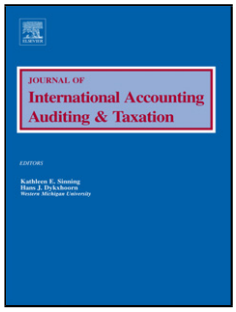

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Did Mandatory IFRS Adoption Affect the Cost of Capital in Latin American Countries?

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Abstract

This study investigates whether mandatory adoption of International Financial Reporting Standards (IFRS) has affected the long-term cost of equity and debt in Latin America, where the enforcement of accounting standards and investor protection mechanisms are weak in comparison to developed nations. Analyzing a sample of firms from Argentina, Brazil, Chile, Mexico, and Peru, we show that mandatory IFRS adoption led to reduction in the cost of equity even after controlling for firm-level reporting incentives. Test results also show that the cost of debt was reduced significantly after the IFRS adoption. Our results suggest that enhanced disclosure and comparability stemming from IFRS in comparison to previous domestic accounting standards helped to mitigate the information asymmetry problem, and resulted in positive economic consequences for Latin American firms.

Keywords: IFRS, cost of equity, cost of debt, investors, debt holders, Latin America
JEL Classification: G14, M40

1. Introduction

The movement towards mandating the adoption of International Financial Reporting Standards (IFRS) is considered the most widespread global financial reform in accounting history (Daske, Hail, Leuz, & Verdi, 2008). The premise of these standards is to improve the transparency and reliability of financial statements across the globe and facilitate cross

border investments. As a result of this global dimension, determining the economic consequences of the accounting standards as part of financial regulatory reforms is both more challenging and important as more countries with diverse levels of development adopt IFRS (Zeff, 2012).

A considerable body of literature investigates the economic effects of IFRS adoption in developed nations (Barth, Landsman, & Lang, 2008; Daske et al., 2008; Houqe, Monem, & Zijl, 2016)[1]. They report the consequences of the adoption of IFRS on several different users, including accountants, investors, analysts, governments and international regulators. However, few studies have investigated these effects in the Latin American context (Pelucio-Grecco, Geron, Grecco, & Lima, 2014; Rodríguez, Cortez, Méndez, & Garza, 2017). Examining these effects have significant potential economic and social implications for emerging countries, which can impact both national and international users of accounting information. Therefore, regulators are interested in whether adopting IFRS may have contributed toward reducing the cost of capital and consequentially signalling an increase in market efficiency and market liquidity (Han et al., 2016). Investors are interested in whether information asymmetry problems were reduced after IFRS adoption. This would signal lower effort in acquiring and verifying information, allowing for more efficient investment decisions (Diamond & Verrecchia, 1991; Ball, 2006) and a potential increase in cross-border investments (DeFond, Hu, Hung, & Li, 2011). Overall, these potential enhancements to the economic conditions of these countries are argued to 'improve people's lives' (Turley, 2007). However, there are increasing calls to provide empirical evidence on the impact of these standards on emerging countries. The limited literature about Latin America focuses on the impact of IFRS on accounting quality, but the economic consequences of such adoption are yet to be fully explored. To fill this gap in the literature, we investigate the impact of IFRS adoption on the cost of equity and the cost of debt in Latin American countries.

There are several reasons of exploring the economic consequences of IFRS in Latin America. First, Latin American countries have two economic trading blocs, the Mercado Comum do Sul (MERCOSUL)[2] and the Pacific Alliance,[3] which both aim to promote free trade among their participants. Through these blocs, commodities are exchanged with

[1] See also Li (2010), Daske, Hail, Leuz, and Verdi (2013), Eliwa, Haslam, and Abraham (2016).

[2] Mercado Comum do Sul (MERCOSUL) is composed of five full members (Argentina, Brazil, Paraguay, Uruguay, and Venezuela), five associated countries (Chile, Bolivia, Colombia, Ecuador, and Peru), and two observer countries (New Zealand and Mexico). Its website is http://www.mercosul.gov.br/.

[3] The Pacific Alliance is composed of five member states: Chile, Colombia, Mexico, Peru, and Costa Rica.

developed countries, and investment opportunities are created particularly by attracting foreign direct investment, from countries such as the United States (US) and China (Tuman & Emmert, 2004; Trevino, Thomas & Cullen, 2008)[4]. Thus, the mandatory adoption of IFRS leads to changes in accounting standards, which in turn can affect the way foreign investors make their investment decisions in the worldwide economy. Indeed, this is a significant step taken by the governments of these countries to develop their capital markets through the adoption of 'high-quality' accounting standards to benefit investors, analysts, lenders, and other users of accounting.[5]

Second, studying Latin American markets also allows us to investigate the determinants and effects of reporting quality and its economic consequences in different national institutional settings, as these typically have variations in the enforcement of accounting standards, different investor protection mechanisms, and lesser-developed capital markets (Ball, 2016). Previous literature focusing mainly on developed countries demonstrate that reporting quality and its economic effects are not determined by the adoption of high-quality accounting standards per se, but vary according to the level of legal enforcement, investors' protection and managers' incentives (Ball, Robin, & Wu, 2003; Barth et al., 2008; Christensen, Hail, & Leuz, 2013).

The enforcement and investor protection mechanisms in Latin American countries are weak (Brown, Preiato, & Tarca, 2014; La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 1998), and have not changed significantly since the mandatory IFRS adoption (Moura & Gupta, 2019). This institutional environment is optimal for identifying more clearly the impact of the IFRS adoption on the cost of capital. Thus, investigating the Latin American case can extend the international literature, and answer the call of the International Accounting Standards Board (IASB) for evidence on the economic consequences and impact of adopting IFRS in emerging markets.

