Book-Tax Conformity and Earnings Persistence: Moderating effects of Earnings Management and Tax Aggressiveness

Guilherme Otávio Monteiro Guimarães [1]
Marcelo Alvaro da Silva Macedo [2]

▪ Received: 02/28/2024 ▪▪ Approved: 08/09/2024

ABSTRACT

The degree of association between accounting and tax systems in a country, or its book-tax conformity, fuels a debate about the effect of this variable on the quality of accounting information, with positions both in favor of and against conformity. There is a gap in the literature regarding the addition of other elements not previously considered in the relationship between book-tax conformity and the quality of accounting information, which could enhance the understanding of the effects of conformity. This study evaluates and analyzes the possible moderating effect of earnings management and tax aggressiveness on the relationship between book-tax conformity and earnings persistence. The multiple regression technique was employed on an unbalanced panel of non-financial companies by country-year, encompassing 35 countries from 2010 to 2020. The results indicate that the association between aggressive practices (earnings management or tax aggressiveness) and the tax accounting environment (book-tax-conformity) impairs earnings persistence. The findings provide new evidence on the relationship between book-tax conformity and earnings persistence in environments with higher or lower incidences of discretionary practices, indicating greater risks to the quality of accounting information in countries with high conformity.

Keywords: Book-tax conformity. Earnings Persistence. Discretionary Practices.

Book-Tax Conformity e Persistência do Lucro: Efeitos moderadores do Gerenciamento de Resultados e da Agressividade Tributária

RESUMO

[1] PhD in Accounting from the Federal University of Rio de Janeiro (UFRJ), Brazil. Graduate Program in Accounting of UFRJ. Address: Av. Pasteur, 250 - sala 250. Urca. Rio de Janeiro-RJ CEP 22290240, Brazil. Phone: +55 (21) 39385262. E-mail: gomguimaraes@gmail.com. https://orcid.org/0000-0002-4999-5534

[2] PhD in Production Engineering from the Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering of the Federal University of Rio de Janeiro (COPPE-UFRJ), Brazil. Associate professor of the UFRJ at the Accounting Department of the School of Administration and Accounting - FACC. Address: Av. Pasteur, 250 - sala 250. Urca. Rio de Janeiro-RJ CEP 22290240, Brazil. Phone: +55 (21) 39385262. E-mail: malvaro@facc.ufrj.br. https://orcid.org/0000-0003-2071-8661

O maior ou menor grau de associação entre os sistemas contábil e tributário, ou o book-tax conformity (BTC) de cada país, fomenta um debate sobre o efeito dessa variável na qualidade das informações contábeis, com posições a favor e contrárias à conformidade. Existe uma lacuna para a adição de outros elementos não considerados na relação entre BTC e qualidade das informações contábeis que aumentem a compreensão dos efeitos da conformidade. O presente estudo tem como objetivo testar e analisar o possível efeito moderador dos níveis de gerenciamento de resultados (EM) e de agressividade tributária (TAG) na relação entre a Book-Tax Conformity (BTC) e a persistência do lucro. Foi empregada a técnica de regressão múltipla em um painel não balanceado de empresas não financeiras por país-ano, englobando 35 países no período de 2010 a 2020. Os resultados mostram que a associação entre práticas agressivas (EM ou TAG) e o ambiente contábil tributário (BTC) prejudicam a persistência do lucro. O estudo oferece novas evidências sobre a relação entre a BTC e a persistência do lucro em ambientes de maior ou menor incidência de práticas discricionárias, indicando que há maiores riscos para a qualidade da informação contábil em países de alta BTC.

Palavras-Chave: Book-tax Conformity. Persistência do Lucro. Práticas Discricionárias.

1 INTRODUCTION

Book-tax conformity (BTC) has been the focus of significant academic debate regarding its impact on earnings quality. Discussions about the different levels of association between the taxable base and accounting profit gained momentum in the United States following major financial scandals in the early 2000s. Desai (2005) thoroughly described three major investigations into earnings manipulation – Enron, Tyco, and Xerox – highlighting how the combination of earnings management (EM) and tax aggressiveness (TAG) ultimately eroded both the taxable base and market confidence in accounting statements. Faced with these events, the market, policymakers, and academia sparked discussions on whether a higher BTC could benefit both markets and governments (Hanlon, Laplante, & Shevlin, 2005; Hanlon & Heitzman, 2010).

Advocates for higher BTC argue that institutional models with less conformity allow those responsible for accounting choices more openings to opportunistically manage profits upward while simultaneously engaging in aggressive tax reduction practices. This creates a dual risk: biased financial information due to EM presenting profit inflation, which could harm investors, and increased tax evasion, undermining government revenue (Desai, 2005; Whitaker, 2005; Desai & Dharmapala, 2009).

Those sustaining that higher BTC is beneficial for both the market and the government posit that executives would have no incentives to minimize the tax burden, as doing so would reduce reported profits and, consequently, dividends. Additionally, executives would be less likely to engage in intensive earnings management to inflate profits, as this would result in higher tax payments (Desai, 2005; Desai & Dharmapala, 2009). Furthermore, higher BTC reduces compliance costs (Whitaker, 2005; Desai & Dharmapala, 2006). Whitaker (2005) highlights

additional advantages of higher BTC, including lower tax administration costs, improved political economy, and enhanced perceptions of fairness in tax law enforcement. Finally, advocates of higher conformity argue that earnings reported in this context naturally curtail managers' discretionary behavior, improving the reliability of financial information and enabling tax authorities to exercise greater oversight, as supported by studies from Desai (2005), Whitaker (2005), and Desai and Dharmapala (2009).

On the other hand, critics of higher BTC argue that aligning accounting and tax measures diminishes the informational value of accounting profits, which no longer faithfully reflect economic phenomena (Hanlon, Laplante, & Shevlin, 2005; Hanlon & Shevlin, 2005; Hanlon, Maydew, & Shevlin, 2008). Shackelford (2006) further contends that greater conformity facilitates legislative and political interference in accounting standards, undermining the quality of information reported to investors. Advocates for lower BTC assert that accounting information, which relies on mechanisms to ensure the faithful representation of economic events, loses quality under high BTC, negatively impacting capital markets and impairing decision-making. This occurs when accounting practices are subordinated to state requirements inherent in a high BTC model. Hanlon, Laplante, and Shevlin (2005), Hanlon and Shevlin (2005), and Hanlon, Maydew, and Shevlin (2008) argue that higher BTC reduces earnings quality, ultimately harming investors who depend on accurate information for capital allocation decisions. Thus, greater conformity primarily serves the interests of tax authorities, often at the expense of investors' need for useful and reliable financial information.

In response to this theoretical discussion, empirical research in accounting, particularly in the area of taxes and their connections to the disclosed information, has recognized the importance of quantitatively examining the relationship between BTC and proxies for earnings quality. This approach seeks to understand how a country's institutional arrangements regarding tax norms influence the quality of accounting information. However, the findings have not consistently supported either side of the theoretical debate.

Atwood, Drake, and Myers (2010) demonstrated a negative relationship between BTC and earnings persistence (EP), suggesting that higher BTC leads to lower EP and a weaker association between current earnings and future cash flows, ultimately resulting in lower-quality accounting information. Similarly, Blaylock, Gaertner, and Shevlin (2015) found that high levels of BTC do not correspond to reduced EM, as their results indicated greater EM in firms from countries with higher conformity rates.

