



TAX AGGRESSIVENESS AND AUDITOR SWITCHING: INSIGHTS FROM B3

AGRESSIVIDADE FISCAL E TROCA DE AUDITOR: VISÃO DA B3

Recebido em 12.10.2023 Aprovado em 04.12.2023 Avaliado pelo sistema double blind review DOI: https://doi.org/10.12712/rpca.v17i4.60218

Antonio Lopo Martinez

almartinez@fd.uc.pt

Faculdade de Direito da Universidade de Coimbra-Coimbra/Portugal https://orcid.org/0000-0001-9624-7646

Ana Clara Fonseca do Amaral

anaclara86fonseca@gmail.com

Programa de Pós-Graduação em Controladoria e Contabilidade do Departamento de Ciências Contábeis da Universidade Federal de Minas Gerais, Belo Horizonte/MG Brasil https://orcid.org/0009-0009-4559-3595

Laura Edith Taboada Pinheiro

ltaboada@face.ufmg.br

Programa de Pós-Graduação em Controladoria e Contabilidade do Departamento de Ciências Contábeis da Universidade Federal de Minas Gerais, Belo Horizonte/MG Brasil https://orcid.org/0000-0002-4511-7208

Abstract

In Brazil's complex tax landscape, this study examines the link between tax aggressiveness and auditor switches among B3-listed companies. Analyzing data from 2012 to 2022, we find heightened tax aggressiveness reduces the propensity for voluntary auditor changes. Yet, during crises or under Big 4 auditing, this inclination shifts. These findings spotlight Brazil's unique corporate dynamics, differing from global trends, and emphasize the importance of understanding tax strategies and auditor behaviors within Brazil's unique market context.

Keywords: Independent auditors, tax aggressiveness, auditor switching.

Resumo

No complexo cenário tributário do Brasil, este estudo examina a ligação entre a agressividade fiscal e as trocas de auditor entre as empresas listadas na B3. Analisando dados de 2012 a 2022, constatamos que a maior agressividade fiscal reduz a propensão de mudanças voluntárias de auditor. No entanto, durante crises ou sob a auditoria das Big 4, essa inclinação muda. Essas descobertas destacam a dinâmica corporativa única do Brasil, que difere das tendências globais, e enfatizam a importância de compreender as estratégias tributárias e os comportamentos dos auditores dentro do contexto de mercado único do Brasil.

Palavras-chave: Auditores independentes, agressividade fiscal, troca de auditor.

Introduction

External auditing plays an indispensable role in assuring the quality of information in financial statements, offering insights into a firm's economic health (Lu & Sivaramakrishnan, 2009). This process is not just a formal necessity but a critical aspect that enhances transparency and accountability. Sousa et al. (2021) further emphasize that external auditing significantly mitigates the informational risks that external agents face, leading to more robust trust relationships with stakeholders. In market economies, this can directly translate to more efficient capital distribution, fostering an environment of growth and sustainability.

In Brazil, the prominence of independent auditing emerged as a necessary countermeasure to corporate financial scandals. It's regulated by the CVM (Comissão de Valores Mobiliários, in Portuguese) (Oliveira & Santos, 2007). This regulatory measure stands out not only for its robustness but also for its progressive nature. Notably, Brazil is among the few countries mandating auditor rotation for public companies, a decision deeply rooted in its history of accounting fraud (Azevedo & Costa, 2012). This rotation policy aims to prevent complacency and promote an unbiased evaluation of financial statements.

As economies develop and capital markets expand, the role of auditing intensifies. The exponential growth of firms, especially in their financial dimensions, brings a myriad of complexities that necessitate reliable financial data (Dantas et al. 2017). In this evolving landscape, recent studies such as Martinez and Lessa (2014) indicate that auditors are stricter regarding tax aggressiveness in their initial years, becoming more lenient towards the end of their tenure. This dynamic interplay between auditors and firms raises essential questions, some of which have been addressed by researchers like Almeida et al. (2018) and Niyama et al. (2015), who delved into the issues of mandatory rotation and earnings manipulation, respectively.

National and international literature offer abundant research on this topic, with notable studies highlighting various angles of mandatory auditor rotation and the influence of tax aggressiveness on auditing decisions. For instance, Goh et al. (2013) suggested that high tax avoidance might decrease litigation and reputational risks for auditors. This perspective is further nuanced by studies like Kim et al. (2011), who reveal how CEO behavior may hide tax evasion, making the auditor's task of detecting irregularities even more complex. Furthermore, extreme tax aggressiveness could significantly undermine the reliability of financial statements (Balakrishnan et al., 2019). The multifaceted relationship between tax aggressiveness and auditor fees has been well-studied, leading to crucial insights like the correlation between auditor switching and tax aggressiveness.

