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THE EFFECT OF IFRS ADOPTION ON CASH HOLDINGS IN LATIN AMERICA UNDER THE EARNINGS MANAGEMENT PERSPECTIVE

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Resumo/Abstract

The aim of this study is to analyze the effect of mandatory IFRS adoption on cash holdings in Latin America. We also verified the effect of mandatory IFRS adoption on earnings management practices in Latin American firms. We applied robust-GMM regressions in a sample of 7,058 firm-year observations from Brazil, Argentina, Chile, Colombia, Mexico and Peru in the period of 2005 to 2018. The findings demonstrate that the adoption of IFRS standards has decreased earnings management practices in Latin American firms and these firms are reducing its cash holdings, suggesting that better quality of financial reports could play a role to reduce the effects of asymmetric information. Additional analysis demonstrates that the benefits of IFRS adoption is more pronounced in non-ADR firms once ADR firms has already demonstrated strong incentives to improve the level of accounting information quality. Our study seeks to contribute to the cash management literature, demonstrating that cash holdings are sensitive to accounting information quality since better quality of financial reports though the IFRS adoption could mitigate the effects of asymmetric information even in low investor protection countries, as Latin America. Our findings also contribute to the expansion of studies in this context, corroborating with previous evidence that incentives have a play on the effectiveness of IFRS standards.

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Abstract

The aim of this study is to analyze the effect of mandatory IFRS adoption on cash holdings in Latin America. We also verified the effect of mandatory IFRS adoption on earnings management practices in Latin American firms. We applied robust-GMM regressions in a sample of 7,058 firm-year observations from Brazil, Argentina, Chile, Colombia, Mexico and Peru in the period of 2005 to 2018. The findings demonstrate that the adoption of IFRS standards has decreased earnings management practices in Latin American firms and these firms are reducing its cash holdings, suggesting that better quality of financial reports could play a role to reduce the effects of asymmetric information. Additional analysis demonstrates that the benefits of IFRS adoption is more pronounced in non-ADR firms once ADR firms has already demonstrated strong incentives to improve the level of accounting information quality. Our study seeks to contribute to the cash management literature, demonstrating that cash holdings are sensitive to accounting information quality since better quality of financial reports though the IFRS adoption could mitigate the effects of asymmetric information even in low investor protection countries, as Latin America. Our findings also contribute to the expansion of studies in this context, corroborating with previous evidence that incentives have a play on the effectiveness of IFRS standards.

Keywords: Cash Holdings. IFRS. Earnings Management. Latin America. Accounting Quality.

1. Introduction

Cash holdings management is one of the most important decisions in a firm (Chen & Mahajan, 2010). Opler, Pinkowitz, Stulz and Williamson (1999) highlight that cash holdings are impacted by three main factors. The first is related to transaction costs, in which larger amounts of cash tend to reduce those costs. The second is related to informational asymmetry, which makes external financing more expensive. Finally, the last factor is associated with agency problems under uncertainty and risk, increasing cash holdings by firms (Dittmar, Mahrt-Smith & Servaes, 2003; Ferreira & Vilela, 2004).

Several studies have investigated the role of informational asymmetry in cash decisions (Dittmar et al., 2003; Farinha, Mateus & Soares, 2018; García-Teruel & Martínez-Solano, 2008; García-Teruel, Martínez-Solano & Sánchez-Ballesta, 2009; Sun, Yung & Rahman, 2014). The results converge to a positive relationship between cash holdings and asymmetric information.

In the presence of lower earnings quality, there is a perception that asymmetric information is more accentuated (Sun et al., 2014). Consequently, managers need to maintain a liquidity buffer to protect against a possible lack of cash or to cover future investment needs (García-Teruel et al., 2009).

In this sense, Accounting plays an important role in reducing information asymmetry, notably through the adoption of International Financial Reporting Standards (IFRS). Lourenço and Castelo Branco (2015) indicate that, with the IFRS adoption, a set of rules gives rise to a set of principles guided by the useful information provided by financial reports.

Empirical evidence has shown that the benefits of IFRS adoption for investors are mixed (Brown, 2011), especially because the adoption of these standards can occur unevenly between

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countries, affecting the quality of financial reports, due to factors such political and legal system, tax, capital market development, property, and capital structure (Holthausen, 2009; Nobes, 2011; Soderstrom & Sun, 2007). Other associated factor is the level of enforcement in the adopting countries (Ball, 2006; Christensen, Hail & Leuz, 2013; Li, 2010).

Key and Kim (2020) demonstrated less earnings management practices following IFRS adoption and more timely loss recognition, indicating higher accounting quality levels in Korean firms after IFRS adoption.

Fortin, Barros and Cutler (2010, p. 15) argue that Latin American countries have experienced relative growth rates in the past two decades, improving corporate financial reports. Latin American markets made significant efforts to improve information for investors with the conversion to IFRS standards, being a recent phenomenon and consequently less explored (García, Alejandro, Sáenz & Sánchez, 2017).

Rathke, Santana, Lourenço and Dalmácio (2016) demonstrated that IFRS adoption tends not to be sufficient to improve the accounting information quality in Brazil and Chile, when compared to Anglo-Saxon and Continental European economies. On the other hand, García et al. (2017) found evidence that changes from local accounting standards to IFRS standards provided an increase in value relevance of Latin American firms.

Montoya (2018) verified a widely sample of Latin American and Caribbean firms from 2006 to 2014 and found evidence that, during the period of IFRS application, companies report lower earnings management levels, increasing accounting information quality. Under the view of earnings opacity, Mongrut and Winkelried (2019) provided evidence that the adoption of IFRS standards tend not to be able to reduce the degree of opacity in Latin American firms.

Chacon Prata and Flach (2021) found the presence of an independent administrative committee tends to reduce earnings management levels in Brazilian public firms and its relationship is driven by IFRS adoption.

The aim of this study is to analyze the effect of mandatory IFRS adoption on cash holdings in Latin American firms. For this purpose, we analyze a sample of 734 firms from Brazil, Argentina, Chile, Colombia, Mexico, and Peru for the period of 2005 to 2018. In addition, we analyzed the incremental effect of the accounting information quality, through earnings management practices, on cash holdings in the context of mandatory IFRS adoption in Latin America.

The overall results show that the adoption of IFRS standards has reduced the scope of earnings management practices in Latin America. Furthermore, the findings also demonstrate that companies with higher information quality though IFRS adoption variable maintain lower cash levels, suggesting that better quality of financial reports could play a role to reduce the effects of asymmetric information in Latin American firms.

