Accounting Conservatism and the Market Value of Cash Holdings in Brazil

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Abstract

Purpose – To analyze the relationship between conservative accounting policies and the value that shareholders attribute to the cash holdings of publicly-traded companies in Brazil. **Theoretical framework** – Cash holdings are the most vulnerable asset to the agent's opportunistic actions. Part of the discussion in the literature on the topic concerns the possible mechanisms to align the interests between the agent and principal. However, little is known on whether accounting conservatism, as a governance mechanism and important attribute of financial reports, can mitigate part of the agency problems related to the use of cash holdings. **Design/methodology/approach** – To analyze the market value of cash holdings we used the Pinkowitz, Stulz, and Williamson (2006) regression model. An accruals-based measure was used as a proxy for accounting conservatism. **Findings** – The evidence obtained indicates a positive association between conservative accounting policies and the market value of cash holdings. In general, the empirical evidence suggests that shareholders attribute a higher market value to the cash holdings of conservative companies. **Practical & social implications of research** – Presenting another benefit associated with accounting conservatism also helps in the discussion on conservatism in financial reports. This is relevant given the current debate on the merits of neutrality versus conservatism as a desirable characteristic of accounting numbers. **Originality/value** – This study contributes to the literature by demonstrating that conservative accounting policies have the potential to provide organizations with real economic benefits, serving as a governance mechanism that reduces the agency problems associated with the use of cash.

Keywords: Corporate governance, cash holdings, audit quality.

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1 Introduction

This study aims to analyze the relationship between conservative accounting policies and the value that shareholders attribute to the cash reserves of publicly traded companies listed on the official stock exchange of Brazil, called the *Brasil, Bolsa, Balcão* (B3). A company's cash holdings, as a significant portion of its total assets, are thought to be the most susceptible asset to being consumed, deviated, and misused through the agent's opportunistic actions (Dittmar & Mahrt-Smith, 2007; Jensen, 1986; Myers & Rajan, 1998). The agent, as an individual who maximizes their utility function, can more easily use their privileged informational situation to consume the private benefits linked to their company's cash holdings at the cost of the principal (Dittmar & Mahrt-Smith, 2007; Jensen, 1986; Manoel & Moraes, 2021a; Masulis et al., 2009; Myers & Rajan, 1998; Opler et al., 1999).

In general, the value that shareholders attribute to cash reserves is mirrored in the way they expect these resources to be used (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007; Pinkowitz & Williamson, 2007). In capital markets that are believed to be perfect, the value of an additional dollar of cash should be exactly US$ 1.00, where the costs for obtaining and maintaining these resources are equal to their expected benefits (Bates et al., 2018). However, capital market imperfections, such as information asymmetry and agency costs, mean that managers attribute a different value to companies' cash reserves (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007; Pinkowitz & Williamson, 2007). Aware of the vulnerability of cash holdings, the market discounts their value in organizations in which the corporate governance mechanisms cannot mitigate the managerial entrenchment related to their use. In other words, an additional dollar in cash may not be worth a dollar for the shareholders in the absence of robust mechanisms for aligning interests between the agent and principal (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007; Pinkowitz & Williamson, 2007).

The discounts related to the market value of cash holdings, however, may be mitigated by the existence and effectiveness of the monitoring mechanisms used in controlling the agent's opportunistic actions (Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Masulis et al., 2009). Previous studies, for example, indicate that a set of robust corporate governance mechanisms can reduce the risk of managers transforming cash into private benefits. As a result of the reduced value-destruction associated with cash reserves, investors attribute a higher value to this asset in companies with better corporate governance (Bates et al., 2018; Frésard & Salva, 2010; Dittmar & Mahrt-Smith, 2007; Masulis et al., 2009; Pinkowitz et al., 2006).

Accounting conservatism forms part of this scenario, given that conservative accounting policies at least partly reduce the agency costs that permeate the relationships between the parties involved in a company (García Lara et al., 2009; Manoel & Moraes, 2021a; Watts, 2003). Positive accounting theory suggests that the conservatism of financial reports plays an important role in reducing investment inefficiencies. More precisely, conservative accounting policies restrict, *ex ante*, managers' incentives to invest in value-destroying projects, as they do not allow them to defer recognizing losses to subsequent managers. They similarly provide mechanisms *ex post* in the early abandonment of low performance projects before the accumulation of large losses (Ahmed & Duellman, 2011; Ball & Shivakumar, 2005; Francis & Martin, 2010; Watts, 2003).

Therefore, accounting conservatism, as a component of accounting information quality and a corporate governance mechanism, is an important aspect in the effective monitoring of a company, reducing agency costs and increasing contract efficiency. Thus, the study is based on the literature that suggests that conservative accounting policies are part of a company's corporate control structure, which reduces managers' incentives to accept value-destroying projects (Ahmed & Duellman, 2007; Ball & Shivakumar, 2005; Francis & Martin, 2010; García Lara et al., 2009; Watts, 2003). Hence, this study is based on the assumption that conservative accounting policies can mitigate part of the value destruction associated with cash reserves.

Despite the literature addressing the effects of corporate governance mechanisms over the market value of cash holdings (Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Pinkowitz et al., 2006), little is known about the relationship between conservative accounting policies and the value that shareholders attribute to cash reserves. Exploring this association represents a promising opportunity to expand the understanding of the interaction between agency conflicts and cash management, and their combined effect on company value. This study

takes advantage of this empirical-theoretical gap in the literature to examine whether accounting conservatism can mitigate part of the agency costs related to the use of cash and whether that is reflected in the value shareholders attribute to this asset. Given the theoretical assumptions, a positive association is expected between conservative accounting policies and the market value of cash holdings.

To achieve the research objective, this study used the Brazilian stock market. Brazil, which is considered an emerging market, is marked by the difficulty of accessing sources of funding (Manoel & Moraes, 2018). So, in an environment of financial constraints, it is essential to have mechanisms that can control the manager's opportunistic actions, since managerial entrenchment is undesirable and results, among other things, in reduced shareholder wealth (Jensen, 1986). Accounting conservatism would therefore represent an alternative and less costly corporate governance mechanism, aiming to mitigate the agency conflicts related to the misuse of cash.

