***	-0.103***	-0.114***	1.127**
	(-6.356)	(-3.712)	(-6.527)	(2.174)
R^2	0.133	0.202	0.162	0.130
N	662	465	662	841
Panel C: Quality metrics based on accruals — Includes MUD_AUD				
	ABS_ACC1	ABS_ACC2	ABS_ACC3	ABS_ACC4
POST	**-0.00617**	**0.00227**	**0.00392**	**-0.220****
	(-1.337)	(0.443)	(1.590)	(-2.356)
MUD_AUD	**-0.00248**	**-0.00183**	**-0.00368**	**0.168**
	(-0.477)	(-0.236)	(-1.165)	(1.536)
Constant	-0.174***	-0.0987***	-0.107***	1.203**
	(-6.296)	(-3.633)	(-6.237)	(2.419)
R^2	0.133	0.201	0.161	0.132
N	662	465	662	841

For all continuous variables, the *winsorize* technique was used at the 1st and 99th percentile levels, except for those in logarithmic form. N is the number of useful observations for each variable. The t-statistic is in parentheses. Standard errors are robust to heteroscedasticity. The regressions were estimated with a fixed industry effect, so the variable IND_FE does not present results when the model is applied. The levels of statistical significance are shown by * p<0.10, ** p<0.05, *** p<0.01, which represent, respectively, 10%, 5%, and 1%.

Source: Authors.

In Table 4, Panel A, it is verified in the regressions applied using the ABS_ACC1, ABS_ACC2, and ABS_ACC3 metrics that the variable of interest POST was not statistically significant. The ABS_ACC4 metric, on the other hand, presented a negative coefficient of the variable of interest and was statistically significant at the level of 5%, indicating a worsening in audit quality. As expected in the research context, the variable POST should present a positive coefficient, suggesting an improvement in audit quality after implementing the revised ISA 700, represented by the behavior of abnormal accruals. However, the test results did not corroborate the H1 hypothesis, contradicting the expectations and results presented by Reid et al. (2019).

In Panel B, the main regression was used with the inclusion of the control variable NUM_RISKS, which aims to verify whether the amount of KAMs effectively disclosed could influence a higher audit quality. It is verified that in the regression applied using the ABS_ACC3 metric, the variable of interest POST was positive and statistically significant. Moreover, when considering the inclusion of the control variable NUM_RISKS, it appears that it was also statistically significant at the 10% level. These results indicate improvement in audit quality compared with the pre- and post-adoption period of the new auditor's report, especially when considering the numbers of KAMs disclosed. These findings point to the possible positive influence of the adequate disclosure of KAMs in improving audit quality, highlighting their importance in the overall evaluation of the performance of organizations and the effectiveness of audit procedures.

However, Pearson's Correlation test for the variable of interest POST and control variable NUM_RISKS showed a correlation of 0.8669 at the significance level of 5%, so there is a high correlation between the variables, which weakens the explanatory power of the results obtained so far. Thus, this improvement in audit quality obtained through the ABS_ACC3 metric might not

reflect an effective improvement. In Panel B, for the metrics ABS_ACC1, ABS_ACC2, and ABS_ACC4, the variable of interest POST was not statistically significant and, therefore, did not indicate an improvement in audit quality. Additionally, tests were performed with metrics presented in Table 4 Panel B, but the control variable NUM_RISKS was replaced with NUM_RISKS_SIZE. The results, including NUM_RISKS_SIZE in the regression, were not different from those presented when NUM_RISKS was included.

In Panel C, it is verified that in the regressions applied using the metrics of ABS_ACC1, ABS_ACC2, and ABS_ACC3, the variable of interest POST is not statistically significant. The ABS_ACC4 metric presented a negative coefficient of the variable of interest and statistically significant at the level of 5%, which indicates a decrease in audit quality, as shown in Panel A. Additional tests were also performed, including in the main regression the variables NUM_RISKS and MUD_AUD and NUM_RISKS_SIZE and MUD_AUD, with no significant changes to the results presented in Panel B. Therefore, the regression results did not corroborate the expectations that the modifications introduced by the revised ISA 700 led to an improvement in audit quality, even considering factors such as the number of audit points disclosed and the change in the audit firm.