Additional analysis demonstrates that the benefits of IFRS adoption is more pronounced in non-ADR firms. That is, the presence of ADR has already demonstrated strong incentives to improve the level of accounting quality.

Therefore, the study seeks to contribute to the cash management literature, demonstrating that cash holdings are sensitive to accounting quality and thus better quality of financial reports though the IFRS adoption could play a role to reduce the effects of asymmetric information even in low investor protection countries. The findings also contribute to the expansion of studies in Latin America, corroborating with previous evidence that incentives have a play on the application of IFRS standards.

2. Theoretical Background and Hypotheses Development

Management decisions regarding cash holdings would be irrelevant whether the capital markets were perfects since the companies could raise funds at any time, with no opportunity

cost and the access to financing would not have additional costs (Opler et al., 1999). However, the world of imperfect markets turns strategic decisions regarding cash holdings.

Kim, Mauer and Sherman (1998) and Opler et al. (1999) argue that cash levels need to be actively balanced to maximize the net benefits, that is the benefits must be balanced against the costs that these resources impose to the firms. Firms that have the greatest access to capital markets tend to hold lower levels of cash holdings (Opler et al., 1999) due to the transaction costs of raising additional resources (Ferreira & Vilela, 2004).

García-Teruel et al. (2009) examined the effects of informational asymmetry and adverse selection costs on cash holdings of 65 Spanish non-financial companies listed in the *Comisión Nacional del Mercado de Valores (CNMV)* from 1995 to 2001. The results showed that accounting quality information influences cash holdings. That is, companies with higher quality maintain lower cash levels, demonstrating economic implications that better quality tends to reduce the effects of asymmetric information and the costs of adverse selection in obtaining external financing. Besides, the results also indicated that a higher generation of operating cash flow increases the amount of cash.

Sun et al. (2014) analyzed 8621 US firms listed on the Compustat database from 1980 to 2005, aiming to identify the impact of accounting quality on the cash holdings. The main results showed that a low disclosure of earnings quality by managers causes an increase in the cash holdings. The authors also found that low accounting quality has a negative impact on the value of cash, due to information asymmetry and agency costs, since investors tend to discount the value of cash holdings when managers are likely to use the excess of cash with less profitable acquisitions or adopting diversification practices for their benefit.

Farinha et al. (2018) examined U.K. public firms from 1998 to 2015. The findings suggest that cash holdings are positively related to asymmetric information. That is, firms tend to keep cash balances to not overlook profitable investment opportunities (Myers & Majluf, 1984).

In this sense, Accounting plays an important role in reducing information asymmetry. The IFRS adoption for public firms around the World is one of the most significant regulatory changes in the history of Accounting (Daske, Hail, Leuz & Verdi, 2008). IFRS adoption seeks to provide better transparency of the financial statements, reducing the level of information asymmetry between companies and the market, by improving the information content generated by accounting (IFRS, 2020).

Pelucio-Grecco, Geron, Grecco and Lima (2014) found preliminary evidence of the improvement in accounting information quality in Brazil during IFRS period. Houque, Easton and Van Zijl (2014) found similar evidence that the IFRS adoption leads to an improvement of information quality also in countries with low investor protection. Through the analysis of more than 500 French, German and Swiss listed companies for 2003 and 2011, the authors found a significant improvement in both forecast accuracy and forecast dispersion post-IFRS.

García et al. (2017) analyzed a sample of 923 firms from Argentina, Brazil, Chile and Mexico during 2000 to 2014 to verify whether changing from local to international accounting standards improves the quality of accounting information. They found that changes from local accounting to international standards increased value relevance in Latin American firms. In addition, the results suggested the presence of earnings timeliness in large firms.

Key and Kim (2020) investigated changes in accounting quality before and after IFRS adoption in Korea, considering 4,390 firm-year observations from 2006 to 2015. The evidence demonstrated less earnings management practices following IFRS adoption and more timely loss recognition, indicating higher accounting quality levels.

Chacon Prata and Flach (2021) analyzed a sample of 92 Brazilian public firms during pre- (2002 to 2007) and post- (2010 to 2015) IFRS adoption to verify whether IFRS adoption strengthened the negative relationship between earnings management and good corporate

governance practices, considering differentiated levels of corporate governance of B3, board independent directors and Big Four auditorship. The results showed the presence of an independent administrative committee tends to reduce earnings management levels and its relationship is driven by IFRS adoption.

Ball (2006) points out that the adoption of IFRS has the potential to facilitate the comparability of information between adopters, increase transparency, decrease information costs, and reduce information asymmetry.

Verdi (2006) arguments that better levels of financial reporting can improve investment efficiency by the reduction of information asymmetry in two aspects: (i) between firms and investors, through the reduction of adverse selection costs and thus lower costs of raising funds for firms; and (ii) between investors and managers, through the mitigation of agency conflicts and thus lower shareholder's costs of monitoring managers and improves project selection.

The ideal set of standards varies in each country, being determined according to its history, culture, and legal system (Nobes, 2011). Some studies argue that IFRS adoption could occur unequally between the countries (Holthausen, 2009; Soderstrom & Sun, 2007) since the accounting information quality is dependent on the context in which it is based (Dechow, Ge & Schrand, 2010; Paulo, 2007; Scott, 2009). Ball, Kothari and Robin (2000) and Bushman and Piotroski (2006) highlight that the quality of financial reports is directly influenced by the institutional environment, especially in countries of code law origin.

Consequently, improving the information quality through the adoption of IFRS standards would only be significant in countries with incentives to adopt these standards (Christensen, Lee, Walker & Zeng, 2015). Despite that, some studies have demonstrated that the benefits of IFRS adoption could also be perceived in low investor countries, including Latin America (Manzano & Conesa, 2014; García et al., 2017; Houque et al., 2014; Montoya, 2018; Pelucio-Grecco et al., 2014).

Thus, considering that previous studies demonstrated the benefits of IFRS adoption could also appear in contexts of low investor protection, it is expected that mandatory IFRS adoption could lead to a lower level of cash holdings in Latin America. Better levels of accounting information may reduce the negative effects of information asymmetries and adverse selection costs, allowing firms to reduce its levels of corporate cash holdings (García-Teruel et al., 2009).

H₁: The mandatory IFRS adoption resulted in a decrease in the level of cash holdings in Latin American public companies.

In addition to the main hypothesis H₁, we propose an additional hypothesis, H₂, which aims to contribute to the explanation of the effects of the accounting information quality under cash holdings, in the context of full adoption of IFRS standards.