Analyzing the value that shareholders attribute to companies' cash holdings is relevant, especially in less developed markets, since maintaining assets in the form of cash and cash equivalents is costly, given that part of these resources could be allocated in other more profitable investments (Kim et al., 1998; Manoel & Moraes, 2021b; Opler et al., 1999). In addition, firms allocate a substantial part of their assets in cash and the expropriation of these resources has a devastating impact on shareholders' well-being (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Manoel & Moraes, 2021a; Pinkowitz et al., 2006). Consequently, the existence of mechanisms that improve contract efficiencies and act as a limiter of managerial opportunism, such as accounting conservatism, can mean that in the best-case scenario the agent only uses cash in projects that maximize the principal's utility function.

Consistently with the arguments presented, we verified a positive association between conservative accounting policies and the market value of cash holdings. The evidence obtained is consistent with accounting conservatism performing a relevant corporate governance role, providing managers with *ex ante* incentives to avoid projects with negative net present value (NPV) and in the *ex post* monitoring of investment decisions (Ball & Shivakumar, 2005; Watts, 2003). Therefore, aware that accounting conservatism can mitigate part of the agency costs associated with cash reserves, it can be verified that shareholders attribute a higher value to the cash holdings of companies that adopt conservative accounting practices. A

series of robustness tests were run that provide additional evidence in support of the research hypothesis.

The literature indicates various benefits associated with conservative accounting policies, such as: reduced cost of debt (Ahmed et al., 2002); reduced agency conflicts over dividends policies (Ahmed et al., 2002) and reduced risk of a collapse of the share price (Kim & Zhang, 2016); a lower level of informational asymmetry (LaFond & Watts, 2008) and of management of bad news (Kim & Zhang, 2016); and more profitable acquisitions (Francis & Martin, 2010), among others. The evidence from this study, in turn, indicates that conservative accounting policies mitigate part of the agency problems associated with the most vulnerable asset to opportunistic actions, so that shareholders place a higher value on the cash holdings of more conservative companies. Thus, this study initially contributes to the literature by providing evidence that accounting conservatism, as a corporate governance mechanism and a prominent attribute of financial reports, reduces the value destruction associated with the inappropriate use of cash reserves.

The findings of this study also have relevant practical implications. The literature considers studies on the economic benefits of accounting conservatism to be relevant, given the debate throughout the 2000s on the merits of neutrality versus conservatism as a desirable characteristic of accounting numbers (Artiach & Clarkson, 2012; Francis et al., 2013). And, in the end, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) adopted the neutrality of financial statements as being higher order, to the detriment of prudence or conservatism as desirable qualities. This choice was made since the IASB and the FASB state that conservatism introduces preconceptions in financial reports and, as a result, increases informational asymmetry (Artiach & Clarkson, 2012; Francis et al., 2013).

Thus, the empirical evidence indicates that removing the prudence principle would represent, among other things, an increase in agency costs, which would in turn reduce the accuracy in the decision-making process and the investor's well-being. Hence, this study also has practical implications by revealing that adopting more conservative accounting numbers has the potential to provide organizations with real economic benefits, serving as a corporate governance mechanism, so as to mitigate the agency conflicts associated with cash holdings. In light of this, the accounting conservatism principle would play a

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relevant and beneficial role within accounting principles and practices.

The rest of the article proceeds as follows. Section 2 develops the research hypothesis. Section 3 describes the research design in terms of the selection of the sample used, the regression model proposed, and the description of the variables. Section 4 presents the results found and the robustness tests. Finally, section 5 presents the study's concluding remarks.

2 Theoretical framework and hypothesis development

Maintaining part of the assets in the form of cash and cash equivalents provides benefits for companies in imperfect capital markets. Among those benefits, the literature mentions, for example, financing a company's daily operations (Dittmar & Mahrt-Smith, 2007; Keynes, 1936; Opler et al., 1999), addressing unexpected contingences (Kim et al., 1998; Opler et al., 1999), taking advantage of investment opportunities (Keynes, 1936; Opler et al., 1999), avoiding the transactional costs of fundraising (Kim et al., 1998), and reducing underinvestment problems (Frésard & Salva, 2010) and financial constraints, especially during crisis periods (Manoel, Moraes, Santos, & Neves, 2017; Manoel & Moraes, 2018), among others.

Although maintaining resources in cash provides benefits to companies, cash reserves can also have a negative side. First, part of the assets allocated in cash could be used in other more profitable investments (Kim et al., 1998; Opler et al., 1999). Moreover, cash reserves expose companies to managerial opportunism, since this asset is more easily converted into private benefits compared with less liquid assets (Dittmar & Mahrt-Smith, 2007; Myers & Rajan, 1998; Opler et al., 1999). Cash reserve expropriation can take many forms, such as the consumption of bonuses, the building of empires, excessive remuneration, or even stealing (Dittmar & Mahrt-Smith, 2007; Jensen, 1986; Masulis et al., 2009; Myers & Rajan, 1998).

Thus, if there are no mechanisms to align the interests between the agent and principal, the agent, as an individual who maximizes their utility function, is expected to not always act in accordance with the shareholders' interests (Jensen & Meckling, 1976). Agency problems represent one of the main questions regarding the studies on cash management (Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Jensen & Meckling, 1976; Myers & Rajan, 1998; Pinkowitz et al., 2006). The core of that

theory consists of the fact the principal knows they will lose part of their wealth, so they will seek to get the best performance from the agent within the possible conditions. Therefore, the principal should seek means to stimulate the agent to take decisions that are in agreement with their interests (Dittmar & Mahrt-Smith, 2007; Jensen & Meckling, 1976).

Within that context, Basu (1997) and Watts (2003) state that accounting conservatism, as one of the most prominent characteristics of accounting that has influenced its practice for centuries, is a mechanism that naturally emerges when the parties need to formalize a contract and reduce agency costs. For Basu (1997), accounting conservatism can be understood as the tendency of accounting to demand a higher level of verification for the recognition of good news than for bad news, so that profit reflects bad news more quickly than good news. In other words, based on Basu's (1997) perspective, it can be said that accounting conservatism is the accounting tendency to require a higher degree of verification to recognize positive outlooks (good news), compared with the recording of losses (bad news).