Following the CVM Normative Instruction 480/2009, the disclosure of auditor compensation details became mandatory. Recognizing the existing research gaps on tax aggressiveness and independent auditing in Brazil, this study ambitiously examines the influence of tax aggressiveness on the voluntary switching of auditors in public companies listed at B3. Going beyond merely identifying correlations, the findings aim to bridge the informational gap and illuminate the intricate nexus between auditor fees, continuity, and tax aggressiveness, providing both academic and practical contributions.

Building on the insights of Azevedo and Costa (2012) and Goh et al. (2013), this research presents empirical evidence on the relationship between tax aggressiveness and independent auditor voluntary switching, an under-explored domain in national literature. Rather than a monolithic examination, the research is structured into five comprehensive sections: this introduction, followed by substantive discussions on the theoretical framework, meticulous methodology, data-driven results, and thought-provoking concluding remarks. The holistic approach ensures that the study not only adds to the existing body of knowledge but fosters deeper understanding and encourages further inquiry.

Literature review

Determinants of auditor shifting: A deeper dive into independence and tax aggressiveness

The corporate landscape has seen numerous scandals, like the infamous case of Enron, leading regulators to reinforce measures for independence in the relationship between the auditor and the audited institution. One widely adopted practice has been the implementation of mandatory audit firm rotation to enhance auditors' independence (Martinez, Ribeiro & Funchal, 2019; Sousa, Ribeiro & Vicente, 2021). However, this study focuses on tax aggressiveness and its influence on the voluntary shifting of audit firms.

With its history of corporate scandals, Brazil introduced mandatory audit rotation through BACEN (Central Bank of Brazil) (Quevedo and Pinto, 2014). Yet, the trend toward voluntary changes in audit firms in the country warrants attention. Specific regulations, such as CVM normative instructions 308 and 509, define the mandatory rotation period, but businesses often voluntarily choose to change audit firms, possibly influencing their tax strategies.

Scholars like Silva and Bezerra (2010) and Williams and Wilder (2017) have emphasized strengthening independence through audit firm rotation. However, mistakes may be more likely during voluntary changes, especially when the auditor is unfamiliar with the audited company. This underscores the importance of not carrying out mandatory or voluntary rotations over excessively short periods (Gietzmann and Sen, 2002; Al-Nimer, 2015).

Regulation around an independent auditor's tenure has sparked interest in regulatory and academic circles (Williams & Wilder, 2017). Research has also emerged focusing on the implications of voluntary auditor shifts, indicating that these shifts may have nuanced effects on tax aggressiveness and the relationship between auditors and client companies (Jennings, Pany, and Reckers, 2006; Daniels and Booker, 2011; Dopuch, King, and Schwartz, 2001).

Various studies have explored the dynamics of mandatory and voluntary audit rotation in different countries (Gietzmann and Sen, 2002; Said and Khasharmeh, 2014; Al-Nimer, 2015). The literature also points to potential negative effects, such as competitive distortions and inferior technical competence (Arrumada and Paz-Ares, 1997). These findings might provide insights into the complexities of voluntary audit shifts and the corresponding tax strategies.

Reports of the beneficial effects of mandatory rotation are prevalent (Nagy, 2005), but an understanding of the voluntary shifting of audit firms remains a gap in the literature. This research aims to explore the voluntary auditor changes, its motivations, and the possible connection with tax aggressiveness in firms, contributing a unique perspective to the ongoing conversation.

Tax aggressiveness

Tax aggressiveness is characterized by a notable reduction in the taxable base. According to Martinez (2017), this reduction often arises from a spectrum of tax planning techniques, which can span from entirely legal to illicit endeavors. It's essential to understand that the outcomes of such tax planning strategies don't merely impact the financial bottom lines of companies. While Martinez points out that these endeavors can significantly reduce liabilities, the implications of this mitigation are deeply contingent upon the practices' magnitude, intensity, and their legal standing. Importantly, being tax aggressive does not always equate to engaging in abusive or illegal tax practices. However, it's undeniable that challenges emerge when firms intentionally curtail their explicit tax obligations. As Ramos & Martinez (2018) and Martinez & Silva (2019) suggest, this intentional reduction might lead to complex legal and fiscal implications.

In recent years, the topic of tax aggressiveness has ascended to the forefront of scholarly discussions.

This surge in interest isn't merely academic; it's deeply rooted in a myriad of political and economic catalysts. Martinez, Ribeiro, & Funchal (2019) and Ramos & Martinez (2018) emphasize that these driving forces play pivotal roles in shaping corporate choices, especially when it comes to tax considerations. Beyond national boundaries, the global academic community has also shown heightened interest in the intricacies of tax research. Pioneers like Scholes et al. (2014) have redefined the boundaries of the field, emphasizing a holistic approach to tax planning that encompasses not just the direct fiscal elements but also associated costs and stakeholder perspectives. This broader vision is further explored by scholars like Shackelford and Shevlin (2001) and Halon and Heitzman (2010), who delve deeper into the intricate challenges of proficient tax planning, highlighting its multifaceted nature.