Watrin, Ebert, and Thomsen (2014) identified a higher likelihood of upward EM in systems with lower BTC, which compromises the quality of accounting information. Furthermore, studies by Atwood et al. (2012) and Tang (2015) indicated that high levels of BTC are associated with reduced EM practices and less TAG.

Despite these findings, a gap remains in incorporating additional elements that might influence the relationship between BTC and the quality of accounting information. This study addresses this gap by using EP as a proxy for accounting information quality, as suggested by Atwood, Drake, and Myers (2010).

According to Dechow, Ge, and Schrand (2010), EP provides investors with more reliable information about future cash flows. Francis, LaFond, Olsson, and Schipper (2004) similarly emphasize that EP enhances predictability and reduces risks in valuation processes.

Several factors influence EP, including EM and TAG. While EM is a proxy for information quality, research has also explored its influence on EP. Studies such as Dechow and Dichev (2002), Rajgopal and Venkatachalam (2011), Reis, Brunozi Jr., and Lima (2018), and Li (2019) reveal that discretionary EM practices negatively affect EP. Similarly, TAG has been shown to have adverse effects on EP in studies by Hanlon (2005), Tang and Firth (2011), Martinez and Passamani (2014), and Brunozi Júnior, Kronbauer, Alves, and Martinez (2019). However, Blaylock, Shevlin, and Wilson (2011) highlight the positive effects of certain discretionary TAG practices on EP.

The evidence suggests that while higher or lower BTC levels can positively affect EP, these effects may be reduced in the presence of elevated EM and vary with the degree of TAG in the environment.

In summary, empirical studies indicate that (a) BTC can either benefit or harm earnings quality, (b) discretionary EM compromises earnings quality, and (c) discretionary TAG can have either positive or negative effects on earnings quality. These findings raise new questions, as the inconsistent relationship between conformity and persistence may stem from overlooking other incentives not directly governed by BTC while focusing on discretionary EM and TAG practices.

The motivation for this research lies in the perception – supported by various studies on the relationship between BTC and EP, as well as between EP and opportunistic practices – that the influence of TAG practices and discretionary EM practices on the relationship between the tax accounting environment and the quality of accounting information remains underexplored.

In other words, discretionary practices within the relationship between BTC and EP – whether based on taxable income or accounting results – may produce effects that are not yet fully understood. A third variable, such as EM or TAG levels, may exert a moderating effect on the relationship between BTC and EP. Thus, this study poses the following research question: What is the effect of EM and TAG levels on the relationship between BTC and EP?

Therefore, this study analyzes the moderating effects of EM and TAG levels within the relationship between BTC and EP. It examines how the average EM and TAG levels in a given jurisdiction (country) influence the relationship between BTC and EP within that same environment.

The analysis was conducted using statistical multiple regression tests on an unbalanced panel of companies, categorized by country-year – given that BTC is a variable measured at the jurisdictional level (country) – encompassing 35 countries. The results demonstrate that both EM and TAG practices negatively affect EP when interacting with BTC.

This study contributes primarily by offering evidence that heightened BTC presents non-negligible risks, as high EM and TAG levels undermine EP in environments with greater conformity. These findings offer valuable insights for

investors, regulators, and governments as they bring new evidence regarding the relationship between BTC and EP in environments with higher or lower incidences of discretionary EM and TAG practices. For investors, the findings enhance understanding of how environmental factors influence EP. For regulators, the study sheds light on the combined effects of legal-institutional settings and discretionary practices on the quality of accounting information. Finally, for governments, the findings offer a clearer perspective on the implications of tax policy decisions for BTC and its impact on economic environments.

2 THEORETICAL FRAMEWORK

According to Dechow et al. (2010), earnings persistence (EP) provides higher-quality information about future cash flows. This conclusion is supported by Kolozsvari and Macedo (2016), who demonstrate that such information allows for a better assessment of future cash flows compared to entities without persistent earnings. Consequently, the predictability associated with EP reduces risks and increases asset value (Francis et al., 2004). Considering these attributes, the variable EP was selected as the dependent variable in this study.

A series of empirical studies have been conducted to analyze the relationship between book-tax conformity (BTC) and the quality of accounting information. Ali and Hwang (2000) observed a negative relationship between BTC and the relevance of accounting information, and Burgstahler et al. (2006) found that higher BTC is associated with more earnings management (EM) in privately held companies and less EM in listed companies.

Atwood et al. (2010) demonstrated that high levels of BTC negatively affect EP persistence and its ability to estimate future cash flows. Blaylock et al. (2015) provided evidence of increased EM in countries with higher BTC rates. These findings stress the disadvantages of BTC.

The study by Atwood et al. (2012) found that lower BTC levels are associated with higher TAG. Their results indicated that entities are less tax-aggressive in environments of higher BTC. Watrin et al. (2014) analyzed the relationship between BTC and EM, finding that companies in more conforming environments exhibited higher levels of EM aimed at reducing profits in consolidated statements compared to companies in less conforming countries. This finding supports the case for increased BTC.

Tang (2015) identified an inverse relationship between tax-aggressive practices and BTC, showing that higher levels of BTC are associated with less EM practices and reduced TAG. Tang's findings align with those of Atwood et al. (2012) and corroborate the predictions of Desai (2005) and Watrin et al. (2014), indicating that higher BTC positively impacts the quality of accounting information. Nevertheless, the contrasting results of Atwood et al. (2010) and Blaylock et al. (2015) – which suggest an inverse relationship between conformity and the quality of accounting information – cannot be overlooked.

Other studies have further contributed to this discussion. A meta-analysis by Evers et al. (2016) found a negative relationship between BTC and both EM and

TAG practices. Additionally, Braga (2017) observed that after the adoption of IFRS, tax avoidance increased more significantly in firms in countries with higher BTC.

Regarding the relationship between EM and EP, Dechow and Dichev (2002) demonstrated that high levels of EM through accruals are associated with lower EP. Rajgopal and Venkatachalam (2011) found a correlation between EM and the deterioration in the quality of accounting information over time. Reis et al. (2018) identified a negative relationship between EM practices through discretionary accruals and EP. Finally, Li (2019) confirmed an inverse relationship between real earnings management and EP. Collectively, these studies indicate that EM negatively impacts the quality of accounting information, particularly regarding EP.

Regarding the relationship between TAG and EP, two lines of research have emerged: (i) studies indicating negative impacts consistent with findings for EM, and (ii) studies suggesting positive impacts. Research by Hanlon (2005) and Martinez and Passamani (2014) on companies with significant book-tax differences, as well as studies by Tang and Firth (2011) and Brunozi Junior et al. (2019) on companies with substantial abnormal book-tax differences, confirmed the hypothesis that such companies exhibit lower EP, indicating that TAG undermines the quality of accounting information.

The study by Blaylock et al. (2011) found that aggressive tax practices captured by book-tax differences can have a positive relationship with EP. However, they noted this occurs only when the book-tax differences arise from a reduction in taxable income. When the book-tax differences result from increased accounting profit, the effect on EP is negative.

The effect of TAG on EP is uncertain as the primary proxy for TAG (book-tax differences) reflects both TAG practices (tax base reductions) and EM practices (increased accounting profit). Thus, aggressive tax practices may correlate with EM, potentially harming information quality (Desai & Dharmapala, 2009; Frank et al., 2009).