The misalignment of interests between the agent and principal can mean that the former invests in investment projects with a negative NPV, as well as delaying the abandonment of unprofitable projects that benefit them in some way. Consequently, hiding bad news enables less conservative companies to maintain unprofitable investment projects for a longer period compared with more conservative ones (Ahmed & Duellman, 2011; Ball & Shivakumar, 2005; Francis & Martin, 2010; García Lara et al., 2009; LaFond & Watts, 2008; Watts, 2003). The more timely recognition of losses than gains, however, enables shareholders and the board of directors to quickly identify unprofitable investment projects, so as to oblige managers to take suitable action (Francis et al., 2013; LaFond & Watts, 2008). Accounting conservatism, therefore, counterbalances the tendency of managers to hide bad news from investors and to accelerate the release of good news to information users, so as to reduce the agent's incentives to get involved in opportunistic actions that expropriate the principal (LaFond & Watts, 2008; Watts, 2003).

Therefore, more conservative accounting policies provide efficient *ex ante* incentives that can inhibit managers from investing in projects with a negative NPV, as they know that the losses will be recognized in a timelier way during their management. Thus, conservative accounting

policies facilitate the *ex post* monitoring of investment decisions, enabling directors and shareholders to capture initial signs regarding the profitability of investment projects. Based on more timely information, managers can take corrective actions, for example abandoning the project and substituting the responsible manager (Ahmed & Duellman, 2011; Ball & Shivakumar, 2005; Francis & Martin, 2010; Watts, 2003).

Consequently, in more conservative companies the agent is expected to preserve part of the cash reserves, in the best case scenario only investing in projects that really show profitability and that are in the principal's interest. On the other hand, in less conservative companies, the manager is expected to be more likely to accept investment projects with a negative NPV, as well as delaying the abandonment of projects with negative *ex post* cash flows.

Investors evaluate the market value of a company's cash holdings by mirroring the way they expect managers to use this resource (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007; Masulis et al., 2009). Aware of the problems related to the misuse of cash, investors penalize the market value of that asset in companies in which the control mechanisms cannot prevent the misuse of cash in actions that do not create shareholder value. Consequently, the market value of this asset is higher in companies in which the interests are aligned between the agent and principal, so that the former only uses cash in situations that maximize the principal's utility function (Bates et al., 2018; Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007; Masulis et al., 2009).

In light of that, previous empirical evidence indicates that shareholders attribute a higher market value to cash holdings in companies with more robust governance mechanisms (Dittmar & Mahrt-Smith, 2007; Frésard & Salva, 2010; Kalcheva & Lins, 2007). Thus, conservative accounting policies can help in mitigating the agency problems related to the use of cash, so as to provide the interested parties with tools that help in monitoring and limit the agent's capacity to expropriate this asset. Therefore, aware that accounting conservatism results in the *ex-ante* prevention of projects with a negative NPV and/or in the *ex post* identification of projects with unsatisfactory performance, investors are expected to attribute a higher value to the cash holdings of conservative companies. In light of that, the research hypothesis is that the market attributes a higher market value to the cash reserves of publicly traded companies in Brazil that adopt conservative accounting policies.

3 Research methodology

3.1 Sample description

The initial sample used in this study covers all the publicly traded companies listed on the official stock exchange of Brazil (B3) with information available in the Economática® database covering 2008 to 2019. We chose to start the sampling period in 2008 since the proposed econometric model requires variables that are presented in the Cash Flow Statement (CFS). All the information collected is in thousands of US dollars for the purposes of comparing with the literature this article is based on, including the works of Pinkowitz et al. (2006), Dittmar and Mahrt-Smith (2007), and Frésard and Salva (2010). The organizations were chosen according to the availability of data for building the proposed econometric model.

Following the literature on the topic (Dittmar & Mahrt-Smith, 2007; Opler et al., 1999), we removed financial companies and public utility firms from the final sample, as the cash holdings policies of these companies are influenced by statutory capital requirements and other government regulations. Finally, to mitigate any concern about survival bias, we included survivor and non-survivor companies in the sample with information available during the analysis period (Manoel & Moraes, 2021b). After imposing these restrictions, the final sample used consists of an unbalanced panel with 293 non-financial companies, totaling 1,839 observations.

Supplementary Material contains the database used. To avoid possible influences of extreme values on the results, we chose to winsorize all the continuous variables at the 1% and 99% levels (Dittmar & Mahrt-Smith, 2007).

3.2 Accounting conservatism

The literature on accounting conservatism indicates difficulties in the development of consistent proxies for this construct, so that as it stands there is no single measure generally accepted in the literature (Artiach & Clarkson, 2012; Francis et al., 2013). However, the evidence of Givoly and Hayn (2000) indicates that conservative accounting policies lead to persistent negative accruals. This suggests that mean negative accruals, over time, provide a consistent proxy for accounting conservatism.

Therefore, we chose to use accruals before depreciation (CONACC) as a proxy for conservative accounting policies. This measure is based on Givoly and Hayn (2000) and widely used in the accounting literature, for example by Ahmed and Duellman (2007) and Francis et al. (2013).

This measure is based on accruals and was obtained as net earnings plus depreciation and minus operational cash flow multiplied by -1 and deflated by the total assets accumulated in the previous three months. Positive values of this measure indicate greater conservatism. The intuition underlying this measure is that accounting conservatism results in persistently negative accruals, so that the more negative the average accruals are, the higher the level of the accounting conservatism in a particular firm (Ahmed & Duellman, 2007; Francis et al., 2013; Givoly & Hayn, 2000). This measure has two advantages: 1) it is not based on the market, that is, it does not depend on share price movements to identify good and bad news; 2) it is specific for the company year. Thus, to capture the effects of accounting conservatism on the market value of cash holdings we added the CONACC variable in the proposed model, as presented below.