In the evolving regulatory environment, which underscores auditor independence and given the complex dynamics surrounding the voluntary shifting of audit firms, it is crucial to delve into potential correlations. At the heart of this exploration is the need to discern if there's a relationship between corporate tax aggressiveness and the choices firms make regarding audit partnerships. More specifically, there's a suggestion that companies with marked tax aggressiveness may have a higher likelihood of voluntarily changing auditors, even without regulatory mandates necessitating such a shift. By probing this potential linkage within Brazil's distinctive milieu, this study seeks not only to illuminate an understudied area but also to contribute empirical insights to the national literature, filling existing knowledge voids.

H1: In the context of Brazil's corporate landscape, higher tax aggressiveness, as measured by the BTD variable, decreases the likelihood of public companies listed on the B3 exchange voluntarily switching their auditors, especially for those audited by the Big 4 firms.

The hypothesis under consideration presents a distinct perspective that veers away from conventional literature, predominantly centered on developed markets. To contextualize this hypothesis, one must first appreciate the unique intricacies of Brazil's corporate and regulatory landscape.

- 1. Brazil's Tax Complexity: Brazil is renowned for its intricate and multifaceted tax regulations. For firms, navigating this maze demands a combination of expertise and strategic maneuvering. Tax aggressiveness becomes a tool for many to optimize their tax liabilities, given the complex system.
- 2. Relationship with Auditors: The hypothesis posits that tax-aggressive firms are less inclined to switch auditors voluntarily. This could be attributed to the trust and understanding developed with auditors who are familiar with the company's tax strategies and can navigate the complexities without raising red flags.
- 3. Big 4 Firms: The specificity concerning Big 4 firms is particularly noteworthy. Globally, the Big 4 are perceived as market leaders in ensuring compliance and have a reputation to uphold. In the Brazilian context, a company audited by a Big 4 firm and engaging in aggressive tax strategies might be hesitant to switch auditors because a new auditor might not be as understanding or might adopt a more conservative approach, raising potential challenges.
- 4. Contrary to Global Trends: Globally, aggressive tax strategies might be viewed with suspicion, potentially leading to more frequent auditor switches as companies might believe that a change might lessen scrutiny. However, the hypothesis suggests the opposite for Brazilian companies. This could be attributed to the complexities of Brazil's tax system, where auditor familiarity might be seen as an asset.
- 5. Regulatory Implications: If this hypothesis holds true, it would have significant implications for regulators in Brazil. It would suggest that the current regulatory environment, combined with market dynamics, is inadvertently promoting stable, long-term relationships between companies

- and their auditors, especially amidst aggressive tax strategies.
- 6. Stakeholder Perception: Another dimension to consider is how stakeholders perceive companies that retain their auditors despite aggressive tax postures. This could either instill confidence due to perceived stability or raise concerns about transparency.

In sum, the hypothesis, though contrary to much of the existing literature, reflects a nuanced understanding of Brazil's distinct corporate milieu. It underscores the importance of context in shaping corporate behaviors and auditor-client dynamics.

Methodology

Sample and variables

The study sample was built with Brazilian public companies listed at B3 from sectors of economy that has sensitivity to external factors, including changes in consumer preferences, technological advancements, and the impacts of global events, such as the COVID-19 pandemic. The analysis period extends from 2012 to 2022, a timeline deliberately chosen to encompass the recent recession influenced by Brazil's political crisis from 2015 to 2016 and the health crisis brought about by COVID-19 between 2020 and 2021. Figure 1 below delineates the variables employed in the research.

For the variable "voluntary switch," we reviewed the reference forms of each company available on the CVM website, specifically in the "Auditors" section. In instances where the switch was due to mandatory rotation, there were no accompanying notes, or the audited company would mention that the change was executed in accordance with CVM's normative instruction No. 308/1999 concerning mandatory rotation. However, for voluntary switches, the justification section provided the reason for the change. This could be based on a decision by the Board of Directors or initiated by the Audit firm itself.

In light of our previous discussions, understanding the nature of auditor shifts—whether they're due to regulatory mandates or voluntary decisions—becomes imperative. Given the historical backdrop of financial scandals and the subsequent regulatory response, it's crucial to discern the motivations behind these shifts, as they may significantly influence tax strategies and auditor-client dynamics.