We propose that IFRS standards lead to lower levels of earnings management practices, consequently, firms are reducing its levels of asymmetric information and improving accounting information quality, mitigating its financing costs. Consequently, firms with higher levels of accounting information quality (measured by accruals quality) might improve the cash holdings management, investment efficiency and thus better allocation of resources, reducing its cash levels.

H₂: Lower levels of earnings management lead to lower levels of cash post-IFRS adoption in Latin American public firms.

Thus, in a context of IFRS adoption, it is expected that lower levels of earnings management practices, and consequently higher levels of accounting information quality, will be sufficient to reduce cash holdings in Latin American firms.

3. Research Design

3.1 Sample and data description

Our sample initially comprises 1,232 public firms from Latin America, considering the six largest economies, that is Argentina, Brazil, Chile, Colombia, Mexico, and Peru from 2005 to 2018.

We excluded financial industry and insurance services since they have operational and cash management differences (Bates, Kahle & Stulz, 2009). We also excluded firm-observations with losses because the calculation of some variables could be subjected to mathematical bias. Besides, firms with losses have specific incentives for earnings management practices and thus managers tend to report even more losses to improve performance in the future by ‘taking a bath’ practice. This behavior could harm the effect of earnings management in our models. Finally, we remove firm-observations with null available information in all period and with negative equity to provide consistency in the estimations.

The final sample comprises 734 public firms, in a total of 7,058 firm-year observations from 2005 to 2018, in an unbalanced panel data. Table 1 shows the composition of the final sample.

Table 1 Sample description

Description	Firms	Observations
Total public firms	1,232	17,248
(-) financial and insurance firms	(427)	(5,978)
(=) initial sample	805	11,270
(-) null firm-year observations in all years		(1,840)
(-) firm-year observations with negative net income	(71)	(1,906)
(-) firm-year observations with negative equity		(466)
(=) final sample	734	7,058

Source: the authors.

Final sample comprises 734 non-financial public firms from Latin America, considering Argentina, Brazil, Chile, Colombia, Mexico and Peru.

Financial information was collected in USD.

Database from Refinitiv/Thomson Reuters.

Unbalanced panel data contains 7,058 firm-year observations from 2005 to 2018.

3.2 Variables and econometric model

The dependent variable is corporate cash holdings, defined as the ratio of cash and cash equivalents divided by total assets, following previous studies as Bates et al. (2009), García-Teruel et al. (2009) and Ozkan and Ozkan (2004). Whether the firm did not have available information of cash and cash equivalents, we consider cash and short-term investments.

The interest variable is a dummy for mandatory IFRS adoption by country. The variable takes the value one (1) for the years post-IFRS adoption and zero (0) for prior years. We choose the period pre- and post- IFRS due to the fact that most companies are not to prepared to the short period of the implementation of the IFRS standards (IFRS, 2020).

The accounting quality can be measured by a variety of attributes, including persistence, smoothness, timeliness, accruals, loss avoidance, investor responsiveness (Dechow et al., 2010). We did not choose a specific measure of accounting quality, but a general one that

aggregates more information. Dechow (1994) points earnings are a summary of performance produced by the firm under the accrual's basis of accounting. Reported earnings consist of cash earnings and non-cash earnings. While the first is measured by cash flow from operating activities, accruals are accounting adjustments with no direct cash flow consequences. Therefore, earnings are an aggregate of operating cash flows and total accruals (Hribar & Collins, 2002).

We calculated the total accruals (TA) as the difference between net income and cash flow from operating activities (Dechow et al., 2010; Healy, 1985; Sloan, 1996). After, we applied the model proposed by Kothari, Leone and Wasley (2005) to calculate the discretionary (DA) component. This model includes the return on assets (ROA) to control the influence of different levels of performance between firms.

$$TA_{i,t} = \delta_0 + \delta_1(1/ASSETS_{i,t-1}) + \delta_2(\Delta SALES_{i,t} - \Delta AR_{i,t}) + \delta_3 PPE_{i,t} + \delta_4 ROA_{i,t} + u_{i,t} \quad (1)$$

Where,

$TA_{i,t}$ is total accruals of firm i in year t, weighted by total assets of firm i in year t-1;

$ASSETS_{i,t-1}$ is total assets of firm i in year t-1;

$\Delta SALES_{i,t}$ is net revenue for year t minus net revenue for year t-1 for firm i, weighted by total assets for firm i in year t-1;

$\Delta AR_{i,t}$ is net receivables of year t minus net receivables of year t-1 of firm i, weighted by total assets of firm i in year t-1;

$PPE_{i,t}$ is net property, plant and equipment of firm i in year t;

$ROA_{i,t}$ is net income of firm i in year t divided by total assets of firm i in year t;

$u_{i,t}$ is the regression error term.

The model was calculated by cross-sectional regression for the sample period as previous studies (Barth, Landsman & Lang, 2008; García-Teruel et al., 2009; Jones, 1991; Verdi, 2006) to obtain the residues of the regression, specifically, the discretionary accruals component (DA).

After the estimation of the DA component, we obtained the absolute value of the residue, $|DA|$, as an inverse measure of the accounting information quality, that is, a greater magnitude of discretionary accruals indicates a higher level of earnings management (Barth et al., 2008; Chen, Tang, Jiang & Lin, 2010; Dechow et al., 2010; García-Teruel et al., 2009; Rathke et al., 2016; Van Tendeloo & Vanstraelen, 2005).

We include control variables with factors traditionally explored in the cash holdings literature as demonstrated in Table 2.

Table 2 Cash control variables

Variable	Description	Calculation	Expected coefficient	Theoretical reference
SIZE	Firm size	Natural logarithm of total assets	(-)	Economies of scale favor larger firms since they are more diversified hence lower probability of being in financial distress (Rajan & Zingales, 1995). Thus, larger firms hold less cash (Bates et al., 2009; Opler et al., 1999).
GOP	Growth opportunities	Ratio of company market value and book value	(+)	Firms with greater growth opportunities are able to maintain higher cash levels to carry out investment projects (Kim et al., 1998; Opler et al., 1999; Ozkan & Ozkan, 2004). Firms with greater growth opportunities are subject to have greater costs of financial distress (Bates et al., 2009).