3.3 Market value of cash holdings

In order to meet the research objective, we used the panel data regression model. To estimate the market value of cash holdings, we resorted to the model initially developed by Fama and French (1998) to study the impact of debt and dividends on company value and which was subsequently adapted by Pinkowitz et al. (2006) to analyze the market value of cash holdings. The model used by Pinkowitz et al. (2006) can be observed in Equation 1:

$$
\begin{aligned}
V_{i,t} = \alpha_i &+ \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \\
&\beta_4 dNa_{i,t} + \beta_5 dNa_{i,t+1} + \beta_6 RD_{i,t} + \beta_7 dRD_{i,t} + \\
&\beta_8 dRD_{i,t+1} + \beta_9 I_{i,t} + \beta_{10} dI_{i,t} + \beta_{11} dI_{i,t+1} + \\
&\beta_{12} D_{i,t} + \beta_{13} dD_{i,t} + \beta_{14} dD_{i,t+1} + \beta_{15} dV_{i,t+1} + \\
&\beta_{16} dC_{15} h_{i,t} + \beta_{17} dCash_{i,t+1} + \epsilon_{i,t}
\end{aligned}
\tag{1}
$$

where V is a company's market value (market-to-book) calculated at the end of the fiscal year as the sum of the market value of net equity and the book value of short- and long-term debts; E is earnings before interest and tax; NA is net assets, that is, the total number of assets minus cash and equivalents; RD represents research and development (R&D) spending; I is financial expenditure; D is dividends paid; $Cash$ is the sum of cash and cash equivalents. In addition, X_t is the level of each variable X in year t divided by total assets in year t; dX_t is the change

in the level of X from year $t-1$ to year t divided by total assets in year t, that is, $((X_t - X_{t-1}) / \text{Total Assets}_t)$; dX_{t+1} is the change in the level of X from year $t+1$ to year t divided by total assets in year t, that is, $((X_{t+1} - X_t)/\text{Total Assets}_t)$.

The control variables in level and differences are included in the regression model to capture the expectations regarding future earnings and other effects that potentially influence a company's value. Moreover, all the variables were divided by total assets to make the company attributes comparable. In Equation 1, the coefficient β_{16} can be interpreted as a measure of the value that shareholders attribute to a dollar in cash (Pinkowitz et al., 2006). The Pinkowitz et al. (2006) model uses the market-to-book variable as dependent together with other control variables. However, considering that this variable is also a proxy for accounting conservatism, we chose to use Tobin's Q as a dependent variable in the proposed model (Kalcheva & Lins, 2007; Manoel & Moraes, 2021a). Tobin's Q is also a common proxy in corporate financial and accounting studies for measuring a company's value (Kalcheva & Lins, 2007).

Besides that adaptation, we also chose to use the percentage variation in revenues as a proxy for investment opportunities instead of R&D spending. This choice was made since Brazilian companies did not report their R&D spending before 2007 and this information is only available in the explanatory notes after that period. Therefore, we chose to use the variation in revenue as the best proxy available for the investment opportunities construct, given its use by Ahmed and Duellman (2007), Pinkowitz and Williamson (2007), Frésard and Salva (2010), and Manoel and Moraes (2021a).

Finally, we chose to extend the Pinkowitz et al. (2006) model by including the conservatism measure (CONACC) and its interaction with the variation in the level of cash holdings. The CONACC variable was included in isolation in the model with the aim of controlling the direct association between accounting conservatism and the market value of companies. Therefore, to test the relationship between accounting conservatism and the market value of cash holdings, we used the regression model according to Equation 2:

$$
\begin{aligned}
V_{i,t} = \alpha_i &+ \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \beta_4 dNa_{i,t} + \beta_5 dNa_{i,t+1} \\
&+ \beta_6 \text{Growth Opportunities}_{i,t} + \beta_7 I_{i,t} + \beta_8 dI_{i,t} + \beta_9 dI_{i,t+1} + \beta_{10} D_{i,t} + \beta_{11} dD_{i,t} \\
&+ \beta_{12} dD_{i,t+1} + \beta_{13} dV_{i,t+1} + \beta_{14} dCash_{i,t} + \beta_{15} \text{CONACC}_{i,t} + \beta_{16} dCash_{i,t} \\
&* \text{CONACC}_{i,t} + \beta_{17} dCash_{i,t+1} + \epsilon_{i,t}
\end{aligned}
\tag{2}
$$

where V is a company's market value (Tobin's Q) calculated as the ratio between the company's market value and total

assets, *Growth Opportunities* is the proxy used for investment opportunities, obtained through the percentage variation in revenues; CONACC is the proxy used for conservatism, defined as net earnings plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years; and the other variables are the same as in Equation 1.

As listed in the research hypothesis, we are interested in the market value of cash holdings in relation to accounting conservatism. Thus, the hypothesis test is that the coefficient β_{16} ($dCash_{i,t} * CONACC_{i,t}$) is statistically positive, indicating that shareholders place a higher value on the cash holdings of companies that adopt conservative accounting policies. To control the macroeconomic effects, we also included year dummy variables. To mitigate part of the potential problems of correlated omitted variables we used the company fixed effects model.

4 Results

4.1 Descriptive statistics

Table 1 reports the descriptive statistics of the variables used in this study for a sample of 293 publicly traded companies between 2008 and 2019, totaling 1,839 observations.

Observing Table 1, it is verified that the non-financial companies listed on the B3 maintain a mean (median) level of total assets allocated in cash and equivalents in relation to total assets of 7.86% (5.40%), with a standard deviation of 7.92%. It is also verified that the mean (median) value of cash reserves in relation to net assets, that is, total assets minus cash and cash equivalents, is 9.47% (5.71%). The descriptive statistics also indicate that the companies presented an annual decrease in sales of approximately -2.31%. The mean value of the conservatism measure (CONACC) used is -85.48%, which is consistent with accruals being negative on average, since we multiplied this proxy by -1. The variation in the levels of cash in relation to total assets has a mean (median) of -1.21% (-0.24%).

4.2 Main results

Panel A of Table 2 presents the results of the econometric model (Equation 2) without the accounting conservatism measure. Panel B, in turn, shows the results of the analyses of Equation 2 considering the effects of accounting conservatism on the market value of cash holdings. Initially, we chose to report the findings without considering the effects of accounting conservatism, with the aim of having a basis for comparison regarding the market value of cash holdings in Brazil with other international studies (Frésard & Salva, 2010; Dittmar & Mahrt-Smith, 2007; Kalcheva & Lins, 2007; Pinkowitz & Williamson, 2007). The dependent variable of the regression model is the Tobin's Q, calculated as the ratio between a company's market value and its total assets. To save space, the tables below do not include the coefficients of the year dummies.