Figure 1
Description of the variables

Variable	Nomenclature	Description	References	Justification
Book - Tax - Difference	BTD	Fiscal aggressiveness corresponds to a sharp reduction in the tax base	Martinez, Lessa, & Moraes (2014); Martinez & Ramalho (2017); Moraes et al. (2021); Chen et al. (2010); Dunbar et al. (2010); Hanlon & Heitzman (2012) Hanlon & Slemrod (2009)	It is estimated that the more significant the resulting difference between accounting & taxable profit, the higher the level of tax aggressiveness
Effective Tax Rate	ETR	It is the effective tax rate used to measure the actual tax burden of institutions	Scholes et al. (2014); Martinez & Silva (2019); Chen et al. (2010); Hanlon & Heitzman (2012)	It is estimated that the higher the ETR value, the higher the level of tax aggressiveness of the company
Degree of indebtedne ss	END	Measured by the ratio of gross total debt to equity	Almeida, Carvalho & Braunbeck (2018)	It is estimated that if the company has a high debt ratio, it has a better chance of reducing the tax burden
Return on assets	ROA	Return on total assets	Moraes et al. (2021)	It is estimated that the higher the rate of return on assets, the lower the tax aggressiveness

Size	LnSize	The logarithm of a company's total assets		The larger the firm's size calculated by Ln_Assets, the smaller the voluntary exchange of the firm and the less tax aggressive it would be
Big Four	Big4	Dummy variable that receives one of Big Four audit companies and 0 otherwise	Stigler (1961); Hartmann & Moraes (2020); Braunbeck (2010)	The number of waivers of audit firms of the <i>Big Four</i> group is higher than the others due to this group's reputation regarding tax aggressiveness in the market
Economic crisis	CRISIS	The dummy variable receives 1 in the crisis period and 0 otherwise		The higher the economic downturn, the more aggressive the fiscal stance – with years 2015, 2016, 2020 and 2021., being assigned a value 1.
Valuation	VALUE	Corresponds to the market value of companies	Moares et al. (2021)	The more tax aggressive the company, the lower its market value
voluntary switch	VOL_S	Dummy variable that receives one if there was a voluntary change of auditor and 0 otherwise		That is the dependent variable

Logistic regression model

This research leverages the econometric approach of Logistic Regression to assess the impacts of tax aggressiveness on the likelihood of resignation by independent auditors for public companies listed at B3. The adoption of this model aligns with the objective of our study due to the dichotomous nature of the response variable.

Logistic regression is designed to calculate the probability of a specific event's occurrence based on regressor variables. A distinguishing feature of this method is that the response variable is categorical, taking a value of 1 when the event of interest occurs, and 0 otherwise (Greene, 2003). Given the temporal and spatial dimensions of the sampled data, the logistic regression model for panel data is necessary. There are three potential approaches in this scenario: Pooled logit, Fixed Effects, and Random Effects (Baltagi, 2005).

The model's goodness of fit is represented by its ability to correctly classify instances. The overarching significance of the model is determined through the LR test. Under the null hypothesis H0, this test assumes that the estimated parameters lack general importance. Sensitivity and specificity refer to the model's accuracy regarding the event of interest and the proportion of correct classifications for the group marked as 0, respectively. The Receiver Operating Characteristic (ROC) curve evaluates the model's fit, where an optimal model would have an area under the curve close to 1 (Wooldridge, 2010).

It's pertinent to highlight that the Pseudo R² metric, often associated with logistic regression, isn't viewed as an apt measure of fit when validating the proposed model (Gujarati, 2000).

Within this framework, the logistic regression model employed in this research is detailed in Equation 1

$$\begin{aligned} VOL_S_{it} &= \beta_1 TAX_AG_{it} + \beta_2 LEV + \beta_3 ROA_{it} + \beta_4 SIZE_{it} + \beta_5 BIG4_{it} + \beta_6 CRISIS_{it} \\ &+ \beta_7 VALUAT_{it} + \beta_8 BIG4_{it} * TAX_AG_{it} + \beta_9 CRISIS_{it} * TAX_AG_{it} + u_i \end{aligned}$$

Where:

VOL_S: dummy variable that receives one if there was an auditor change and 0 otherwise;

TAX_AGR: a proxy for tax aggressiveness (BTD and ETR);

END: degree of indebtedness;

ROA: return on total assets; SIZE: logarithm of total assets;

BIG4: dummy variable that receives one of Big Four audit company and 0 otherwise;

CRISIS: dummy variable that receives 1 in a crisis period and 0 otherwise;

VALUAT: valuation; vit: model error term; and ui: unobserved heterogeneity.

Analysis and discussion of results

Descriptive statistics

Table 1 presents the results of the descriptive statistics of the variables considered in the research, segregated concerning the absence or not of voluntary exchange.