FLOW	Operating cash flow	Ratio of cash from operating activities and total assets	(+)	Firms with higher cash flows have higher cash levels (Bates et al., 2009; Ferreira & Vilela, 2004; Opler et al., 1999; Ozkan & Ozkan, 2004).
LEV	Leverage	Ratio of total debt and total assets	(+/-)	In case of the debt is high enough, firms will hold less cash to reduce leverage (Bates et al., 2009). However, leveraged firms are expected to hold more cash to reduce the probability of financial distress (Ferreira & Vilela, 2004).
NWC	Net working capital	Current net assets minus cash and cash equivalents, divided by total assets	(-)	Liquid assets can be seen as cash substitutes (Bates et al., 2009; Ferreira & Vilela, 2004; Ozkan & Ozkan, 2004; Opler et al., 1999) since working capital and investments compete for available resources (Fazzari & Petersen, 1993).
CAPEX	Capital expenditures	Ratio of capital expenditures and total assets	(+/-)	Firms with more capital expenditures have more liquid assets (Opler et al., 1999). Capital expenditures tend to increase the debt capacity and reduce the cash demand since the assets created by these expenses can be used as collateral (Bates et al., 2009).
DIV	Dividend payment	Dividend dummy	(-)	Dividend-paying firms are less risky and have greater access to capital markets, reducing cash levels (Bates et al., 2009; Ferreira & Vilela, 2004; Opler et al., 1999).

Source: the authors.

We include a variable to control the issuance of American Depositary Receipts (ADR). Companies that issued ADR are expected to have superior quality even before the mandatory adoption of IFRS standards since they must comply with the requirements of the U.S. Securities and Exchange Commission (SEC), which require more transparency and better information disclosures.

Lang, Lins and Maffett (2012) found that earnings management practices are lower for companies that have securities traded on U.S. markets. Black and Nakao (2017) demonstrated similar results for Brazilian firms in the context of IFRS adoption. We control ADR issuers by a dummy variable that takes one (1) for the years from the date of issuance, or zero (0) if the company does not have issued ADR in the New York Stock Exchange (NYSE).

Big audit firms (AUDIT) need to protect their reputation, which could affect the propensity of firms audited by them to reduce earnings management practices (Francis & Wang, 2008; Rathke et al., 2016).

The control of macroeconomic events considers the Gross Domestic Product (GDP) growth variable, which is compiled by The World Bank Group. This variable captures the positive and negative fluctuations in the GDP rate over the years. Then, a decline in the rate is one of the most important characteristics of an indicative of the economic crises' occurrence (Frankel & Saravelos, 2012), which tends to differ among countries (Iatridis & Dimitras, 2013).

Filip and Raffounier (2014) found that drastic changes in the economic environment have a significant impact on earnings management practices, affecting the quality of accounting information. Bliss, Cheng and Denis (2015) found that, in times of crisis, the marginal benefit of resource retention was increased, as a way to firms finance their operations and reduce financial costs. Dahrouge and Saito (2013) demonstrated that high financial costs hamper immediate adjustment to the optimal cash level in periods of crises.

The control of country characteristics is consistent with Simnett, Vanstraelen and Chua (2009) and Alrazi, Villiers and Van Staden (2016). The rule of law (LAW) variable measures

the perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of the contract enforcement, property rights, the policy and the courts, as well as the likelihood of crime and violence (Kaufmann, Kraay & Mastruzzi, 2010, p. 4). This variable is compiled by The World Bank Group through the initiative of the Worldwide Governance Indicator (WGI), varying in a scaled from -2.5 (weak) to 2.5 (strong).

The final sample was winsorized at 0.1 percentile and 99.9 percentile, as previous studies (Barth et al., 2008; Dechow et al., 2010; Dittmar et al., 2003; Kothari et al., 2005; Naranjo, Saavedra & Verdi, 2016), except for variables from the World Bank database and dummies.

Regarding the econometric model, we firstly verified whether IFRS adoption standards has influenced earnings management practices in Latin American firms:

$$|DA|_{i,t} = \beta_0 + \beta_1 IFRS_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 DIV_{i,t} + \beta_4 LEV_{i,t} + \beta_5 FLOW_{i,t} + \beta_6 NWC_{i,t} + \beta_7 CAPEX_{i,t} + \beta_8 GOP_{i,t} + \beta_9 AUDIT_{i,t} + \beta_{10} ADR_{i,t} + \beta_{11} GDP_{i,t} + \beta_{12} LAW_{i,t} + u_{i,t} \quad (2)$$

Where,

$|DA|_{i,t}$ is absolute discretionary accruals from Kothari et al. (2005) model of firm i in year t ;

$IFRS_{i,t}$ equals to 1 (one) from the year t of mandatory IFRS adoption and, 0 (zero) before the mandatory adoption;

$SIZE_{i,t}$ is the natural logarithm of total assets of firm i in year t ;

$DIV_{i,t}$ is the dividend dummy that takes 1 if firm i presented cash-dividend payment in year t or 0, otherwise;

$LEV_{i,t}$ is the ratio of total debt of firm i in year t and total assets of firm i in year t ;

$FLOW_{i,t}$ is the ratio of cash from operating activities of firm i in year t and total assets of firm i in year t ;

$NWC_{i,t}$ is the current net assets minus cash and short-term investments of firm i in year t , divided by total assets of firm i in year t ;

$CAPEX_{i,t}$ is the ratio of capital expenditures of firm i in year t and total assets of firm i in year t ;

$GOP_{i,t}$ is the ratio of company market value of firm i in year t and book value of firm i in year t ;

$AUDIT_{i,t}$ is the dummy variable that takes 1 if firm i is audited by big-4 audit firms in year t and 0, otherwise;

$ADR_{i,t}$ is the dummy variable that takes 1 if firm i has ADR listing at NYSE stock exchange in year t and 0, otherwise;

$GDP_{i,t}$ is the gross domestic product growth in year t according to the country of firm i ;

$LAW_{i,t}$ is the rule of law range from -2.5 (weak) to 2.5 (strong) in year t according to the country of firm i ;

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12}$ are the estimated coefficients in the regression;

$u_{i,t}$ is the regression error term.