Consequently, models evaluating the relationship between BTC and information quality may not have fully addressed the complexity of EM and TAG practices. Since EM and TAG practices can influence EP, these discretionary practices may modify the relationship between the BTC and EP. As Baron and Kenny (1986) describe, a moderating variable is a third variable that impacts the strength or direction of the relationship between dependent and independent variables. Thus, this study explores the effects of the level of incentives to discretionary EM and TAG practices on the relationship between BTC and EP.

Observing the relationship between EP and BTC without incorporating these opportunistic practices limits the understanding of the incentives and constraints shaping this relationship. Therefore, the study examines the potential moderating effects of EM and TAG practices on the BTC-EP relationship. The following hypotheses are proposed:

H1: The level of EM within a given legal-institutional environment (country) moderates the relationship between BTC and EP in that environment, exerting a negative influence.

H2: The level of TAG within a given legal-institutional environment (country) moderates the relationship between BTC and EP in that environment.

Figure 1 illustrates the study's proposal:

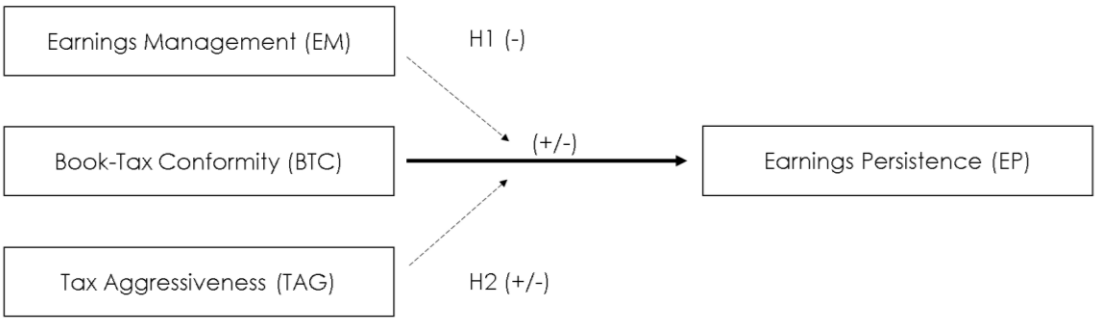

Figure 1 – Research design
Source: Elaborated by the authors.

Regardless of the direct effect of BTC on EP, it is expected that in environments with higher EM, a positive effect will be reduced or a negative effect amplified. Thus, H1 hypothesizes a negative moderating effect of EM on the BTC-EP relationship. This aligns with studies by Dechow and Dichev (2002), Desai (2005), and Whitaker (2005), which emphasize the detrimental impact of EM on EP and with the expectation of lower (higher) EM in environments with higher (lower) BTC.

Given the inconsistent findings regarding TAG's effect (positive or negative) on EP, the direction of TAG's moderating effect in H2 cannot be determined.

3 METHODOLOGICAL PROCEDURES

The moderating effect proposed in the hypotheses was analyzed using data from companies across 35 countries, covering the period from 2010 to 2020 – the most recent data available at the time of collection – sourced from the Thomson Reuters© Refinitiv database. Financial companies were excluded from the study due to their distinct accounting and tax characteristics.

Regressions with unbalanced panels were employed to examine the relationship between book-tax conformity (BTC) and earnings persistence (EP), along with the moderating effects of earnings management (EM) and tax aggressiveness (TAG). The models were applied to a dataset containing variables aggregated by country-year, following the modeling applied in the studies by Leuz et al. (2003), Blaylock et al. (2015), and Tang (2015). According to Tang (2015), analyzing data aggregated by company-year, as conducted by Atwood et al. (2010), may lead to overestimated significance levels due to errors arising from relationships between variables with differing dimensions and theoretically inconsistent variances.

3.1 Specification of Variables and Test Models

The dependent variable earnings persistence (EP) was determined from the coefficient β_1 of the general autoregressive persistence model (Dechow et al.,

2010), as used by Francis et al. (2004), Barton et al. (2010) and Canina and Potter (2019):

$$L_{t+1} = \beta_0 + \beta_1 L_t + e_t \quad \text{Eq. (1)}$$

Where,

L = Earnings per Share

Higher β_1 (EP) values indicate a high EP relative to lagged earnings, while lower values indicate low EP. Using the database for each country, *t* regressions of Equation 1 were estimated, where *t* corresponds to each year in the sample. In total, *t* regressions were conducted for the 35 countries. For each country, the estimated coefficients of β_1 from the general persistence model for each year in the sample were recorded, forming the test base by country-year.

The book-tax conformity (BTC) was estimated following the model proposed by Atwood et al. (2010). The BTC variable was constructed as an index derived from the unexplained portion of the regression between current tax expenses and profit before tax:

$$CTEt = \theta 0 + \theta 1 PTBIt + \theta 2 DIVt + et \quad \text{Eq. (2)}$$

Where,

CTE: Current Tax Expense

PTBI: Profit Before Tax

DIV: Dividends

The model was estimated to determine the root mean square error (RMSE) for each country-year. In other words, *t* regressions were conducted in each country, where *t* is the number of years included in the sample. The RMSE for each country was tabulated and ranked in descending order by year. The highest RMSE value in each annual cross-section was assigned a value of 0, while the remaining values were ranked in descending order and divided by *n*-1, where *n* is the number of countries in the series. Thus, the BTC variable ranges from 0 (low conformity) to 1 (high conformity), varying between countries and across years.

The constructs for earnings management (EM) and tax aggressiveness (TAG) were derived from indexes calculated using different models, ranked for each country-year to ensure consistency with the BTC variable specification.

The construct EM was calculated using four distinct models to capture non-overlapping management specifications. The EM measures were derived following the structure adopted by Leuz et al. (2003), Blaylock et al. (2015), and Tang (2015).

Variables were developed for each country-year, considering the selected models

The first EM measure (EM1) was calculated using the discretionary accruals derived from the model proposed by Dechow et al. (1995) and modified by Kothari et al. (2005):

$$\mathrm{TACC}_{it}/\mathrm{TA}_{i,t-1} = \alpha_0 + \alpha_1 {}^{1}/_{\mathrm{TA}_{i,t-1}} + \alpha_2(\Delta\mathrm{REV} - \Delta\mathrm{AR})_{i,t}/\mathrm{TA}_{i,t-1} + \alpha_3\mathrm{PPE}_{i,t}/\mathrm{TA}_{i,t-1} + \alpha_4\mathrm{ROA}_{i,t} + \varepsilon_{i,t} \quad \text{Eq.(3)}$$

Where,

TACC (Total Accruals) = NI (Net Income) – OCF (Operating Cash Flow).