TABLE 1Descriptive Statistics of Variables Based on Voluntary Exchange Presence

Descriptive Statistics of Variat	oles Based on Volu	ntary Exchang	ge Presence		
	ABSENCE (OF VOLUN'I	TARY SWITCH		
STATISTICS	ROA	VALUAT	INDEBTEDNESS	BTD	ETR
Median	2.522259	287563.5	0.3073028	9785.294	0.0000
Average	-2.108656	3812479	1741.286	50499.39	0.3695568
Standard deviation	150.0292	1.20E+07	14289.36	371013.7	7.940263
Minimum	-1459.898	2131.796	-36129	-2379618	-59.08831
Maximum	1549.217	1.61E+08	171668	1834706	1.13E+02
Coefficient of variation	7114.92%	314.33%	820.62%	734.69%	2148.59%
Number of observations	312	312	311	312	312
	PRESENCE	OF VOLUN	TARY SWITCH		
STATISTICS	ROA	VALUAT	END	BTD	ETR
Median	1.581044	1940155	.7542653	3382.353	0.00E+00
Average	1.349137	5325936	36.05735	1791.617	0.0101745
Standard deviation	9.312813	7582155	157.9286	468303.7	5.74E-01
Minimum	-28.82792	17311.95	-1.922916	-1647150	-1.268285
Maximum	20.85531	2.84E+07	707	734791.2	1.463241
Coefficient of variation	690.28%	142.36%	437.99%	26138.61%	5636.91%
Number of observations	20	20	20	20	20
MAN	N WHITNEY TI	EST OF DIF	FERENCES OF ME	ANS	
Z-statistics	0.198	-1.848*	-1.428	0.353	0.339

Note: *P-value<0.10.

Table 1 offers a detailed depiction of the data, highlighting the variability in mean values that underscores the diverse characteristics of the sample in question. This diversity in values might reflect differences in company sizes and sectors.

For companies without a voluntary switch (Absence of Voluntary Switch):

- 1. ROA (Return on Assets):
 - Median is positive at 2.52, but the average is negative at -2.11, indicating skewed data.
 - The data for ROA varies widely given the high standard deviation of 150.03 and a coefficient of variation of 7114.92%.

2. VALUAT (Company Valuation):

- Median valuation is 287,563.5 units, and the average is significantly higher at 3,812,479 units.
- The data varies widely, as indicated by the large standard deviation and coefficient of variation.

3. INDEBTEDNESS:

- The data varies significantly, with an average of 1741.29 and a median of 0.31.
- Again, the coefficient of variation is high, indicating substantial variability.

4. BTD (Book-Tax Differences):

- Median is 9785.29 units, while the average is significantly higher at 50,499.39 units.
- The data has a large spread, shown by the high standard deviation and coefficient of variation.

5. ETR (Effective Tax Rates):

- Median is 0, with an average at 0.37, showing some level of skewness.
- The standard deviation and coefficient of variation indicate significant variability.

For companies with a voluntary switch (Presence of Voluntary Switch):

1. ROA:

- Both median and average are positive, with values of 1.58 and 1.35, respectively.
- Variability exists, but it is narrower compared to the first group.

2. VALUAT:

- Median and average are 1,940,155 units and 5,325,936 units respectively.
- There is significant variability, but it is narrower compared to the first group.

3. INDEBTEDNESS:

• The data is less varied with an average of 36.06 and a median of .75.

4. BTD:

- Median is 3382.35 units, with an average of 1791.62 units.
- There's a high variability, particularly notable in the coefficient of variation.

5. ETR:

- Median is 0, and average is close to 0 at 0.01.
- There's significant variability in the data.

Mann Whitney Test of Differences of Means:

The Mann Whitney test examines whether the means of the two groups are statistically different.

- For VALUAT, the Z-statistic is -1.848 with a p-value less than 0.10, indicating that there's a significant difference in the means of VALUAT between the two groups at the 10% significance level. Specifically, companies with a voluntary switch have a lower valuation on average compared to those without a voluntary switch.
- For other variables (ROA, END, BTD, ETR), the Z-statistics aren't significant at common significance levels (e.g., 0.10, 0.05, or 0.01), suggesting no significant difference in means between the two groups for these metrics.

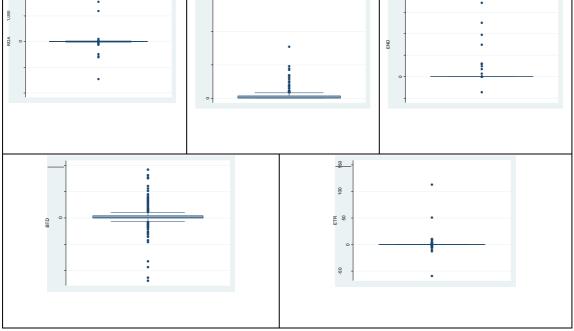
The table 1 presents an exploration of key company metrics based on their auditor switching behavior. Only VALUAT shows a statistically significant difference in means between companies with and without a voluntary auditor switch. A crucial takeaway from Table 1 is the marked difference in the average valuation (VALUAT) of companies. Contrary to initial impressions, companies that have undergone voluntary switches appear to have a higher average valuation compared to those without such switches. This could indicate specific operational, strategic, or market factors affecting these groups differently.

Although the differences in metrics associated with tax aggressiveness weren't statistically significant, their potential relevance should not be understated. Further in-depth studies, possibly employing methods like multiple regression analysis, could reveal nuanced correlations or patterns that are not immediately evident.