To test our hypothesis, we propose the following model:

$$CASH_{i,t} = \beta_0 + \beta_1 |DA|_{i,t} + \beta_2 IFRS_{i,t} + \beta_3 IFRS_{i,t} \times |DA|_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 DIV_{i,t} + \beta_6 LEV_{i,t} + \beta_7 FLOW_{i,t} + \beta_8 NWC_{i,t} + \beta_9 CAPEX_{i,t} + \beta_{10} GOP_{i,t} + \beta_{11} AUDIT_{i,t} + \beta_{12} ADR_{i,t} + \beta_{13} GDP_{i,t} + \beta_{14} LAW_{i,t} + u_{i,t} \quad (3)$$

Where,

$CASH_{i,t}$ is corporate cash holdings of firm i in year t ;

$|DA|_{i,t}$ is absolute discretionary accruals from Kothari et al. (2005) model of firm i in year t ;

$IFRS_{i,t}$ equals to 1 (one) from the year of mandatory IFRS adoption and, 0 (zero) before the mandatory adoption;

$IFRS_{i,t} \times |DA|_{i,t}$ is the interaction variable of IFRS of firm i in year t and DA of firm i in year t ;

$SIZE_{i,t}$ is the natural logarithm of total assets of firm i in year t ;

$DIV_{i,t}$ is the dividend dummy that takes 1 if firm i presented cash-dividend payment in year t or 0, otherwise;

$LEV_{i,t}$ is the ratio of total debt of firm i in year t and total assets of firm i in year t ;

$FLOW_{i,t}$ is the ratio of cash from operating activities of firm i in year t and total assets of firm i in year t ;

$NWC_{i,t}$ is current net assets minus cash and short-term investments, divided by total assets of firm i in the year t ;

$CAPEX_{i,t}$ is the ratio of capital expenditures of firm i in year t and total assets of firm i in year t ;

$GOP_{i,t}$ is the ratio of company market value of firm i in year t and book value of firm i in year t ;

$AUDIT_{i,t}$ is the dummy variable that takes 1 if firm i is audited by big-4 audit firms in year t and 0, otherwise;

$ADR_{i,t}$ is the dummy variable that takes 1 if firm i has ADR listing at NYSE stock exchange in year t and 0, otherwise;

$GDP_{i,t}$ is the gross domestic product growth in year t according to the country of firm i ;

$LAW_{i,t}$ is the rule of law range from -2.5 (weak) to 2.5 (strong) in year t according to the country of firm i ;
 $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12}, \beta_{13}, \beta_{14}$ are the estimated coefficients in the regression;
 $u_{i,t}$ is the regression error term.

Based on H_1 , we expect that the adoption of IFRS standards has influenced the corporate cash holdings (*CASH*) in the Latin American firms. Thus, it is expected a negative β_2 coefficient. The incremental analysis (H_2) aims to demonstrate the joint effect of IFRS adoption and accounting information quality ($|DA|$) on corporate cash holdings (*CASH*) by the coefficient β_3 .

We applied Generalized Method of Moments (GMM) dynamic panel data estimations to control for endogeneity by using instruments based on lags of the original regressors (Dahrouge & Saito, 2013; García-Teruel et al., 2009; Guney, Ozkan & Ozkan, 2003; Ozkan & Ozkan, 2004). We obtained the GMM estimator in two steps to ensure homoscedasticity in the residuals (Arellano & Bond, 1991).

4. Results Discussion

The descriptive statistics of the sample variables are demonstrated on Table 3.

Table 3 Descriptive statistics

Variable	Number of obs	Mean	Median	Std. Dev.	Min.	Max.
SIZE	7,051	19.965	20.055	2.029	13.755	24.190
CASH	7,032	0.072	0.039	0.091	0.000	0.485
IFRS	7,058	0.596	1.000	-	-	-
LEV	7,051	0.211	0.207	0.159	0	0.622
FLOW	6,763	0.090	0.080	0.089	-0.137	0.432
NWC	7,046	0.043	0.017	0.150	-0.316	0.500
GOP	7,051	1.263	1.013	0.989	0.062	6.226
CAPEX	6,463	0.058	0.045	0.050	0.000	0.269
DIV	5,201	0.935	1.000	-	-	-
AUDIT	6,957	0.689	1.000	-	-	-
ADR	7,058	0.069	0.000	-	-	-
$ DA $	6,851	0.061	0.042	0.063	0.000	0.454
GDP	7,058	3.237	0.030	3.102	-5.919	10.125
LAW	7,058	-0.032	3.257	0.720	-0.886	1.433

Source: the authors.

Table 3 shows the average amount of cash holdings in Latin American firms is 7.2% to total assets during the period. This average value is equivalent to that found for Spanish firms (García-Teruel et al., 2009) and below to firms from countries like U.S., France, U.K., and Japan (Guney et al., 2003). The highest cash amount reached 48.5% to total assets.

The average level of discretionary accruals is 6.1%, which is similar to found by Rathke et al. (2016). The highest value of discretionary accruals reached 45.4%.

While most of the sample firms are audited by Big 4 auditorship (68.9%), only 7% of the firm-year observations are ADR issuers. The GDP growth rate presents an average value of 3.1%, but it varies from -5.9% to 10.1% for the period of 2005 to 2018.

Table 4 shows whether IFRS adoption reduced the level of discretionary accruals.

Table 4 The effect of IFRS adoption on |DA|

Dependent Variable		DA								
		Model (1)			Model (2)			Model (3)		
Independent Variables		Coef.	P-value		Coef.	P-value		Coef.	P-value	
DA	Lag 1.	0.094	0.016	**	0.098	0.011	***	0.095	0.014	***
		<i>0.039</i>			<i>0.039</i>			<i>0.039</i>		
IFRS		-0.020	0.000	***	-0.020	0.000	***	-0.020	0.000	***
		<i>0.004</i>			<i>0.005</i>			<i>0.005</i>		
SIZE		0.038	0.000	***	0.038	0.000	***	0.038	0.000	***
		<i>0.007</i>			<i>0.007</i>			<i>0.007</i>		
DIV		0.004	0.529		0.004	0.507		0.005	0.500	
		<i>0.007</i>			<i>0.007</i>			<i>0.007</i>		
LEV		0.031	0.261		0.031	0.259		0.032	0.251	
		<i>0.027</i>			<i>0.028</i>			<i>0.028</i>		
FLOW		0.126	0.007	***	0.127	0.008	***	0.124	0.009	***
		<i>0.047</i>			<i>0.047</i>			<i>0.048</i>		
NWC		-0.020	0.488		-0.018	0.533		-0.017	0.557	
		<i>0.029</i>			<i>0.029</i>			<i>0.029</i>		
CAPEX		-0.042	0.334		-0.041	0.355		-0.041	0.354	
		<i>0.044</i>			<i>0.044</i>			<i>0.044</i>		
GOP		-0.001	0.660		-0.001	0.668		-0.001	0.768	
		<i>0.002</i>			<i>0.002</i>			<i>0.002</i>		
ADR		0.013	0.455		0.011	0.515		0.012	0.505	
		<i>0.017</i>			<i>0.017</i>			<i>0.018</i>		
AUDIT		0.017	0.026	**	0.017	0.033	**	0.017	0.033	**
		<i>0.008</i>			<i>0.008</i>			<i>0.008</i>		
GDP					0.000	0.874		0.000	0.937	
					<i>0.000</i>			<i>0.000</i>		
LAW								-0.009	0.360	
								<i>0.010</i>		
Const		-0.752	0.000	***	-0.757	0.000	***	-0.762	0.000	***
		<i>0.137</i>			<i>0.142</i>			<i>0.141</i>		
Industry control		yes			yes			yes		
Number of obs		3512			3512			3512		
Number of groups		519			519			519		
Number of instruments		89			90			91		
Wald Chi2 (prob)		59.79 (0.00)***			59.12 (0.00)***			60.3 (0.00)***		
Mean VIF		1.25			1.25			1.27		
Breusch-Pagan/Cook-Weisberg test (prob)		12.18 (0.00)***			12.47 (0.00)***			23.95 (0.00)***		
Arellano-Bond test Order 1		-9.00 (0.00)***			-9.07 (0.00)***			-9.06 (0.00)***		
Arellano-Bond test Order 2		0.51 (0.61)			0.56 (0.57)			0.50 (0.62)		