TA = Total Assets

∆REV = Change in Revenue

∆AR = Change in Account Receivable

PPE = Property, Plant, and Equipment (Intangible Assets) for the Period

ROA = Return on Assets

ε = Discretionary Accruals = EM1

The second EM measure (EM2) was obtained based on the model by Pae (2005), where all variables are divided by the lagged total assets:

$$\mathrm{TACC_{i,t}}/\mathrm{TA}_{i,t-1} = \beta_0(1/\mathrm{TA_{t-1}}) + \beta_{1\mathrm{i}}(\Delta\mathrm{REV_{i,t}})/\mathrm{TA}_{i,t-1} + \beta_{2\mathrm{i}}\mathrm{PPE_{i,t}}/\mathrm{TA}_{i,t-1} + \beta_{3\mathrm{i}}\mathrm{CFO_{i,t}}/\mathrm{TA}_{i,t-1} + \beta_{4\mathrm{i}}\mathrm{CFO_{i,t-1}}/\mathrm{TA}_{i,t-1} + \beta_{5\mathrm{i}}\mathrm{TACC_{i,t-1}}/\mathrm{TA}_{i,t-1} + \varepsilon_{\mathrm{i,t}}) \quad \text{Eq. (4)}$$

Where,

OCF = Operating Cash Flow

ε = Discretionary Accruals = EM2

EM3 will be determined based on discretionary accruals following Dechow and Dichev (2002), modified by Francis et al. (2005), with all variables scaled by average total assets:

$$\frac{\mathrm{TACC}_{it}}{\mathrm{AvgTA}_{i,t}} = \alpha_0 + \frac{\alpha_1\mathrm{CFO}_{i,t-1}}{\mathrm{AvgTA}_{i,t}} + \frac{\alpha_2\mathrm{CFO}_{i,t}}{\mathrm{AvgTA}_{i,t}} + \frac{\alpha_3\mathrm{CFO}_{i,t+1}}{\mathrm{AvgTA}_{i,t}} + \frac{\alpha_4\Delta\mathrm{REV}_{i,t}}{\mathrm{AvgTA}_{i,t}} + \alpha_5\mathrm{PPE}_{i,t}/\mathrm{AvgTA}_{i,t} + \varepsilon_{i,t}) \quad \text{Eq. (5)}$$

Where,

ε = Discretionary Accruals = EM3

The fourth EM measure, EM4, is adapted from the study by Dechow et al. (2012) and applied by Martins et al. (2016), with the variables scaled by lagged total assets.

$$\mathrm{TACC_t}/\mathrm{TA}_{i,t-1} = \alpha_1 + \alpha_2\left(\frac{1}{\mathrm{TA}_{i,t-1}}\right) + \alpha_3(\Delta REV_t - \Delta\mathrm{AR_t})/\mathrm{TA}_{i,t-1} + \alpha_4\mathrm{PPE}/\mathrm{TA}_{i,t-1_t} + \alpha_5\mathrm{TACC}_{t-1}/\mathrm{TA}_{i,t-1} + \varepsilon_t \quad \text{Eq. (6)}$$

Where,

ε = Discretionary Accruals = EM4

The four variables were constructed using the annual averages of the absolute residuals from each EM model, estimated in cross-sections controlled by the economic sector for each country in the sample. The annual absolute averages of the residuals from the regressions of each model by country were ranked each year, with higher absolute values indicating greater EM practices.

The TAG variables were defined based on the methodologies employed by Atwood et al. (2012), Tang (2015), and Braga (2017).

The first is TAG(a), adapted from Atwood et al. (2012) and expressed by the equation:

$$TAG_{(a)it} = \frac{[\sum_{t-2}^{t}(PTBI\ x\ \tau_{i,t}) - \sum_{t-2}^{t} CTE_{it}]}{\sum_{t-2}^{t} PTBI_{\ i,t}}) \quad \text{Eq. (7)}$$

Where,

TAG(a) = Measure of Tax Aggressiveness

PTBI = Profit Before Tax before exceptional items;

T = Tax Rate on Profit in the country;

CTE = current tax expense

This first measure requires a three-year data window to enhance accuracy by mitigating errors caused by reversals within a single period (Atwood et al., 2012; Braga, 2017). Instead of subtracting the variation in taxes payable from the current tax expense, only the current tax expense was used. In cases of aggressive tax practices, the current tax expense tends to approach zero. Therefore, higher values of TAG(a) indicate a greater degree of TAG.

The second measure, TAG(b), is calculated as the difference between the nominal tax rate of each jurisdiction (*τ*) and the current tax expense (CTE), divided by the operating cash flow (OCF):

$$TAG_{(b)it} = \tau_{i,t} - \frac{CTE_{it}}{OCF_{i,t}} \quad \text{Eq. (8)}$$

The third measure of tax aggressiveness, TAG(c), is obtained by the difference between the nominal tax rate of each jurisdiction (statutory tax rate or *τ*) and the current expense with taxes on profits (CTE) divided by the profit before taxes PTBI:

$$TAG_{(c)it} = \tau_{i,t} - \frac{CTE_{it}}{PTBI_{i,t}} \quad \text{Eq. (9)}$$

The annual averages by country were tabulated, forming the variables TAG(a), TAG(b), and TAG(c) by country-year, following the procedure adopted by Tang (2015). Higher values for each variable indicate greater TAG.

Considering the influences of the institutional environment, additional control measures related to indexes representing institutional factors were included in the analysis models, as applied in previous studies (La Porta et al., 1998; Leuz et al., 2003; Atwood et al., 2010; Blaylock et al., 2015; Tang, 2015). These indicators encompass a) Legal origin (LEG), distinguishing between common law and other law systems (civil law, for instance); b) Investor rights (INVR), which measures shareholder and investor protections; and c) Worldwide Governance Indicators (WGI), a composite governance index developed by Kaufmann et al. (2011) and published and updated by the World Bank. The WGI reflects six key governance dimensions across more than 200 countries: i) democratic participation, freedom of expression, and accountability; ii) political stability and the absence of violence or terrorism; iii) government effectiveness in providing public services; iv) regulatory quality; v) adherence to the rule of law; and vi) control of corruption.

Figure 2 lists the variables in the hypothesis tests.

Variables	Description
EP	Dependent Variable: Coefficient β_1 of the general model of persistence
BTC	Book-tax conformity – Values from 0 to 1 per country-year
EM1	Residual equation 3 – model by Dechow et al. (1995) and Kothari et al. (2005)
EM2	Residual equation 4 – model by Pae (2005)
EM3	Residual equation 5 – model by Dechow and Dichev (2002), adapted by Francis et al. (2005)
EM4	Residual equation 6 – model by Dechow et al. (2012), adapted by Martins et al. (2016)
TAGa	Equation 7
TAGb	Equation 8
TAGc	Equation 9
WGI	Average of the Worldwide Governance Indicators (WGI)
INVR	Investor rights (from 1 to 5)
LEG	Legal origin (1 = common law; 0 = others)

Figure 2 - Description of variables
Source: Elaborated by the authors

Note: The models below present the control variables WGI, INVR, and LEG as ΣIF, which refers to the set of institutional factors.

After defining the variables for the analysis models, the regression models were applied to evaluate the hypotheses.

In the initial step, we tested whether BTC influences EP and assessed its impact on the dataset. This serves as a preliminary analysis, as without establishing this relationship, it would not make sense to continue the analysis of the moderating effect of EM and TAG on a non-existent relationship.

$$EP_{i,t} = \beta_0 + \beta_1 BTC_{i,t} + \beta_2 \Sigma IF_{i,t} + e_{i,t} \quad \text{Eq. (10)}$$

Since there is no clear expectation regarding the impact of BTC on EP, no specific direction is anticipated for β_1. If the results align with the findings of Atwood et al. (2012), Watrin et al. (2014), and Tang (2015), β_1 is expected to be positive. If the results align with Ali and Hwang (2000), Burgstahler et al. (2006), Atwood et al. (2010), and Blaylock et al. (2015), β_1 is expected to be negative.