The results obtained and not tabulated from the variance inflation factor test indicated that multicollinearity is not a problem in this study, given that the highest value found for the test was 2.06 (Gujarati & Porter, 2012). In addition, we used the White test to test the heteroscedasticity of the model. The null hypothesis is rejected by verifying that the model presented a heteroscedasticity problem. So, we used the robust standard errors regression technique given its better fit in situations in which there are heteroscedasticity problems. Non-tabulated results also indicated that the empirical evidence remains after including the correction with errors clusterized by industry. Finally, Table 2 reports the Durbin-Watson test. The results obtained from this test were 0.827 and 0.802 for Panels A and B, respectively. These values may indicate positive serial autocorrelation problems. However, it has to be considered that there are stochastic elements in the model and that it is static with panel data, which may impair the analyses (Gujarati & Porter, 2012).

The main coefficient of interest in Panel A of Table 2 is that of the variation in cash ($dCash_{i,t}$). The results reported indicate that this coefficient is positive with a value of 0.092. Despite not being statistically significant, the coefficient of variation of cash indicates that investors attribute a low market value to the cash holdings of Brazilian companies. This value of US$ 0.092 may reflect the market's concern that managers will waste cash on investment projects that do not add shareholder value in Brazil. According to Pinkowitz et al. (2006), emerging countries generally provide low investor protection and weaker corporate governance standards. Thus, the market expects managers to be able to more easily expropriate the corporate resources of companies located in emerging markets (Pinkowitz et al., 2006). Therefore, consistently with the evidence from Pinkowitz et al. (2006), this study may identify weak evidence that in a context of

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Table 1
Descriptive Statistics

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
Cash/Total Assets	0.078	0.054	0.079	0.000	0.374
Cash/Net Assets	0.094	0.057	0.110	0.000	0.597
$V_{i,t}$	0.670	0.411	0.774	0.010	4.223
$E_{i,t}$	0.044	0.058	0.116	-0.604	0.311
$dE_{i,t}$	-0.006	-0.001	0.108	-0.522	0.417
$dE_{i,t+1}$	0.003	0.000	0.105	-0.359	0.567
$dNa_{i,t}$	0.000	0.000	0.000	0.000	0.000
$dNa_{i,t+1}$	0.000	0.000	0.000	0.000	0.000
$Growth\,Opportunities_{i,t}$	-0.023	-0.038	0.325	-0.735	1.555
$I_{i,t}$	0.071	0.051	0.072	0.000	0.418
$dI_{i,t}$	-0.001	-0.001	0.047	-0.219	0.183
$dI_{i,t+1}$	-0.003	-0.001	0.047	-0.220	0.170
$D_{i,t}$	0.020	0.008	0.033	0.000	0.182
$dD_{i,t}$	-0.000	0.000	0.026	-0.114	0.114
$dD_{i,t+1}$	-0.001	0.000	0.022	-0.101	0.084
$dV_{i,t+1}$	0.098	0.005	0.539	-1.474	2.551
$dCash_{i,t}$	-0.012	-0.002	0.059	-0.256	0.132
$CONACC_{i,t}$	-0.854	-0.857	0.191	-1.499	-0.327
$dCash_{i,t} * CONACC_{i,t}$	0.008	0.002	0.045	-0.119	0.190
$dCash_{i,t+1}$	0.006	-0.000	0.061	-0.153	0.288

Notes: *Cash* is the sum of cash and cash equivalents; V is a company's market value (Tobin's Q) calculated as the ratio between the company's market value and total assets; E is earnings before extraordinary items divided by total assets; NA is net assets, that is, the total number of assets minus cash and equivalents divided by total assets; *Growth Opportunities* is the proxy used for investment opportunities, obtained through the percentage variation in revenues; I is financial expenditure divided by total assets; D is dividends paid divided by total assets; *CONACC* is the proxy used for conservatism, defined as net earnings before extraordinary items plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years.

low protection of shareholders' rights, such as in Brazil, the market value of cash is lower than a dollar.

Addressing the control variables, it can be verified that the results are generally consistent with Pinkowitz et al. (2006). For example, the percentage variation in revenue obtained a statistically positive coefficient with the Tobin's Q variable. The positive coefficient for this variable indicates that the companies with bigger investment opportunities have a higher market value. In addition, the results suggest a positive association between the coefficient of the earnings variable used ($E_{i,t}$) and a company's value. Another important observation is that the companies that pay a higher percentage of dividends in relation to their total assets have a higher market value.

Next, to test the research hypothesis, we estimated the regression model given by Equation 2 with company fixed effects, as according to Panel B of Table 2. Based on Panel B of Table 2, it is perceived that the coefficient of the interaction term β_{16} ($dCash_{i,t} * CONACC_{i,t}$) is positive (1.078) and statistically significant at the 5% level. The positive association between conservative accounting policies and the market value of cash indicates that, all other factors remaining constant, investors attribute a higher value to the cash holdings of companies that adopt conservative accounting policies. In general, investors assess the market value of cash holdings by mirroring how they expect this asset to be used. The evidence therefore

Table 2
Fixed Effects Regression Model with Robust Standard Errors

Variables	Panel A	Panel B
	Coefficients (Standard Error)	Coefficients (Standard Error)
Constant	0. 552*** (0.066)	0.792*** (0.098)
$E_{i,t}$	0.332 (0.221)	0.417* (0.219)
$dE_{i,t}$	0.140** (0.068)	0.125* (0.068)
$dE_{i,t+1}$	0.221 (0.139)	0.245* (0.135)
$dNa_{i,t}$	8644.030** (3635.370)	10895.500*** (3565.290)
$dNa_{i,t+1}$	7755.590*** (2757.540)	6782.750*** (2491.000)
$Growth\,Opportunities_{i,t}$	0.059* (0.033)	0.087*** (0.033)
$I_{i,t}$	-0.489* (0.257)	-0.630** (0.265)
$dI_{i,t}$	0.005 (0.307)	0.103 (0.299)
$dI_{i,t+1}$	-0.386 (0.267)	-0.414 (0.257)
$D_{i,t}$	5.882*** (1.576)	5.391*** (1.564)
$dD_{i,t}$	-0.655* (0.356)	-0.671* (0.341)
$dD_{i,t+1}$	2.819*** (1.023)	2.650*** (1.012)
$dV_{i,t+1}$	-0.261*** (0.058)	-0.264*** (0.059)
$dCash_{i,t}$	0.092 (0.140)	0.886*** (0.333)
$CONACC_{i,t}$	-	0.274*** (0.085)
$dCash_{i,t} * CONACC_{i,t}$	-	1.078** (0.423)
$dCash_{i,t+1}$	0.518 (0.336)	0.556* (0.335)
Observations	1,839	1,839
Adjusted R²	0.311	0.321
Durbin-Watson test	0.827	0.802
p-value	0.000	0.000