Source: the author.

GMM two-step estimation results with robust standards errors.

Robust standards errors are in italics.

Industry control was omitted by the GMM estimation in all regressions.

* / ** / *** denotes the significance levels 0.10 / 0.05 / 0.01.

The results of Table 4 shows that IFRS adoption reduced the level of absolute discretionary accruals in Latin American firms for 2005 to 2018. The results remain consistent after controlling macroeconomic and country effects (Model 1, 2 and 3).

As the variable $|DA|$ is an inverse measure of accounting information quality, the negative coefficient indicates that IFRS adoption has reduced the scope of earnings management practices around 2% in these firms, corroborating with the results documented by Pelucio-Grecco et al. (2004) for Brazil, Manzano and Conesa (2014) for Mexico, Houque et al. (2014) for France, Germany and Sweden, García et al. (2017) and Montoya (2018) for a set of Latin American firms.

Some control variables also presented significant coefficients, as firm size, cash flow from operating activities and Big 4 auditorship. Firm size presented a positive coefficient, indicating that larger (smaller) firms tend to present more (less) earnings management practices. This is consistent to the view that larger sized firms tend to manage their earnings to mitigate the pressure of investors and to meet target's analysts (Myers, Myers & Skinner, 2007).

While operating cash flow can be seen as a proxy for expected growth in the firm's operations (Larcker & Richardson, 2004), the results show that growing companies (larger cash flows) tend to exhibit larger accruals (Burgstahler, Hail & Leuz, 2006).

The positive coefficient of Big 4 auditorship contradicts the previous evidence (Francis & Wang, 2008; Rathke et al., 2016) since it was expected that firms audited by Big 4 would have less incentive to manage its earnings compared to the firms audited by other audit firms. Despite, Montoya (2018) found a positive coefficient, demonstrating that incentives or pressures in Latin American companies may be relevant factors to increase the use of discretion in accounting numbers.

Future studies could analyze a widely perspective of audit and earnings management in Latin America, mainly because if the market perceives that firms audited by a Big 4 have a higher degree of discretionary accruals, the transaction cost increases a lot for the audit firm, affecting for example brand, service quality and reputation (Almeida & Almeida, 2009; Ferguson, Francis & Stokes, 2003).

Some authors have suggested other characteristics impact the audit quality, as partner rotation and audit firm rotation (Chen, Lin & Lin, 2008; Davis, Soo & Trompeter, 2009; Kim, Lee & Lee, 2015; Silvestre, Costa & Kronbauer, 2018). Then, only dichotomous variable could not be able to fully reflect the audit quality service since the evidence suggest that these factors could have adverse effects on earnings quality, especially in case of short-term relationship between the audit and client firms (Davis et al., 2009) or in case of voluntary audit firm rotate (Silvestre et al., 2018).

To ensure the consistency of our previous results, we ran earnings management regressions applying the model of Larcker and Richardson (2004). The results (not reported) show that IFRS adoption variable remains significant and presents a negative coefficient, indicating that IFRS standards has reduced the scope of earnings management practices in Latin American firms.

Table 5 shows the effect of IFRS standards on cash holdings.

Table 5 Cash holdings and IFRS adoption

Dependent Variable	CASH							
	Model (1)		Model (2)			Model (3)		
Independent Variables	Coef.	P-value	Coef.	P-value	Coef.	P-value	Coef.	P-value
CASH								
Lag 1.	0.379	0.000 ***	0.383	0.000 ***	0.382	0.000 ***	0.059	0.000 ***
	<i>0.059</i>		<i>0.060</i>		<i>0.059</i>			
IFRS	-0.013	0.002 ***	-0.013	0.002 ***	-0.013	0.002 ***	0.004	0.002 ***
	<i>0.004</i>		<i>0.004</i>		<i>0.004</i>			