The first research hypothesis (H1) was tested by estimating a model that includes EM as a potential moderator of the relationship between BTC and EP. In this model (Eq. 11), EM appears both as an independent variable and as an interaction term with BTC.

$$EP_{i,t} = \beta_0 + \beta_1 BTC_{i,t} + \beta_2 EM_{i,t} + \beta_3 EM_{i,t}*BTC_{i,t} + \beta_4 \Sigma IF_{i,t} + e_{i,t} \quad \text{Eq. (11)}$$

Similar to Equation 10, β_1 is expected to be significant, but its direction remains undefined. To confirm H1, the coefficient β_3 must be significant and negative. If β_3 are in different directions β_1 – for instance, β_1 is positive – this would indicate a moderating effect that dampens or reduces BTC's positive influence on EP. Alternatively, if β_1 is negative, the moderating effect would amplify BTC's negative impact on EP.

Subsequently, tests were conducted using TAG variables to evaluate the second hypothesis (H2).

$$EP_{i,t} = \beta_0 + \beta_1 BTC_{i,t} + \beta_2 TAG_{i,t} + \beta_3 TAG_{i,t}*BTC_{i,t} + \beta_4 \Sigma IF_{i,t} + e_{i,t} \quad \text{Eq. (12)}$$

For TAG, the conflicting results in the literature make it challenging to specify a predetermined direction for β_3 in Eq. (12). To confirm H2, β_3 must be significant. Four potential outcomes emerge if both β_1 and β_3 are significant: (i)If β_1 and β_3 are positive, greater tax aggressiveness amplifies BTC's positive effect on EP; (ii) If β_1 and β_3 are negative, greater TAG amplifies BTC's negative effect on EP; (iii) If β_1 is positive and β_3 is negative, greater TAG mitigates BTC's positive effect on EP; (iv) If β_1 is negative and β_3 is positive, greater TAG mitigates BTC's negative effect on EP.

3.2 Data Collection

Data collection considered the USD as the standard currency, and a filter was applied to select the consolidated financial statements of non-financial companies listed in stock exchanges located in a given region and country. Companies operating in the financial sector were disregarded due to the peculiarities of their accounting systems, which render the earnings management (EM) models applied here inappropriate. Additionally, following the guidelines of Atwood et al. (2010), the variables were winsorized at 1% per country.

Data on corporate tax rates on profits, collected from the Tax Foundation database (https://taxfoundation.org/corporate-tax-rates-around-the-world-2020/), were added to the country-specific files before calculating the variables and were used to compute the tax aggressiveness (TAG) variables TAGa, TAGb, and TAGc, according to the formulas described in Section 3.1.

The same criteria used by Atwood et al. (2010) and Braga (2017) were applied to estimate the book-tax conformity (BTC). It was estimated by country-year from an unbalanced panel containing 165,370 company-year observations covering the period from 2008 to 2020.

The calculations of the EM variables were based on the absolute values of the residuals from the equations corresponding to the four models described in Section 3.1 (Equations 3 to 6).

The Worldwide Governance Indicator (WGI) variable was calculated as the average of the six factors present in the database prepared by Kaufmann et al. (2011). The variables corresponding to the investor protection index or investors rights (INVR) and legal origin (LEG) (common law or other system such as civil law, for instance) were collected from the tables provided in the studies by La Porta et al. (1998), Leuz et al. (2003), Atwood et al. (2010), Blaylock et al. (2015), and Tang (2015). The non-random sample, used for hypothesis testing after eliminating missing observations, covers the period from 2010 to 2020 due to the lags and windows included in the calculations of the variables. The sample includes data from 35 countries, resulting in 319 country-year observations.

4 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Test Results

The first step of the tests was to verify the relationship between book-tax conformity (BTC) and earnings persistence (EP). The results in Table 1 show that the BTC variable is significant (p-value < 1%) and positive, indicating that higher BTC explains higher EP. This first evidence is contrary to the finding of Atwood et al. (2010).

Table 1
Relationship between BTC and EP

$$EP_i = \beta_0 + \beta_1 BTC_i + \sum \text{IF} + e_t$$

Independent variables	
Constant	0.737007***
	(0.042)
BTC	0.085547***
	(0.0298)
WGI	-0.059805***
	(0.010)
INVR	-0.005208
	(0.010)
LEG	-0.065550***
	(0.021)
Adjusted R^2	0.184
p-value Test F	< 0,000001
Largest VIF	1,54

Note: Significance: *** 1%, ** 5%, and * 10%. The analysis includes 319 country-year observations. There are no problems of normality or heteroscedasticity of the residuals. EP = proxied by β_1 of the general autoregressive model by Dechow, Ge, and Schrand (2010). BTC = estimated according to the model of Atwood, Drake, and Myers (2010) and varies from 0 to 1 by country-year. Worldwide Governance Indicators (WGI) corresponds to the average of six factors developed by Kaufmann, Kraay, and Mastruzzi (2011); INVR corresponds to investor rights and varies from 1 to 5; LEG (legal origin) = binary variable, where 1 refers to common law, and 0 refers to other legal systems.
Source: Elaborated by the authors.

Table 2 presents the results of the relationship between BTC and EP, moderated by earnings management (EM) – EM1, EM2, EM3, and EM4. Consistent with the findings in the previous estimation (Table 1), BTC shows a positive and significant coefficient (p-value < 1%) across all four models. This reinforces the conclusion that higher levels of conformity are associated with greater EP.

Table 2
Relationship between BTC and EP with interaction between BTC and EM

$EP_{i,t} = \beta_0 + \beta_1 BTC_{i,t} + \beta_2 EM_{i,t} + \beta_3 EM_{i,t}*BTC_{i,t} + \Sigma\beta IF_{i,t} + e_{i,t}$

Independent variables	**EM1**	**EM2**	**EM3**	**EM4**
PANEL A (coefficients)				
Constant	0.7578 ***	0.7416 ***	0.7537***	0.7510***
	(0.044)	(0.044)	(0.046)	(0.044)
EM1	-0.0563			
	(0.145)			
EM2		0.0379		
		(0.061)		
EM3			-0.1515	
			(0.132)	
EM4				-0.0053
				(0.128)
BTC	0.2100***	0.2109***	0.2519***	0.1858***
	(0.062)	(0.043)	(0.057)	(0.059)
EM1*BTC	-2.5587***			
	(0.941)			
EM2*BTC		-3.6303***		

		(0.839)		
EM3*BTC			-4.7353***	
			(1.232)	
EM4*BTC				-2.0917**
				(0.871)
WGI	-0.0641 ***	-0.0510***	-0.0510***	-0.0617***
	(0.011)	(0.010)	(0.010)	(0.011)
INVR	-0.0070	-0.0055	-0.0041	-0.0055
	(0.010)	(0.010)	(0.010)	(0.010)
LEG	-0.0420 *	-0.0410**	-0.0273	-0.0459**
	(0.022)	(0.020)	(0.021)	(0.022)
PANEL B				
Adjusted R^2	0.2022	0.2265	0.2373	0.1977
p-value Test F	< 0,000001	< 0,000001	< 0,000001	< 0,000001
Largest VIF / GVIF	5.36 / 1.77	2.92 / 1.68	4.32 / 1.79	3.52 / 1.75

Note: Significance: *** 1%, ** 5% and * 10%. The relaxed normality assumption is based on the central limit theorem (Brooks, 2019). The analysis includes 319 country-year observations. EP = proxied by β_1 of the general autoregressive model by Dechow, Ge, and Schrand (2010). BTC = estimated according to the model of Atwood, Drake, and Myers (2010) and varies from 0 to 1 by country-year. EM1 is the annual average of the absolute residual of the model by Dechow et al. (1995) and Kothari et al. (2005); EM2 is the annual average of the absolute residual model by Pae (2005); EM3 is the annual average of the absolute residual of the model by Dechow and Dichev (2002), adapted by Francis et al. (2005); EM4 is the annual average of the absolute residual of the model adapted from Dechow et al. (2012); Worldwide Governance Indicators (WGI) corresponds to the average of six factors developed by Kaufmann, Kraay, and Mastruzzi (2011); INVR corresponds to investor rights and varies from 1 to 5; LEG (legal origin) = binary variable, where 1 refers to common law, and 0 refers to other legal systems. White's heteroscedasticity-consistent (HCO) error correction was applied to EM2 and EM3 due to residual heteroscedasticity.
Source: Elaborated by the authors.