Drawing from the insights by Moraes et al. (2021), we observe that larger companies tend to be more transparent in their disclosures. Such transparency often stems from both the ample resources at their disposal and the expectations of their stakeholders. In contrast, smaller entities might find it more challenging to bear the costs of such disclosures, influencing their financial decisions and disclosure practices. The relationship between a firm's size and its approach to disclosure can be deduced from the presented average values, especially when considering the presence or absence of voluntary auditor switches.

FIGURE 2 Box plots of the variables analyzed in the study.

ISSN 1982-2596



Upon examining Figure 2, it's evident that the analyzed variables contain outliers. To address these discrepancies and ensure the robustness of the subsequent analyses, the outliers in the sample were treated using Winsorization at the 1% level.

Regression test

Table 2 provides the results of the logistic regression model applied to the dataset. In simple terms, logistic regression is a statistical method used to understand the relationship between a set of variables and a binary outcome (like 'yes' or 'no'). In our context, we're trying to determine the likelihood of a particular event happening based on the data we have.

The LR test in our analysis confirms that our model is statistically significant, meaning that the BTD variable related to the phenomenon we are studying do have some influence on the outcome. A "cut-off" value of 0.06 helps us determine when an event is likely to occur. If the computed probability is above this threshold, the event is predicted to happen; if below, it's not.

The Goodness-of-Fit test and the ROC curve, which has an area value of 81.91%, are both indicators that the model is doing a good job at predicting outcomes. The higher the ROC value, the better the model's predictive power.

Lastly, the sensitivity (85%) tells us how well the model correctly identifies true positives, while the specificity (67%) indicates how well the model correctly identifies true negatives. The overall model accuracy, combining both correct predictions of positives and negatives, is 68.15%.

Table 2
Logistic regression models

	LOGISTIC REGRESSION MODELS		
Variables	MARGINAL EFFECT	LOGIT	
LnSIZE	0.0205**	0.6815**	
ROA	0.0004	0.0144	
VALUAT	-0.0000	-0.00000002	
END	-0.0000	-0.00008	
BTD	-0.0000003*	-0.000009**	
ETR	-0.0022	-0.0742	
CRISIS	-0.0250	-0.8936	
BIG4	-0.0235	-0.7329	
CRISIS*BTD	0.000001*	0.000003**	
CRISIS*ETR	0.0028	0.0944	
BIG*BTD	0.0000002	0.000008*	
BIG*ETR	-0.00004	-0.0015	
CONSTANT	-	-11.89***	
VALID	ATION STATISTICS OF THE PROPOSED	MODEL	
Numb	er of observations	327	
M	13.62%		
Sensit	85.00%		
Specif	67.10%		
Ov	68.20%		
The are	81,91%		
G	319.88		
	20.59**		

Note: Significances considered *** 1%; ** 5%; *10%.

Table 2 meticulously delineates the findings of our logistic regression models, drawing attention to the drivers underpinning companies' choices to voluntarily switch auditors.

Chief among these factors is the company's size. The LnSIZE variable indicates that with each unit rise in the natural logarithm of size, the probability of a voluntary auditor switch ascends by 2.05%, a relationship that's significant at the 5% level. This resonates with the conclusions of Moraes et al. (2021) and Balakrishnan et al. (2018), positing that larger entities foster consistent auditor relationships to enhance their market standing. Conversely, our data suggests that these mammoth entities might voluntarily consider switching auditors, countering the prevailing notion that firms primarily aim to curtail tax contingencies.

A salient insight emerges concerning BTD (Book-to-Tax Differences). The BTD coefficient in the table is negative, suggesting an inverse relationship: the more aggressive a firm's tax strategy (higher BTD), the less probable it is to opt for a voluntary auditor switch. This underscores the idea that heightened tax aggressiveness could be linked to stable auditor relationships. However, the dynamics are nuanced in the context of a crisis or when the company is audited by one of the Big 4. The positive coefficients of CRISISBTD and BIGBTD indicate that during turbulent times or when audited by the Big 4, an increase in BTD might amplify the chances of an auditor change. This infers that amidst challenges or under the watch of elite auditing firms, companies might adjust to internal pressures or external demands, potentially resulting in a heightened inclination towards seeking fresh audit engagements.

Furthermore, the BTD's influence on tax frameworks shouldn't be underestimated. Hanlon & Slemrod's (2009) apprehensions about intricate tax reduction strategies find echoes in our results, reinforcing Martinez & Lessa (2017)'s stance that auditors might view pronounced tax aggressiveness as a potential hazard.

The 'BIG4*BTD' interaction presents another layer of insight, underscoring that firms under the Big4's umbrella, upon witnessing an increase in BTD, have a heightened predisposition to switch auditors voluntarily. This buttresses Sitgler's (1961) hypothesis, suggesting that partnering with a Big4 auditor acts as a testament to unparalleled audit quality.