SIZE	0.012 <i>0.006</i>	0.050 <i>0.005</i>	**	0.012 <i>0.006</i>	0.059 <i>0.005</i>	*	0.012 <i>0.006</i>	0.072 <i>0.005</i>	*
DIV	-0.004 <i>0.005</i>	0.425 <i>0.005</i>		-0.004 <i>0.005</i>	0.422 <i>0.005</i>		-0.004 <i>0.005</i>	0.398 <i>0.005</i>	
LEV	0.010 <i>0.026</i>	0.704 <i>0.026</i>		0.011 <i>0.027</i>	0.667 <i>0.027</i>		0.013 <i>0.027</i>	0.634 <i>0.027</i>	
FLOW	0.182 <i>0.029</i>	0.000 <i>0.029</i>	***	0.185 <i>0.029</i>	0.000 <i>0.029</i>	***	0.187 <i>0.029</i>	0.000 <i>0.029</i>	***
NWC	-0.132 <i>0.027</i>	0.000 <i>0.027</i>	***	-0.131 <i>0.027</i>	0.000 <i>0.027</i>	***	-0.131 <i>0.027</i>	0.000 <i>0.027</i>	***
CAPEX	-0.265 <i>0.048</i>	0.000 <i>0.048</i>	***	-0.266 <i>0.049</i>	0.000 <i>0.049</i>	***	-0.269 <i>0.049</i>	0.000 <i>0.049</i>	***
GOP	0.003 <i>0.003</i>	0.452 <i>0.003</i>		0.002 <i>0.003</i>	0.494 <i>0.003</i>		0.002 <i>0.003</i>	0.481 <i>0.003</i>	
ADR	-0.009 <i>0.087</i>	0.914 <i>0.087</i>		-0.010 <i>0.089</i>	0.912 <i>0.089</i>		-0.012 <i>0.088</i>	0.888 <i>0.088</i>	
AUDIT	0.000 <i>0.006</i>	0.954 <i>0.006</i>		0.001 <i>0.006</i>	0.910 <i>0.006</i>		0.001 <i>0.006</i>	0.829 <i>0.006</i>	
GDP				0.000 <i>0.000</i>	0.749 <i>0.000</i>		0.000 <i>0.000</i>	0.699 <i>0.000</i>	
LAW							0.005 <i>0.012</i>	0.653 <i>0.012</i>	
Const	-0.205 <i>0.130</i>	0.114 <i>0.130</i>		-0.198 <i>0.131</i>	0.129 <i>0.131</i>		-0.189 <i>0.131</i>	0.151 <i>0.131</i>	
Industry control	Yes			yes			yes		
Number of obs	3622			3622			3622		
Number of groups	529			529			529		
Number of instruments	89			90			91		
Wald Chi2 (prob)	109.16 (0.000)***			117.66 (0.000)***			119.92 (0.000)***		
Mean VIF	1.24			1.25			1.26		
Breusch-Pagan/Cook-Weisberg test (prob)	573.98 (0.000)***			577.48 (0.000)***			539.61 (0.000)***		
Arellano-Bond test Order 1	-6.718 (0.000)***			-6.756 (0.000)***			-6.743 (0.000)***		
Arellano-Bond test Order 2	0.2177 (0.8277)			0.2322 (0.816)			0.2299 (0.8181)		

Source: the authors.

GMM two-step estimation results with robust standards errors.

Robust standards errors are in italics.

Industry control was omitted by the GMM estimation in all regressions.

* / ** / *** denotes the significance levels 0.10 / 0.05 / 0.01.

Table 5 shows a negative and statistically significant coefficient (1% level) of IFRS standards, demonstrating that mandatory IFRS adoption decreased corporate cash holdings in the firms analyzed (Model 1, 2 and 3). This result is consistent with García-Teruel et al. (2009), Sun et al. (2014) and Farinha et al. (2018), demonstrating that accounting quality (in this case,

IFRS adoption) plays a role on cash management, reducing the level of asymmetry information and thus allows lower levels of cash holdings. Consequently, the set of IFRS standards leads to better accounting information quality, which should be a factor to reduce the asymmetry between firms and investors.

The results also demonstrate that some cash determinants are relevant to the Latin American context, as firm size (SIZE), cash flow generation (FLOW), liquid assets substitutes (NWC) and capital expenditures (CAPEX).

The firm size coefficient is positive, demonstrating that larger firms hold more cash, contrary to the trade-off model of economies of scale in larger firms (Bates et al., 2009; Ferreira & Vilela, 2004; Opler et al., 1999). Despite that, the evidence corroborates with the argument that larger firms tend to have more discretionary power over the investment and financial policies, increasing cash amounts, according to Free Cash Flow Theory (Ferreira & Vilela, 2004; Opler et al., 1999). Besides that, Pecking Order Theory states that larger firms should have more cash holdings since they have presumably been more successful after controlling for investment (Ferreira & Vilela, 2004; Opler et al., 1999).

The cash flow generation presented a positive coefficient, showing an increase in cash holdings (Bates et al., 2009; Ferreira & Vilela, 2004; Opler et al., 1999; Ozkan & Ozkan, 2004). This is consistent to the view of when current operational cash flows are enough to finance new investments, firms should repay debt and maintain higher cash levels, as stated by Pecking Order Theory (Ferreira & Vilela, 2004; Opler et al., 1999).

The negative coefficient of NWC variable corroborates with the argument that liquid assets can be cash substitutes (Bates et al., 2009; Ferreira & Vilela, 2004; Ozkan & Ozkan, 2004; Opler et al., 1999) since working capital and investments compete for available resources (Fazzari & Petersen, 1993). According to Trade-off Theory, cash holdings contribute to minimize costs of external funds or to liquidate existing assets, acting as a buffer between sources of financing and uses of funds (Ferreira & Vilela, 2004; Opler et al., 1999).

Capital expenditures have a negative impact on cash holdings, demonstrating that capital expenditures should increase debt capacity and reduce the demand for cash holdings since these expenses create assets that should be used as collateral (Bates et al., 2009).

Table 6 shows the results of the interaction between IFRS and |DA|.

Table 6 Cash holdings, Earnings management and IFRS adoption

Dependent Variable	CASH								
	Model (1)			Model (2)			Model (3)		
Independent Variables	Coef.	P-value		Coef.	P-value		Coef.	P-value	
CASH									
Lag 1.	0.371	0.000	***	0.375	0.000	***	0.374	0.000	***
	<i>0.059</i>			<i>0.059</i>			<i>0.059</i>		
DA	0.135	0.001	***	0.136	0.002	***	0.141	0.001	***
	<i>0.043</i>			<i>0.043</i>			<i>0.043</i>		
IFRS	-0.009	0.063	*	-0.009	0.059	*	-0.009	0.050	**
	<i>0.005</i>			<i>0.005</i>			<i>0.005</i>		
IFRS_ DA	-0.033	0.592		-0.031	0.618		-0.032	0.606	
	<i>0.062</i>			<i>0.062</i>			<i>0.061</i>		
SIZE	0.007	0.248		0.007	0.285		0.006	0.357	
	<i>0.006</i>			<i>0.007</i>			<i>0.007</i>		
DIV	-0.004	0.368		-0.004	0.348		-0.005	0.318	
	<i>0.005</i>			<i>0.005</i>			<i>0.005</i>		
LEV	0.007	0.785		0.008	0.754		0.010	0.709	
	<i>0.026</i>			<i>0.026</i>			<i>0.026</i>		
FLOW	0.175	0.000	***	0.178	0.000	***	0.180	0.000	***