None of the EM proxies show statistically significant coefficients. However, untabulated regression tests examining the relationship between EM measures and EP in isolation reveal a negative and significant relationship for all measures (EM1, EM2, EM3, and EM4). This suggests that when the legal-institutional environment, represented by BTC, is taken into account, it makes no sense to analyze the isolated impact of EM on EP.

The test for the moderating effect, conducted through interactions between BTC and the EM measures (β_3 coefficients in each regression), indicates a negative and significant effect (p-value < 1% across all four models) on EP. This finding demonstrates that higher levels of EM reduce or even negate the positive effects of BTC on EP.

These results highlight that an environment where companies engage in discretionary EM undermines the benefits of BTC on EP. Consequently, H1 is not rejected.

Finally, Table 3 presents the results of the relationship between BTC and EP moderated by TAG (obtained using three different proxies – TAGa, TAGb, and TAGc). The three estimates are significant as a whole. The BTC coefficient remained positive and significant (p-value < 1%), reinforcing the previous results.

The coefficients of the three TAG proxies are positive and significant at the 5% level, a result in line with those found by Blaylock, Shevlin, and Wilson (2011).

The statistical significance of β_2, corresponding to the three aggressiveness variables, indicates that aggressive tax practices can benefit EP.

Regarding the interaction term β_3 between BTC and TAG, negative and significant coefficients are observed in all cases at the 5% level, indicating that higher levels of TAG reduce and even cancel out the positive effects of BTC on EP. This shows that an environment in which companies adopt aggressive tax measures is detrimental to the effect of BTC on EP. Therefore, H2 is not rejected: TAG has a moderating effect on the relationship between BTC and EP.

Table 3
Relationship between BTC and EP with interaction between BTC and TAG

$EP_{i,t} = \beta_0 + \beta_1 BTC_{i,t} + \beta_2 TAG_{i,t} + \beta_3 TAG_{i,t}*BTC_{i,t} + \Sigma\beta IF_{i,t} + e_{i,t}$

Independent variables	**TAGa**	**TAGb**	**TAGc**
PANEL A (coefficients)			
Constant	0.590247***	0.593173***	0.588761***
	(0.0936)	(0.0925)	(0.0935)
TAGa	0.577896**		
	(0.28598)		
TAGb		0.566855**	
		(0.2828)	
TAGc			0.584101**
			(0.2859)
BTC	0.417704***	0.407716***	0.419888***
	(0.1307)	(0.1293)	(0.130)
TAGa*BTC	-1.261300***		
	(0.474)		
TAGb*BTC		-1.227247***	
		(0.4714)	
TAGc*BTC			-1.270999***
			(0.4736)
WGI	-0.059966***	-0.059675***	-0.059993***
	(0.010)	(0.010)	(0.010)
INVR	-0.008227	-0.008028	-0.008228
	(0.010)	(0.010)	(0.010)
LEG	-0.067460***	-0.067930***	-0.067464***
	(0.0204)	(0.0205)	(0.0204)
PANEL B			
Adjusted R^2	0.1975	0.1966	0.1978
p-value Test F	< 0,000001	< 0,000001	< 0,000001
Largest VIF/GVIF	23.77 / 1.54	21.45 / 1.59	21.62 / 1.59

Note: Significance: *** 1%, ** 5% and * 10%. The relaxed normality assumption is based on the central limit theorem (Brooks, 2019). The analysis includes 319 country-year observations. EP = proxied by β_1 of the general autoregressive model by Dechow, Ge, and Schrand (2010). BTC = estimated according to the model of Atwood, Drake, and Myers (2010) and varies from 0 to 1 by country-year. TAG measures: $TAG_{(a)it} = \frac{[\sum_{t-2}^{t}(PTBI\ x\ \tau_{i,t}) - \sum_{t-2}^{t} CTE_{it}]}{\sum_{t-2}^{t} PTBI_{\ i,t}}$; $TAG_{(b)it} = \tau_{i,t} - \frac{CTE_{it}}{OCF_{i,t}}$; $TAG_{(c)it} = \tau_{i,t} - \frac{CTE_{it}}{PTBI_{i,t}}$. WGI (World Governance Index) = calculated as the average of six factors developed by Kaufmann, Kraay, and Mastruzzi (2011). INVR = investor rights (varies from 1 to 5). LEG (legal origin) = binary variable, where 1 refers to common law, and 0 refers to others legal systems. White's heteroscedasticity-consistent (HCO) error correction was applied to TAGa, due to residual heteroscedasticity.
Source: Elaborated by the authors.

4.2 Discussion of results

The results of the first test presented in Table 1 demonstrate a positive relationship between book-tax conformity (BTC) and earnings persistence (EP), which is contrary to the findings of Atwood et al. (2010). One possible explanation for this discrepancy is the adoption of different methodological approaches regarding the aggregation of variables. Atwood et al. (2010) employed multivariate tests to examine the relationship between current and lagged earnings (persistence) using a sample aggregated at the firm level (cross-section), incorporating BTC calculated by country-year. In contrast, our study measures the dependent variable using the slope of the variable representing lagged earnings in a general persistence model, aggregated at the country-year level, similar to BTC. It is worth noting that Atwood et al. (2010) relied on the slope value of the interaction between the conformity measure and lagged profits.

Another critical consideration is that Atwood et al. (2010) acknowledged that increased BTC could either enhance or reduce EP. When formulating their hypothesis, the authors emphasized the empirical nature of this question.

While the results from the sample of countries in this study differ from Atwood et al. (2010) regarding the direction (positive or negative) associated with BTC and from Blaylock et al. (2015), when considering a more general perspective, they align with theoretical predictions that higher BTC leads to improved earnings quality. Additionally, they empirically align with the findings of Atwood et al. (2012), Watrin et al. (2014), and Tang (2015).

However, the analysis of BTC's impact on EP is limited without evaluating potential discretionary practices, as done in this study. We argue that the effect of BTC on EP depends on the discretionary practices of companies in the analyzed environment.

The hypothesis test results reported in Tables 2 and 3 indicate that in environments with higher levels of discretionary practices – earnings management (EM) or tax aggressiveness (TAG) – and higher BTC, a combined effect of these variables with BTC diminishes the positive impact of BTC on EP. This situation of higher BTC and higher EM or TAG levels simultaneously leads to more benefits from BTC and a reduction of the positive effect of BTC on EP.