Notes: The dependent variable of the model is the Tobin's Q, calculated as the ratio between the company's market value and total assets; *E* is earnings before extraordinary items divided by total assets; *NA* is net assets, that is, the total number of assets minus cash and equivalents divided by total assets; *Growth Opportunities* is the proxy used for investment opportunities, obtained through the percentage variation in revenues; *I* is financial expenditure divided by total assets; *D* is dividends paid divided by total assets; *CONACC* is the proxy used for conservatism, defined as net earnings before extraordinary items plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years; *statistically significant at 10%; **statistically significant at 5%; ***statistically significant at 1%.

suggests that accounting conservatism is associated with a higher market value of cash.

More specifically, the findings indicate that conservative accounting policies appear to lead to more efficient investment decisions, so as to preserve the cash reserves that would be used in investment projects with a negative NPV and/or in projects with unsatisfactory performance that would not be discontinued. Aware that conservatism reduces part of the agency conflicts related to the inappropriate use of cash reserves, the market thus places a higher value on this asset in companies that adopt conservative accounting policies. On the other hand, in companies that do not adopt conservative accounting policies, shareholders foresee that managers will more easily benefit from the private benefits linked to cash reserves and consequently apply a greater discount on the

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market value of that asset in those companies. Therefore, this first set of results supports the research hypothesis. Also, the findings provide additional evidence regarding the role played by accounting conservatism as a corporate governance mechanism in reducing agency costs (Ball & Shivakumar, 2005; Watts, 2003).

Also, regarding Panel B of Table 2, it can be verified that the coefficient of the conservatism variable used in isolation (0.274) is also positive and significant. This suggests that companies that adopt conservative accounting policies have a higher market value. This evidence supports the argument of LaFond and Watts (2008) that accounting conservatism increases a company's value. In addition, the results of the control variables are generally consistent with the evidence presented in Panel A of Table 2. Finally, the adjusted R^2 obtained is 32.1%, indicating that the model used explains a substantial part of the variation in the market value of companies in Brazil.

4.3 Robustness tests

This section reports the results of a series of robustness tests that provide additional evidence in support of the research hypothesis. As a first robustness test, we analyzed the initial model after removing the sample of companies that are listed on the US stock exchange through American Depositary Receipts (ADRs). The evidence from Frésard and Salva (2010) indicates that companies that issue ADRs receive a higher value due to their excess cash holdings than their domestic counterparts. The authors attribute this result to the fact that investors associate a US listing with a commitment to better corporate governance practices, which reduces the risk of the cash reserves being expropriated. Besides exposure to the US laws, the companies listed in the US through ADRs are also subject to extra scrutiny from large investors, journalists, and other financial market intermediaries, such as financial analysts and auditors. This increased monitoring, in turn, limits the manager's capacity to expropriate resources at the cost of the principal (Frésard & Salva, 2010).

Thus, a cross listing in the US stock market has various characteristics that limit the private benefits associated with cash reserves and which, as a result, reduce the discounts that investors place on the market value of that asset (Frésard & Salva, 2010). Thus, aiming to isolate the effects of a cross listing in the US market on the results of the present study, we again analyzed the model

proposed in Equation 2 without the Brazilian companies (179 observations) that issue ADRs at any level. The results of the fixed effects model are reported in Table 3.

When the analysis is conducted with the Brazilian companies that do not issue ADRs, according to Table 3, it is verified that the coefficient of the interaction variable ($dCash_{i,t} * CONACC_{i,t}$) is positive (1.067) and statistically significant. This result again supports the research hypothesis. Consequently, the evidence is robust to the removal of the effects of a cross listing in the US stock market.

Unreported results also indicate that the main findings of this study are the same when the market-to-book variable is used, calculated at the end of the fiscal year as the sum of the market value of net equity and the book value of short- and long-term debts divided by the book value of assets, as a proxy for accounting conservatism. However, it warrants mentioning that using this measure may not be the best option for measuring accounting conservatism, as it is also used as a proxy for growth opportunities (Francis et al., 2013).

Non-tabulated evidence also indicates that the main conclusions of this study remain when the sampling period starts in 2010 instead of 2008. Brazil started to partially adopt the International Financial Reporting Standards (IFRS) in 2008 and 2009 as a result of Law 11,638/2007. After the transition period beginning in 2008, full obligatory adoption of IFRS began in 2010 in Brazil in accordance with the rules issued by the Accounting Pronouncements Committee (CPC). This additional test is relevant as it mitigates any possible influence of the period of transition to the rules on the results of the study. In sum, the evidence reported in this subtopic provides support for the research hypothesis, indicating that shareholders attribute a greater market value to the cash holdings of conservative companies.

4.4 Control for audit quality

Despite the initial findings of this study indicating that conservative accounting policies can reduce the agency costs associated with the use of cash reserves, the effects found may not necessarily be a direct influence of accounting conservatism. Studies such as those of Ahmed and Duellman (2007) and García Lara et al. (2009), for example, indicate that conservative accounting policies are associated with strong governance structures, so that the arrangements of the total set of governance devices