Logistic regression model demonstrates a modest explanatory power, with McFadden's R² at 13.62%. The model exhibits strong predictive capabilities, correctly forecasting positive outcomes 85% of the time and negative outcomes 67.10% of the time, as evidenced by an 81.91% area under the ROC curve. Notably, the model's overall fit is commendable at 68.20%, and validation tests further corroborate its superiority over a model devoid of predictors.

In wrapping up, our results bolster the insights of Hartmann and Martinez (2017), who argue that auditors, particularly those affiliated with prestigious firms, tread cautiously when it comes to non-compliance disclosures. Complementing this is Braunbeck's (2010) argument, emphasizing the deftness of the Big4 in transmitting pivotal data whilst staunchly maintaining their autonomy.

Conclusions

This study, set against Brazil's complex tax and corporate auditing landscape, has revealed intriguing insights about the interplay between tax aggressiveness and auditor switching behaviors among B3-listed companies. Contrary to prevalent global trends, our findings indicate that heightened tax aggressiveness in Brazilian firms correlates with a decreased propensity for voluntary auditor switches. This phenomenon reflects the unique intricacies of Brazil's corporate and regulatory environment, diverging from patterns observed in other global markets.

External auditing serves as more than just a procedural requirement; it acts as a vital instrument to alleviate the informational uncertainties faced by external stakeholders of a company (Sousa et al. 2021).

The emphasis on auditor independence has grown stronger, especially after several public scandals involving audited firms have come to light. These instances led regulators to champion the mandatory rotation of audit firms, aiming primarily to fortify their independence and maintain impartiality (Martinez et al., 2019; Sousa et al., 2021). The deductions by Goh et al. (2013) that a company's aggressive tax stance can increase the propensity of an independent auditor's departure enrich this multifaceted dynamic.

In Brazil, where the regulatory framework and market dynamics are distinct, tax-aggressive companies seem to foster stable, long-term relationships with their auditors. This finding challenges the traditional narrative which often associates tax aggressiveness with evasion or financial statement manipulation, as highlighted by Hanlon & Slemrod (2009). Instead, our study suggests that in Brazil, aggressive tax strategies might not necessarily signal non-compliance or ethical breaches.

The study also sheds light on how crisis situations or audits by Big 4 firms influence the auditor-client relationship. In these contexts, increased tax aggressiveness appears to consolidate rather than disrupt auditor-client ties. This could be due to a blend of factors including the auditor's in-depth understanding of complex tax strategies and the company's need for consistent auditing in turbulent times.

Our findings suggest several avenues for future research. Sector-specific analyses within the B3 index could provide further insights into the relationship between tax aggressiveness and auditor switching. Additionally, exploring how company size influences tax behavior in Brazil could uncover dynamics unique to the Brazilian market.

In conclusion, this research offers a new perspective on the relationship between tax aggressiveness and auditor switching in Brazil. By highlighting the peculiarities of the Brazilian corporate environment, this study contributes to the broader academic discourse on corporate ethics, transparency, and the evolution of auditing practices. It underscores the need for a contextual understanding of corporate behaviors and auditor-client dynamics, especially in a market as complex and unique as Brazil.

References

Almeida, P. R., de Carvalho, L. N. G., & Bruanbeck, G. O (2021). An Optimal Timeframe for Audit Firm Rotation in Brazil.

Al-Nimer, M. (2015). Factors affecting mandatory audit rotation: evidence from Jordan. International Journal of Economics and Finance, 7(6), 51-59.

Arrunada, B., & Paz-Ares, C. (1997). Mandatory rotation of company auditors: A critical examination. International review of law and economics, 17(1), 31-61.

Azevedo, F. B., & Costa, F. M. D. (2012). Effect of audit firm switching on earnings management in Brazilian publicly traded companies. RAM. Revista de Administração Mackenzie, 13, 65-100.

Balakrishnan, K., Blouin, J. L., & Guay, W. R. (2019). Tax aggressiveness and corporate transparency. The Accounting Review, 94(1), 45-69.

Baltagi, B. H. (2005). Econometric analysis of panel data 3rd Edition England JW &Sons.

Braunbeck, G. O. (2010). Determinants of independent audit quality in Brazil. São Paulo, 2010. Thesis (Ph.D. in Controllership and Accounting) University of São Paulo, São Paulo.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? Journal of financial economics, 95(1), 41-61.

Daniels, B. W., & Booker, Q. (2011). The effects of audit firm rotation on perceived auditor independence and audit quality. Research in Accounting Regulation, 23(1), 78-82.

Dantas, J. A., Barreto, I. T., & de Carvalho, P. R. M. (2017). Report with modification of opinion: risk for the auditor? Revista Contemporânea de Contabilidade, 14(33), 140-157.

Dopuch, N., King, R. R., & Schwartz, R. (2001). An experimental investigation of retention and rotation requirements. Journal of Accounting Research, 39(1), 93-117.

Gietzmann, M. B., & Sen, P. K. (2002). Improving auditor independence through selective mandatory rotation. International Journal of Auditing, 6(2), 183-210.