On the other hand, in environments with lower levels of discretionary practices and lower BTC, it is possible to identify a similar combined effect of each of these variables with BTC, reducing its positive impact on EP. This situation (lower BTC and lower levels of EM or TAG) leads to, simultaneously, fewer benefits of BTC and reductions of its positive effect on EP.

In alignment with the predictions of Desai (2005), Whitaker (2005), and Desai and Dharmapala (2009), a positive relationship was observed between BTC and EP. However, this relationship shifts in the presence of moderating effects from EM or TAG. Tables 2 and 3 reveal that EP decreases as EM and TAG practices increase. This finding reconciles the conclusions of Atwood, Drake, and Myers (2010) and Blaylock, Gaertner, and Shevlin (2015), which indicate that higher BTC may harm earnings quality, with Tang's (2015) assertion that EM or TAG practices are less (more) prevalent in environments of higher (lower) BTC. Thus, the findings suggest that entities in higher BTC settings have fewer opportunities to engage in EM

practices, and if they manifest such behavior, its negative effect on earnings quality is substantially more pronounced than in environments of lower BTC.

This study suggests an approximation between apparently contradictory findings regarding the relationship between BTC and earnings quality proxies. The approach of testing the effects of BTC on information quality gains robustness when including the potential effects of EM and TAG

The test incorporating EM in isolation indicates that when the legal-institutional environment is considered through BTC, the analysis of EM's isolated impact on EP is less meaningful. The expected negative impact of EM on EP only emerges when conformity is observed, with the negative effect intensifying as BTC increases.

The positive results for TAG in Model 12 shed light on the diverse impacts of different environments on EP. The most substantial positive effects of TAG and conformity on EP are observed in environments with high aggressiveness and low conformity or low aggressiveness and high conformity. These effects are weaker in environments with high levels of both or low levels of both. This suggests that in environments of higher BTC, its benefits are undermined by high levels of TAG, which would naturally be expected to decrease under such conditions.

Regarding the institutional control variables included in the models, a negative and significant relationship was observed between the Worldwide Governance Indicators (WGI) and EP in all models, and a negative and significant relationship between legal origin (LEG) and EP in most models. Investor rights (INVR), however, were not significant. These findings suggest that countries with higher WGI scores and common law legal origins exhibit lower EP rates. This aligns with prior studies that link common law traditions, stronger investor protections, better institutional indicators, and improved earnings quality attributes. Nevertheless, some studies, particularly regarding legal origin, raise objections to these assumptions. Ball et al. (2003) found that some common law countries exhibit lower earnings quality than civil law countries, while Boonlert-U-Thai et al. (2006) reported that countries with strong investor protections sometimes show lower earnings quality. These nuances may offer additional context for understanding the results observed in this study.

5 CONCLUSIONS

This study analyzed the moderating effects of earnings management (EM) and tax aggressiveness (TAG) on the relationship between book-tax conformity (BTC) and earnings persistence (EP).

For the sample of countries studied, it was observed that the moderating effect that amplifies reductions in EP changes as the levels of discretionary practices and BTC vary. The effect of reducing the increase in EP related to BTC in various institutional and legal environments is influenced by the level of conformity in these environments and by the level of EM or TAG practices by firms.

For EM, the analysis shows that the benefits of EP associated with higher BTC are obtained only when companies engage in lower levels of EM. This occurs

because of the negative effect of EM, the positive effect of BTC, and the combined adverse effect of EM and BTC.

Regarding TAG, the persistence benefits in environments of high conformity are achieved only when companies are less tax-aggressive. On the other hand, the persistence gains for firms strongly engaged in TAG practices are observed only in low-conformity environments. This can be attributed to the sensitivity of earnings to aggressive tax practices in environments of higher BTC, where the alignment between accounting standards and the tax base amplifies the interplay between TAG and EM (Frank et al., 2009).

The study suggests that the relationship between BTC and information quality has to be examined together with EM and TAG practices. Analyzing the influence of BTC on earnings quality becomes more comprehensive when these additional dimensions are considered. The results demonstrate that the potential benefits of BTC on earnings quality are maximized in environments with low levels of EM and TAG. Additionally, while TAG may enhance EP, this effect is limited to environments of lower BTC.

Changes in legal frameworks across countries, whether increasing or decreasing BTC, pose significant risks to earnings quality. Addressing these risks adequately requires considering firms' discretionary decisions. The findings indicate that in settings where firms have substantial latitude for tax planning, the highest quality accounting information emerges in contexts that maintain a separation between accounting and tax systems. Conversely, environments with higher BTC that encourage discretionary EM practices do not yield improvements in information quality. It is important to note that while higher BTC environments naturally limit EM practices, other incentives for such behavior exist that lie beyond the scope of BTC mechanisms.

To advance the understanding of this topic, future studies could investigate additional attributes of earnings quality and explore alternative methodologies such as hierarchical or multilevel analysis or structural equation modeling to assess potential mediating effects. A study that delves deeper into the impact of other variables in the institutional environment on moderating the BTC-EP relationship would also be relevant. In addition, research using data from companies rather than aggregated by country could offer insights into the effects at the organizational level.

REFERENCES

Ali, A., & Hwang, L. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. Journal of Accounting Research, 38(1), 1-21. https://dx.doi.org/10.2307/2672920

Atwood, T. J., Drake, M. S., & Myers, L. A. (2010). Book-tax conformity, earnings persistence and the association between earnings and future cash flows. Journal of Accouting and Economics, 50, 111-125. https://dx.doi.org/10.1016/j.jacceco.2009.11.001

Atwood, T. J., Drake, M. S., Myers, J. N., & Myers, L. A. (2012). Home country tax system characteristics and corporate tax avoidance: International evidence. The Accounting Review, 87(6), 1831-1860. https://dx.doi.org/10.2308/accr-50222

Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: properties of accounting income in four East Asian countries. Journal of Accounting and Economics, 36(1-3), 235-270. https://doi.org/10.1016/j.jacceco.2003.10.003

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Barton, J., Hansen, T. B., & Pownall, G. (2010). Which performance measures do investors around the world value the most—And why? The Accounting Review, 85(3), 753-789. https://doi.org/10.2308/accr.2010.85.3.753

Blaylock, B., Gaertner, F., & Shevlin, T. (2015). The association between book-tax conformity and earnings management. Review of Accounting Studies, 20(1), 141-172. https://doi.org/10.1007/s11142-014-9291-x

Blaylock, B., Shevlin, T., & Wilson, R. J. (2011). Tax avoidance, large positive temporary book-tax differences, and earnings persistence. The Accounting Review, 87(1), 91-120. https://doi.org/10.2308/accr-10158

Boonlert-U-Thai, K., Meek, G. K., & Nabar, S. (2006). Earnings attributes and investor-protection: International evidence. The International Journal of Accounting, 41(4), 327-357. https://doi.org/10.1016/j.intacc.2006.09.008

Braga, R. N. (2017). Efeitos da adoção das IFRS sobre o tax avoidance. Revista Contabilidade & Finanças, 28(75), 407-424. https://doi.org/10.1590/1808-057x201704680

Brooks, C. (2019). Introductory Econometrics for Finance. 4ª ed. Cambridge: Cambridge University Press.