Table 3
Fixed Effects Regression Model with Robust Standard Errors

Variables	Panel A	Panel B
	Coefficients (Standard Error)	Coefficients (Standard Error)
Constant	0.537*** (0.068)	0.767*** (0.103)
$E_{i,t}$	0.303 (0.223)	0.381* (0.221)
$dE_{i,t}$	0.139** (0.067)	0.126* (0.067)
$dE_{i,t+1}$	0.219 (0.142)	0.242* (0.138)
$dNa_{i,t}$	8861.320** (3800.360)	11034.600*** (3750.460)
$dNa_{i,t+1}$	7766.690*** (2839.480)	6844.690*** (2580.690)
$Growth\,Opportunities_{i,t}$	0.069* (0.035)	0.095*** (0.035)
$I_{i,t}$	-0.457* (0.258)	-0.599** (0.268)
$dI_{i,t}$	-0.013 (0.311)	0.081 (0.303)
$dI_{i,t+1}$	-0.391 (0.269)	-0.419 (0.260)
$D_{i,t}$	5.913*** (1.695)	5.443*** (1.682)
$dD_{i,t}$	-0.616* (0.368)	-0.635* (0.354)
$dD_{i,t+1}$	2.806** (1.088)	2.640** (1.075)
$dV_{i,t+1}$	-0.249*** (0.058)	-0.252*** (0.059)
$dCash_{i,t}$	0.087 (0.144)	0.869*** (0.334)
$CONACC_{i,t}$	-	0.263*** (0.089)
$dCash_{i,t}*CONACC_{i,t}$	-	1.067** (0.429)
$dCash_{i,t+1}$	0.482 (0.344)	0.516 (0.343)
Observations	1,660	1,660
Adjusted R²	0.310	0.319
Durbin-Watson test	0.847	0.822
p-value	0.000	0.000

Notes: The dependent variable of the model is the Tobin's Q, calculated as the ratio between the company's market value and total assets; E is earnings before extraordinary items divided by total assets; NA is net assets, that is, the total number of assets minus cash and equivalents divided by total assets; $Growth\,Opportunities$ is the proxy used for investment opportunities, obtained through the percentage variation in revenues; is financial expenditure divided by total assets; D is dividends paid divided by total assets; $CONACC$ is the proxy used for conservatism, defined as net earnings before extraordinary items plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years; *statistically significant at 10%; **statistically significant at 5%; ***statistically significant at 1%.

perform a relevant role in the implementation of accounting conservatism.

Along these lines, Ahmed and Duellman (2007) indicate that conservative accounting policies are based on a system of mechanisms of good corporate governance practices, such as independent boards of directors, directors with financial experience, and independent auditors, among others. These mechanisms, in turn, will seek

to ensure that an organization commits over the long run to accounting policies that include the principle of conservatism.

Therefore, the positive association between accounting conservatism and the market value of cash holdings could be attributed to the effect captured by other corporate governance mechanisms together with conservative accounting policies and not necessarily

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only by the effect of accounting conservatism. Thus, the endogenous nature of corporate governance and of accounting conservatism may be influencing our results. In light of that, stating that the market value of an additional dollar of cash significantly increases in companies that adopt more conservative accounting policies requires greater efforts to increase the generalization power of the results.

To mitigate the concern that the results are driven by other omitted governance variables, we also included in the proposed econometric model a proxy for the audit quality construct. We controlled by audit quality, as a quality external audit performs a significant governance role in aligning interests between the agent and principal. For that, in this study we used the binary variable Big 4, which we attributed the value of 1 if a company was audited by one of the big four audit firms (Deloitte, Ernst & Young, KPMG, and PWC) in each respective year, and 0 otherwise. We chose that criterion as the Big 4 auditors promote conditional (Chung et al., 2003) and unconditional conservatism (Cano-Rodríguez, 2010) to a greater extent than non-Big 4 auditors. The demand of Big 4 auditors for conservative accounting policies derives from their objective of reducing the risk of litigation and avoiding damage to their image (Chung et al., 2003).

Thus, the better-quality audit firms are expected to have greater incentives to prefer conservative accounting policies in the firms they audit (Cano-Rodríguez, 2010; Chung et al., 2003). So, to avoid possible interference of audit quality in the results obtained, given the endogenous nature of audit quality and of accounting conservatism, we also added the Big 4 binary variable separately and its interaction with the variation in cash in the econometric model. The new model can be observed in Equation 3.

$$
\begin{aligned}
V_{i,t} = \alpha_i &+ \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \\
&\beta_4 dNa_{i,t} + \beta_5 dNa_{i,t+1} + \beta_6 \text{Growth Opportunities}_{i,t} + \\
&\beta_7 I_{i,t} + \beta_8 dI_{i,t} + \beta_9 dI_{i,t+1} + \beta_{10} D_{i,t} + \beta_{11} dD_{i,t} + \\
&\beta_{12} dD_{i,t+1} + \beta_{13} dV_{i,t+1} + \beta_{14} d\,\text{Cash}_{i,t} + \\
&\beta_{15}\,\text{CONACC}_{i,t} + \beta_{16} d\,\text{Cash}_{i,t} * \text{CONACC}_{i,t} + \\
\beta_{17}\,\text{BIG4}_{i,t} &+ \beta_{18} d\,\text{Cash}_{i,t} * \text{BIG4}_{i,t} + \beta_{19} d\,\text{Cash}_{i,t+1} + \epsilon_{i,t}
\end{aligned}
\tag{3}
$$

In this model the interaction coefficient β_{16} ($dCash_{i,t} * CONACC_{i,t}$) is expected to continue being positive even after controlling for audit quality. The definitions of the other variables are the same as in Equation 2. The results are reported in Table 4.

Observing Table 4, it is verified that the coefficient of interest β_{16} is positive and statistically significant at the 5% level. Consistently with the initial evidence, the results reported in Table 4 indicate that investors attribute a higher market value to the cash holdings of Brazilian companies that adopt conservative accounting practices. Therefore, the effect of accounting conservatism that was documented remains even after controlling for audit

Table 4
Fixed Effects Regression Model with Robust Standard Errors

Variables	Coefficients (Standard Error)
Constant	0.781*** (0.102)
$E_{i,t}$	0.408* (0.215)
$dE_{i,t}$	0.125* (0.065)
$dE_{i,t+1}$	0.241* (0.135)
$dNa_{i,t}$	10764.400*** (3440.050)
$dNa_{i,t+1}$	6800.560*** (2492.770)
$Growth\,Opportunities_{i,t}$	0.087*** (0.033)

Notes: The dependent variable of the model is the Tobin's Q, calculated as the ratio between the company's market value and total assets; E is earnings before extraordinary items divided by total assets; NA is net assets, that is, the total number of assets minus cash and equivalents divided by total assets; $Growth\,Opportunities$ is the proxy used for investment opportunities, obtained through the percentage variation in revenues; I is financial expenditure divided by total assets; are the dividends paid divided by total assets; $CONACC$ is the proxy used for conservatism, defined as net earnings before extraordinary items plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years; $BIG4$ is a binary variable that takes the value of 1 if the organization is audited by a Big 4 firm (Deloitte, Ernst & Young, KPMG, and PWC) in each respective period and 0 otherwise; *statistically significant at 10%; **statistically significant at 5%; ***statistically significant at 1%.