Goh, B. W., Lim, C. Y., Shevlin, T. J., & Zang, Y. (2013). Tax aggressiveness and auditor resignation. Available at SSRN 2277336.

Greene, W. H. (2003). Econometric analysis. Pearson Education India.

Hanlon, M.; Heitzman S. (2010). A review of tax research. Journal of Accounting and Economics, v. 50, n. 2-3, p. 127-178, 2012.

Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. Journal of Public Economics, 93(1-2), 126-141.

Hartamann C. F., & Martinez, A. L. (2020). Tax aggressiveness and the Big4 audit firms. REUNIR: Revista de Administração, Contabilidade e Sustentabilidade., 10(3), 37-46.

Jennings, M. M., Pany, K. J., & Reckers, P. M. (2006). Strong corporate governance and audit firm rotation: Effects on judges' independence perceptions and litigation judgments. Accounting Horizons, 20(3), 253-270.

Kim, J. B., Li, Y., & Zhang, L. (2011). Corporate tax avoidance and stock price crash risk: Firm-level analysis. Journal of Financial Economics, 100(3), 639-662.

Lu, T., & Sivaramakrishnan, K. (2009). Mandatory audit firm rotation: Fresh look versus poor knowledge. Journal of Accounting and Public Policy, 28(2), 71-91.

Martinez, A. L., & Lessa, R. C. (2014). The effect of tax aggressiveness and corporate governance on audit fees evidence from Brazil. Journal of Management Research, 6(1), 95.

Martinez, A. L. Ribeiro, A. C., & Funchal, B. (2019). Sarbanes Oxley Act and Taxation: A study of the effects on the tax aggressiveness of Brazilian firms. Contabilidade Vista & Revista, 30 (1), 27-42.

Martinez, A. L. (2017). Tax aggressiveness: a survey of the literature. Journal of Accounting Education and Research, 11, 106-124.

Martinez, A. L., & Ramalho, V. P. (2017). Tax aggressiveness and corporate sustainability in Brazil. Revista Catarinense da Ciência Contábil, 16(49).

Moraes, G. S. D. C., Nascimento, E. M., Soares, S. V., & Primola, B. F. L. (2021). Tax avoidance and tax disclosure: A study in Brazilian publicly traded companies. Revista Contemporânea de Economia e Gestão, Fortaleza - CE, 19(13), 197-216.

Nagy, A. L. (2005). The case of Arthur Andersen is mandatory audit firm turnover, financial reporting quality, and client bargaining power. Accounting Horizons, 19(2), 51-68.

Naser, K., & Nuseibeh, R. (2007). Determinants of audit fees: empirical evidence from an emerging

economy. International Journal of Commerce and Management, 17(3), 239-254.

Niyama, J. K., Rodrigues, A. M. G., & Rodrigues, J. M. (2015). Some reflections on creative accounting and international accounting standards. Revista Universo Contábil, 11(1), 69-87.

Oliveira, A. Q. D., & Santos, N. M. B. F. D. (2007). Audit firm rotation: the Brazilian experience and market findings. Accounting & Finance Journal, 18, 91-100.

Ramos, M. C., & Martinez, A. L. (2018). Tax aggressiveness and the redoing of financial statements in Brazilian companies listed on B3. Pensar Contábil, 20(72).

Rodrigues, M. A., Martinez, A. L. Delay in the Publication of Accounting Statements and Tax Aggressiveness. Revista Pensar Contábil, v. 20, n. 71, p. 14-23, 2018.

Silva, H. M.S, & de Souza, P. V. S. (2018). Determinant Factors of Independent Audit Fees of Brazilian Publicly Held Companies Listed on B3. Accounting Journal of the master's in accounting sciences of UERJ, 23(3), 3-17.

Scholes, M. S., Wolfson, M. A., Erickson, M., Maydew, E., & Shevlin, T. (2014). Taxes & business strategy. Upper Saddle River, NJ: Prentice Hall

Silva, J. O. D., & Bezerra, F. A. (2010). Analysis of earnings management and audit firm rotation in publicly traded companies. Revista Brasileira de Gestão de Negócios, 12, 304-321.

Sousa, A. M. D., Ribeiro, A. M., & Vicente, E. F. R. (2021). Impact of audit switching on financial reporting comparability. Accounting & Finance Journal, 32, 413-428.

Shackelford, D. A., & Shevlin, T. (2001). Empirical tax research in accounting. Journal of accounting and economics, 31(1-3), 321-387.

Stigler, G. J. (1961). The economics of information. Journal of political economy, 69(3), 213-225.

Williams, L. T., & Wilder, W. M. (2017). Audit firm perspective on audit firm rotation and enhancing independence: evidence from PCAOB comment letters. Current Issues in Auditing, 11(1), A22-A44.

Wooldridge, J. M. (2010). Econometric analysis of cross-section and panel data. MIT Press.