Compared to the study by Reid et al. (2019), specifically for absolute abnormal accruals, the modified Jones Model (1991) metric was used, with evidence of an increase in the quality of the financial statements. In the present article, the equivalent metric would be ABS_ACC1, and the results were not statistically significant. In the other metrics applied by Reid et al. (2019), there was also no evidence of improvement in the quality of the financial statements compared with the pre- and post-adoption period of the revised *ISA 700*. The results presented by the current study did not present a significant positive variable of interest POST, therefore, with no indication of improvement in audit quality, except for evidence from Panel B that presented a positive and significant result at the level of 5% for the ABS_ACC3 metric indicating a possible improvement in audit quality. However, the explanatory power of this result decreased due to the high correlation identified between the variable of interest POST, and the control variable NUM_RISKS. Despite resulting in evidence of improvement in audit quality, there are indications that this may not be effective.

In summary, the results of the regressions presented in Table 4 did not show statistical significance for evidence of improvement in audit quality after adopting the revised ISA 700. These results do not corroborate the hypothesis (H1) that there would be improvements in audit quality, indicating that, despite the new disclosure requirements imposed on auditors, the empirical evidence suggests that the procedures and tests practiced by audit firms did not result in a noticeable increase in audit quality. It is possible that the assessment of the business environment and the risk mapping of the audited companies have not been significantly affected by the regulatory change. These findings point to the importance of a detailed investigation into the effects of regulatory changes in audit practice.

4.2.2 Audit fees

The changes in the revised ISA 700, which made the audit reports more extensive, contributed to a noticeable increase in the space occupied in the disclosures of the financial statements. This increase in length may have generated additional publication costs for the audited companies and, consequently, impacted higher audit fees, considering the relationship between the length of the report and the associated costs.

The audit fees were evaluated considering the specification of the test for H2 given by Equation (6). The dependent variable LN_FEE represents the natural logarithm of audit fees, and the coefficient is expected to be positive and significant.

Table 5
Audit fees

	LN_FEE_A	LN_FEE_B	LN_FEE_C
POST	**0.0755**	**-0.109**	**-0.111**
	(1.277)	(-0.908)	(-0.903)
NUM_RISKS		**0.0701****	
		(2.023)	
NUM_RISKS_SIZE			**1.080****
			(2.047)
MUD_AUD		**-0.142****	**-0.142****
		(-2.046)	**(-2.045)**
Constant	-3.206***	-2.964***	-2.998***
	(-4.338)	(-4.146)	(-4.248)
R^2	0.637	0.641	0.641
N	791	791	791

Notes: **LN_FEE_A**: Main regression on audit fees. **LN_FEE_B**: Adds variables NUM_RISKS and MUD_AUD to the main regression. **LN_FEE_C**: Adds variables NUM_RISKS_SIZE and MUD_AUD to the main regression. For all continuous variables, the *winsorize* technique was used at the 1st and 99th percentile levels, except for those in logarithmic form. N is the number of useful observations for each variable. The t-statistic is in parentheses. Standard errors are robust to heteroscedasticity. The regressions were estimated with a fixed industry effect, so the variable IND_FE does not present results when the model is applied. The levels of statistical significance are shown by * p<0.10, ** p<0.05, *** p<0.01, which represent, respectively, 10%, 5%, and 1%.

Source: Authors.

Table 5, column LN_FEE_A, represents the result of the main regression with the coefficient of the variable of interest POST, which is not statistically significant. This result does not indicate an increase in audit fees compared with the pre- and post-adoption period of the new requirements applicable to the reports issued by the auditors. This finding raises questions about the assumption that regulatory changes could influence the costs associated with audit services, which is corroborated by the findings of Reid et al. (2019).