Table 4
Continued...

Variables	Coefficients (Standard Error)
$I_{i,t}$	-0.636** (0.271)
$dI_{i,t}$	0.106 (0.298)
$dI_{i,t+1}$	-0.418 (0.257)
$D_{i,t}$	5.453*** (1.572)
$dD_{i,t}$	-0.649* (0.341)
$dD_{i,t+1}$	2.685*** (1.015)
$dV_{i,t+1}$	-0.262*** (0.059)
$dCash_{i,t}$	0.668** (0.304)
$CONACC_{i,t}$	0.271*** (0.085)
$dCash_{i,t} * CONACC_{i,t}$	1.250*** (0.452)
$BIG4_{i,t}$	0.009 (0.035)
$dCash_{i,t} * BIG4_{i,t}$	0.477 (0.304)
$dCash_{i,t+1}$	0.577* (0.331)
Observations	1,837
Adjusted R^2	0.323
Durbin-Watson test	0.801
p-value	0.000

Notes: The dependent variable of the model is the Tobin's Q, calculated as the ratio between the company's market value and total assets; E is earnings before extraordinary items divided by total assets; NA is net assets, that is, the total number of assets minus cash and equivalents divided by total assets; *Growth Opportunities* is the proxy used for investment opportunities, obtained through the percentage variation in revenues; I is financial expenditure divided by total assets;   are the dividends paid divided by total assets; *CONACC* is the proxy used for conservatism, defined as net earnings before extraordinary items plus depreciation and minus operational cash flows multiplied by -1 and deflated by the total assets accumulated in the previous three years; *BIG*4 is a binary variable that takes the value of 1 if the organization is audited by a Big 4 firm (Deloitte, Ernst & Young, KPMG, and PWC) in each respective period and 0 otherwise; *statistically significant at 10%; **statistically significant at 5%; ***statistically significant at 1%.

quality. Continuing with the results of Table 4, we observe that the binary variable $BIG4_{i,t}$ and its interaction with the variation in cash are positive, but without statistical significance. The other results presented are similar to those previously documented.

5 Concluding remarks

Aware of the problems related to the misuse of cash, the market penalizes the market value of that asset in companies in which the corporate governance mechanisms are unable to align the agent's interests with those of the principal. This study aimed to analyze the relationship between conservative accounting policies and the value that shareholders attribute to the cash reserves of publicly traded companies listed on the Brazilian stock exchange. The final sample used covers the non-financial companies listed on the B3 with available data covering 2008 to 2019. The research hypothesis is that investors attribute a higher market value to the cash holdings of companies that adopt conservative accounting practices in relation to less conservative ones. To analyze the market value of cash holdings we used the methodology of Pinkowitz et al. (2006) and a measure based on accruals before depreciation (CONACC) as a proxy for accounting conservatism.

Consistently with the research hypothesis, we found strong evidence of a positive association between conservative accounting policies and the market value of cash holdings. This result suggests that the market attributes a higher market value to cash holdings in companies that adopt conservative accounting policies. The findings of the study remain after a robustness test and controlling for audit quality. Thus, the empirical evidence indicates that conservative accounting policies can mitigate part of the agency problems associated with cash reserves. This

more precisely occurs because conservative accounting policies restrict, *ex ante*, managers' incentives to invest in value-destroying projects, since they do not allow them to defer the recognition of losses to subsequent managers. They similarly provide *ex post* mechanisms in the early abandonment of low performance projects before the accumulation of large losses. Together, this evidence is consistent with accounting conservatism performing an important role as a corporate governance mechanism in reducing agency costs, and that shareholders benefit from that.

Accounting conservatism therefore offers an alternative and generally less costly means of preventing managers from getting involved in value-destroying projects. These findings are relevant for the Brazilian context, as they suggest that conservatism is a governance mechanism that can be used to reduce the value destruction associated with the use of cash reserves. Moreover, presenting another benefit associated with accounting conservatism also has implications for regulators and those responsible for defining accounting rules. In fact, helping in the discussion on conservatism in financial reports is relevant given the current debate on the merits of neutrality versus conservatism as a desirable characteristic of accounting numbers.

Despite all of the care taken in the methodological aspects, this study is also subject to limitations. First, it should be mentioned that the evidence obtained may not necessarily be a direct benefit of conservatism. Instead of that, the findings may reflect the combined effect of conservatism with other corporate governance mechanisms. This occurs due to the endogenous nature of corporate governance, since governance and conservatism can be determined simultaneously (García Lara et al., 2009), and accounting conservatism may well complement other governance mechanisms (Francis & Martin, 2010). Therefore, even after controlling for audit quality, it cannot be discarded that the evidence obtained is due to the combined effect of accounting conservatism together with other governance mechanisms for which we have no other readily available measures.

The findings of this article are also limited to the context of the Brazilian stock market. Finally, another limitation is associated with the capacity of the proxy used in capturing the accounting conservatism construct. We focused on using a measure based on accruals before depreciation (CONACC) as it is not based on the market and is specific for the company year. Other proxies are also used by the literature, but most of them are cross-sectional measures, while in this study specific company measures are needed.

Considering the limitations presented, it is understood that new studies could be conducted. For example, in recent years the environmental, social, and corporate governance practices of an organization have gained prominence in the national and international media. Therefore, new studies could analyze the relationship between Environmental, Social, and Governance (ESG) and the market value of cash holdings. Moreover, corporate governance is a very broad construct. Thus, new studies could also analyze the relationship between other governance mechanisms and the value that shareholders attribute to cash reserves. For that, it is understood that it is important to try to isolate the effects of each governance mechanism on the value of cash holdings, given the endogenous nature of corporate governance.

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Supplementary Material

Supplementary material accompanies this paper.

Supplementary Data - Accounting Conservatism and the Market Value of Cash Holdings in Brazil

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