	<i>0.029</i>			<i>0.029</i>			<i>0.029</i>		
NWC	-0.129	0.000	***	-0.128	0.000	***	-0.128	0.000	***
	<i>0.029</i>			<i>0.029</i>			<i>0.028</i>		
CAPEX	-0.266	0.000	***	-0.266	0.000	***	-0.269	0.000	***
	<i>0.047</i>			<i>0.047</i>			<i>0.048</i>		
GOP	0.002	0.539		0.002	0.588		0.002	0.581	
	<i>0.003</i>			<i>0.003</i>			<i>0.003</i>		
ADR	0.000	0.999		-0.001	0.994		-0.002	0.985	
	<i>0.087</i>			<i>0.089</i>			<i>0.088</i>		
AUDIT	-0.002	0.774		-0.001	0.841		-0.001	0.914	
	<i>0.006</i>			<i>0.006</i>			<i>0.006</i>		
GDP				0.000	0.696		0.000	0.621	
				<i>0.000</i>			<i>0.000</i>		
LAW							0.009	0.438	
							<i>0.012</i>		
Const	-0.109	0.411		-0.099	0.457		-0.082	0.544	
	<i>0.133</i>			<i>0.134</i>			<i>0.135</i>		
<hr/>									
Industry control		yes		yes			yes		
Number of obs		3610		3610			3610		
Number of groups		529		529			529		
Number of instruments		91		92			93		
Wald Chi2 (prob)		127.54 (0.00)***		139.04 (0.00)***			141.75 (0.00)***		
Mean VIF		1.54		1.52			1.52		
Breusch-Pagan/Cook-Weisberg test (prob)		666.11 (0.00)***		671.71 (0.00)***			640.04 (0.00)***		
Arellano-Bond test Order 1		-6.69 (0.00)***		-6.73 (0.00)***			-6.72 (0.00)***		
Arellano-Bond test Order 2		-0.01 (0.99)		-0.00 (0.995)			-0.01 (0.991)		

Source: the author.

GMM two-step estimation results with robust standards errors.

Robust standards errors are in italics.

Industry control was omitted by the GMM estimation in all regressions.

* / ** / *** denotes the significance levels 0.10 / 0.05 / 0.01.

The results of Table 6 indicate a significant influence of the level of earnings management on cash holdings for all models (1, 2 and 3). We found that $|DA|$ has a positive and significant effect on cash holdings, with a cash variation around 13.5%. That is, firms with higher (lower) values of discretionary accruals tend to maintain higher (lower) levels of cash (García-Teruel et al., 2009).

In complement, we found that IFRS adoption reduced the level of cash holdings, corroborating with our previous results of Table 5. On the other hand, the incremental analysis did not provide significant results, not corroborating with our additional hypothesis H_2 .

We found similar evidence applying the model of Larcker and Richardson (2004) to calculate discretionary accruals. The results (not reported) support a reduction of cash levels post-IFRS adoption. Besides, we did not find significant results for the coefficient of discretionary accruals and neither the interaction variable.

5. Additional results of subsample analysis of ADR and non-ADR issuers

Considering that ADR firms are expected to have superior quality even before the mandatory adoption of IFRS standards and studies suggest that ADR can play a role in minimizing earnings management practices (Black & Nakao, 2017; Lang et al., 2012), we ran additional regression through subsample analysis.

Table 7 Subsample analysis

Dependent Variable	CASH								
	Non-ADR firms					ADR firms			
Independent Variables	Coef.	Robust Std. Err.	P-value		Coef.	Robust Std. Err.	P-value		
CASH									
Lag 1.	0.374	0.061	0.000	***	0.357	0.211	0.091	*	
IFRS	-0.013	0.004	0.005	***	-0.028	0.016	0.082	*	
SIZE	0.012	0.007	0.086	*	-0.005	0.024	0.824		
DIV	-0.001	0.004	0.763		-0.009	0.015	0.562		
LEV	0.009	0.028	0.751		0.000	0.102	0.999		
FLOW	0.187	0.029	0.000	***	0.027	0.145	0.853		
NWC	-0.128	0.028	0.000	***	-0.116	0.096	0.224		
CAPEX	-0.267	0.051	0.000	***	-0.262	0.184	0.153		
GOP	0.001	0.003	0.750		0.016	0.014	0.254		
AUDIT	0.000	0.006	0.962		0.018	0.024	0.455		
GDP	0.000	0.000	0.787		0.000	0.001	0.810		
LAW	-0.008	0.013	0.551		0.082	0.044	0.063	*	
const	-0.187	0.137	0.172		0.182	0.564	0.747		
Industry control		yes				yes			
Number of obs		3280				342			
Number of groups		492				42			
Number of instruments		90				90			
Wald Chi2 (prob)		112.55 (0.00)***				84.5 (0.00)***			

Source: the author.

GMM two-step estimation results with robust standards error.

Industry control was omitted by the GMM estimation in all regressions.

* / ** / *** denotes the significance levels 0.10 / 0.05 / 0.01.

The results show that for both groups, IFRS adoption reduced cash holdings. However, when we compare the significance of the coefficients, the findings suggest the benefits from IFRS adoption are more pronounced in non-ADR firms, considering its higher significance level. ADR firms have already demonstrated lower levels of earnings management (Lang et al., 2012) since they have strong incentives to improve the level of accounting information quality, and thus the effects of IFRS standards are less pronounced in such firms.

6. Concluding Remarks

This study analyzed the effect of mandatory adoption of IFRS standards on cash holdings in Latin American firms from 2005 to 2018. We also analyzed the incremental effect of earnings management practices post-IFRS adoption on cash holdings.

The results show that the adoption of IFRS standards reduced the scope of earnings management practices, contributing to the debate of the benefits of IFRS adoption in low investor protection countries (Houque et al., 2014; García et al., 2017; Manzano & Conesa, 2014; Montoya, 2018; Pelucio-Grecco et al., 2014).

The results also show that IFRS adoption has decreased cash holdings in Latin American firms, emerging economic consequences since better quality of financial reports could play a role to reduce the effects of asymmetric information between firms and investors (García-Teruel et al., 2009). Finally, our findings demonstrate that the benefits of IFRS adoption is more pronounced in non-ADR firms.

We highlight some limitations from the study: (i) discretionary accruals metrics are subjected to estimations' problems since they are not unique. We chose Kothari et al. (2005) model since it is more widespread in the literature nowadays and we provided additional tests of Larcker and Richardson (2004) model; (ii) the results cannot be generalized to other contexts and periods; (iii) accounting quality can be measured by a set of attributes and one measure may not be capable to capture all the possible benefits of IFRS adoption; (iv) IFRS variable did not consider the possibility of early adoption.

Future studies could analyze corporate cash holdings in the context of IFRS adoption, including other perspectives as governance mechanisms, ownership concentration, credit rated firms, audit quality as partner rotation and audit firm rotation and other measures of accounting quality in Latin America and in others settings of firms.

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