Brunozi Júnior, A. C., Kronbauer, C. A., Alves, T. W., & Martinez, A. L. (2019). Book-tax-differences anormais e persistência dos resultados contábeis e tributários em empresas de capital aberto listadas no brasil. Revista Universo Contábil, 15(1). http://dx.doi.org/10.4270/ruc.2019101

Burgstahler, D. C., Hail, L., & Leuz, C. (2006). The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms. The Accounting Review, 983-1016. https://doi.org/10.2308/accr.2006.81.5.983

Canina, L., & Potter, G. (2019). Determinants of earnings persistence and predictability for lodging properties. Cornell Hospitality Quarterly, 60(1), 40-51. https://doi.org/10.1177/19389655187917

Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review, 77(s-1), 35-59. https://doi.org/10.2308/accr.2002.77.s-1.35

Dechow, P. M., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. Journal of Accounting and Economics, 50(2-3), 344-401. https://doi.org/10.1016/j.jacceco.2010.09.001

Dechow, P. M., Hutton; A. P., Kim, J. H., & Sloan, R. G. (2012). Detecting earnings management: A new approach. Journal of Accounting Research, 50(2), 275-334. https://doi.org/10.1111/j.1475-679X.2012.00449.x

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. The Accounting Review, 193-225. https://www.jstor.org/stable/248303

Desai, M. A. (2005). The degradation of corporate profits. Journal of Economic Perspectives, 19, 171-192. https://doi.org/10.1257/089533005775196705.

Desai, M. A., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. Journal of Financial Economics, 79(1), 145-179. https://doi.org/10.1016/j.jfineco.2005.02.002

Desai, M. A., & Dharmapala, D. (2009). Earnings management, corporate tax shelters, and book-tax alignment. National Tax Journal, 62(1), 169-186. https://doi.org/10.17310/ntj.2009.1.08

Evers, M., Meier, I., & Finke, K. (2016). The implications of book-tax differences: A meta-analysis. ZEW-Centre for European Economic Research Discussion Paper, 17-003. https://www.econstor.eu/bitstream/10419/149747/1/878840095.pdf.

Francis, J., Lafond, R., Olsson, P., & Shipper, K. (2004). Costs of Equity and Earnings Attributes. The Accounting Review, 79(4), 967-1010. https://doi.org/10.2308/accr.2004.79.4.967

Francis, J., Lafond, R., Olsson, P., & Shipper, K. (2005). The market pricing of accruals quality. Journal of Accounting and Economics, 39(2), 295-327. https://doi.org/10.1016/j.jacceco.2004.06.003

Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. The Accounting Review, 84(2), 467-496. https://doi.org/10.2308/accr.2009.84.2.467

Hanlon, M. (2005). The Persistence and Pricing of Earnings, Accruals, and Cash Flow When Firms Have Large Book-Tax Differences. The Accounting Review, 80(1), 137-166. https://doi.org/10.2308/accr.2005.80.1.137

Hanlon, M., & Heitzman, S. (2010). A review of tax research. Journal of Accounting and Economics, 50, 127-178. https://doi.org/10.1016/j.jacceco.2010.09.002

Hanlon, M., Laplante, S., & Shevlin, T. (2005). Evidence on the possible information loss of conforming book income and taxable income. Journal of Law and Economics, 48, 407-442. https://dx.doi.org/10.1086/497525

Hanlon, M., Maydew, E., & Shevlin, T. (2008). An unintended consequence of book-tax conformity: A loss of earnings informativeness. Journal of Accounting and Economics, 46, 294–311. https://doi.org/10.1016/j.jacceco.2008.09.003

Hanlon, M., & Shevlin, T. (2005). Book-tax conformity for corporate income: An introduction to the issues. Tax Policy and the Economy, 19, 101-134. https://doi.org/10.1086/tpe.19.20061897

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The worldwide governance indicators: Methodology and Analytical Issues. (WGI) project. Hague J Rule Law 3, 220–246. https://doi.org/10.1017/S1876404511200046

Kolozsvari, A. C., & Macedo, M. A. da S. (2016). Análise da influência da presença da suavização de resultados sobre a persistência dos lucros no mercado brasileiro. Revista Contabilidade & Finanças, 27(72), 306-319. https://doi.org/10.1590/1808-057x201602610

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. Journal of Accounting and Economics, 39(1), 163-197. https://doi.org/10.1016/j.jacceco.2004.11.002

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. Journal of Political Economy, 106(6), 1113-1155. https://doi.org/10.1086/250042

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. Journal of Financial Economics, 69(3), 505-527. https://doi.org/10.1016/S0304-405X(03)00121-1

Li, V. (2019). The effect of real earnings management on the persistence and informativeness of earnings. The British Accounting Review, 51(4), 402-423. https://doi.org/10.1016/j.bar.2019.02.005

Martinez, A. L., & Passamani, R. R. (2014). Book-tax differences e sua relevância informacional no mercado de capitais no brasil. Revista de Gestão, Finanças e Contabilidade, 4(2), 20-37. https://doi.org/10.18028/rgfc.v4i2.615

Martins, V. G., Paulo, E., & do Monte, P. A. (2016). O gerenciamento de resultados contábeis exerce influência na acurácia da previsão de analistas no Brasil?. Revista Universo Contábil, 12(3), 73-90. https://doi.org/10.4270/ruc.2016322

Pae, J. (2005). Expected accrual models: the impact of operating cash flows and reversals of accruals. Review of Quantitative Finance and Accounting, 24(1), 5-22. https://doi.org/10.1007/s11156-005-5324-7

Rajgopal, S., & Venkatachalam, M. (2011). Financial reporting quality and idiosyncratic return volatility. Journal of Accounting and Economics, 51(1-2), 1-20. https://doi.org/10.1016/j.jacceco.2010.06.001

Reis, F. R. dos; Brunozi Jr., A. C., & Lima, B. P. de. (2018). Gerenciamento de Resultados e Persistência dos Dados Contábeis em Empresas de Capital Aberto Listadas no Brasil. Sociedade, Contabilidade e Gestão, 13(3). https://doi.org/10.21446/scg_ufrj.v13i3.15368

Tang, T. Y. H. (2015). Does Book-Tax Conformity Deter Opportunistic Book and Tax Reporting? An International Analysis. European Accounting Review, 24(3), 441-469. https://doi.org/10.1080/09638180.2014.932297

Tang, T. Y. H., & Firth, M. (2011). Can book-tax differences capture earnings management and tax Management? Empirical evidence from China. The International Journal of Accounting, 46(2), 175–204. https://doi.org/10.1016/j.intacc.2011.04.005

Watrin, C., Ebert, N., & Thomsen, M. (2014). Book-tax conformity and earnings management: insights from European one-and two-book systems. The Journal of the American Taxation Association, 36(2), 55-89. https://doi.org/10.2308/atax-50769

Whitaker, C. (2005). Bridging the book-tax accounting gap. Yale LJ, 115, 680. http://hdl.handle.net/20.500.13051/9619

Acknowledgments

This research was supported by the Brazilian agency CAPES – Coordination for the Improvement of Higher Education Personnel. Funding Code 001. CAPESPRINT.

ANNEX I

Australia	Denmark	Indonesia	Peru
South Africa	Spain	Israel	United Kingdom
Germany	United States	Italy	Singapore
Belgium	Philippines	Japan	Sweden
Brazil	Finland	Malaysia	Switzerland
Canada	France	Mexico	Thailand
Chile	Greece	Norway	Taiwan
China	Hong Kong	New Zealand	Turkey
Korea	India	Netherlands	

Figure 2 – List of researched countries
Source: Research data.