Column LN_FEE_B shows the inclusion of the variable NUM_RISKS, in order to verify whether the amount of KAMs effectively disclosed could influence higher audit fees and the variable MUD_AUD, in order to verify whether recurring changes in audit firms could influence audit fees. The result for the coefficient of the variable of interest POST was also not statistically significant, which was different from what was expected. Finally, variables NUM_RISKS_SIZE and MUD_AUD were added in the LN_FEE_C column. The result of the coefficient of the variable of interest POST was negative and statistically non-significant, different from what was expected. The evidence demonstrates the complexity of the factors determining audit fees and suggests that regulatory changes may not directly affect these costs.

When analyzing the results of the regressions for LN_FEE_A, LN_FEE_B, and LN_FEE_C, there was no statistically significant change in audit fees when comparing the pre- and post-adoption period of the new requirements for the auditor's report. These results are consistent with previous studies, such as that of Reid et al. (2019), who also found no evidence of a significant increase in audit fees after adopting these requirements. This conclusion also resembles the findings of Gutierrez et al. (2018), who obtained statistically non-significant coefficients, suggesting that the costs associated with the new audit report may not be substantial compared to the total audit costs.

5 CONCLUSION

This article investigated the effects of modifications to the revised ISA 700, which instituted Key Audit Matters (KAMs) on audit quality and costs. The analysis was conducted from the perspective of offering audits, using metrics such as abnormal accruals and percentages of the

magnitude of accruals. The regressions, considering different scenarios and models, did not provide consistent evidence of improvements in the quality of audits after adopting the standard.

The study also examined the possible impacts on audit fees, finding no statistically significant changes after implementing the new requirements. It was concluded that, in the absence of changes in audit quality, there would be no reason to justify increases in the respective audit fees, being consistent with the studies by Reid et al. (2019) and Gutierrez et al. (2018) in the United Kingdom, but conflicting with Li et al. (2019), who found a significant increase in audit fees considering New Zealand companies.

It should be noted that all analyses expressed in this study for fees were considered within the context of limitations in the data used. In some cases, the audit and non-audit fees were not clearly segregated. They did not specify the period to which they referred, in addition to cases in which the fees were not disclosed, which may impair the accuracy of the conclusions. Another limitation referred to the scope of the sample, which prevented the generalization of the applicability of the results in other contexts, especially in terms of cultural, socioeconomic, and political diversity.

For future research, it is suggested that the changes introduced by the revised ISA 700 be explored in different contexts and sectors. Comparative surveys between countries and organizations can provide insights into the challenges and best practices in their implementation. Also, it is recommended that in-depth research using the case study methodology be conducted to investigate the effectiveness of applying the revised ISA 700, especially regarding the quality of financial information, fraud detection, and stakeholder confidence. Another promising area deals with the impact of technological and regulatory changes on compliance with *ISA 700* and how auditing firms are adapting to these transformations.

In short, the study concluded that, during the four-year period surrounding the adoption of the new requirements, there was no evidence of an increase in audit quality or auditors' fees for publicly traded companies in Brazil. The work contributes to the discussion about the usefulness of the information and the quality of the audit, using a quantitative approach and a significantly larger sample compared to previous studies.

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AUTHOR CONTRIBUTIONS

Roles	1st author	2nd author	3nd author	4nd author
Conceptualization	♦	♦	♦	
Data curation	♦			
Formal analysis	♦			
Funding acquisition				
Investigation	♦	♦	♦	
Methodology	♦			♦
Project administration	♦	♦		
Resources	♦			
Software	♦			
Supervision		♦	♦	♦
Validation	♦	♦		
Visualization	♦	♦	♦	♦
Writing – original draft	♦			
Writing – review & editing	♦	♦	♦	♦

CONFLICT OF INTEREST

The authors assert that there is no conflict of interest related to this submitted work.