[4] The British Broadcasting Corporation (BBC) also discusses investments in Latin America at: http://www.bbc.co.uk/news/world-33424532 (accessed: 24 June 2017).

[5] For more details, see the official documents from the securities market regulator for each country: Argentina (Comisión Nacional de Valores (CNV)), which is available at http://www.cnv.gob.ar/leyesyreg/cnv/esp/rgc562-09.htm; Brazil (Comissão de Valores Mobiliários (CVM)), which is available at www.cvm.gov.br/export/sites/cvm/legislacao/deli/anexos/0500/deli565.doc; Chile (Superintendencia Valores y Seguros (SVS)), which is available at http://www.svs.cl/sitio/legislacion_normativa/normativa/doc/ofc_368_2006.pdf; Mexico (Comisión Nacional Bancaria y de Valores (CNBV)), which is available at http://www.iasplus.com/en/binary/americas/0811cnbvenglish.pdf; and Peru (Comisión Nacional Supervisora de Empresas y Valores (CONASEV)), which is available at http://www.iasplus.com/en/binary/americas/1012peruconasev.pdf.

We examine firms from five Latin American countries (Argentina, Brazil, Chile, México, and Peru).[6] The other countries could not be included as they either adopted IFRS after 2014 or their empirical data was not available. We calculate the cost of debt following Moscariello, Skerratt, and Pizzo (2014), and the cost of equity based on the average of four methods proposed in previous literature (Claus & Thomas, 2001; Gebhardt, Lee, & Swaminathan, 2001; Gode & Mohanram, 2003; Easton, 2004). The measures of cost of equity and debt are compared four years prior to and after the official date of mandatory IFRS adoption. This paper documents that IFRS contributed significantly to reducing the cost of equity and the cost of debt in Latin American markets. We also find some weak evidence that firm-level reporting incentives affect to a certain degree the cost of equity.

This paper provides the first insights into the impact of IFRS on the cost of capital in Latin America. Additionally, we aim to contribute to the existing literature as follows. Firstly, this research advances the accounting harmonisation debate by providing evidence on the economic consequences of IFRS adoption in developing countries. We further extend the scarce literature that links the cost of debt to the economic consequences of mandatory adoption of IFRS (Florou & Kosi, 2015). Secondly, this study is not constrained by concurrent institutional factors indicated by Christensen et al. (2013), as the enforcement of accounting standards and investor protection mechanisms have not changed significantly since the adoption of IFRS. Thus, by investigating the effects of IFRS on these countries, we overcome the limitations of previous research as the institutional settings of these countries are steady during the pre- and post-adoption periods (Florou & Kosi, 2015; Persakis & Iatridis, 2017). Thirdly, this study examines the long-term effect of IFRS, while the previous literature focuses predominantly on the short-term effects. Fourthly, the metrics for determining the cost of equity are derived based only on the forecasts provided by the analysts, in contrast to past papers which used estimated forecasts when data was missing (Claus & Thomas, 2001; Li, 2010). This yields a more robust investigation into the effects of IFRS, since researchers' estimations of missing data may contain measurement errors.

[6] The mandatory adoption date for publicly listed firms to adopt IFRS was January 1, 2012, December 31, 2010, December 31, 2009, January 1, 2012, and January 1, 2012 for Argentina, Brazil, Chile, Mexico and Peru, respectively. We check manually firm by firm for an accurate adoption date, as some firms were given a grace period to adopt IFRS due to several problems. Similar problems occurred in Europe (Larson & Street, 2004).

The remainder of this paper is organised as follows. Section 2 reviews the relevant literature and develops relevant hypotheses. Section 3 illustrates the data and sampling procedures. Then Section 4 presents the research design. Section 5 reports our empirical results, and Section 6 concludes this study along with some potential implications.

2. Literature Review and Hypotheses Development

Our first objective is to investigate the impact of IFRS on the cost of equity in Latin America. Prior literature on the effects of mandatory IFRS adoption on the cost of equity argue that IFRS adoption can lead to a reduction in the cost of equity in countries with strong enforcement and investor protection mechanisms (Daske et al., 2008; Li, 2010; Persakis & Iatridis, 2017). Similarly, we expect that Latin American firms will experience a reduction in their cost of equity based on the assumption that increased accounting quality will reduce firms' riskiness, which in turn can lower the required rate of return demanded by investors (i.e. the cost of equity).

There are two main arguments supporting our expectation: enhanced disclosure and comparability, which affect pricing of both estimation risk and information quality. First, for enhanced disclosure, the cost of equity and estimation risk are closely related (Barry & Brown, 1985). This suggests that a firm can signal to investors the quality of their financial statements by providing superior disclosures, which will reduce investors' perceptions of investment risk in that company. Therefore, considering that investors price their risk, enhanced disclosure should reduce firms' cost of equity (Li, 2010). This is also supported by the findings of previous studies which argue that superior disclosure helps to reduce risk, and subsequently to lower the cost of equity (Easley & O'Hara, 2004; Francis, Khurana, & Pereira, 2005a; Lambert, Leuz, & Verrecchia, 2007). Moreover, superior disclosure can enhance liquidity, thereby reducing the cost of equity through lower transaction costs (Easley & O'Hara, 2004; Muller, Riedl, & Sellhorn, 2011). This illustrates that the mandatory adoption of IFRS can reduce information asymmetry, which is consistent with investors' expectations and with the premise of 'high-quality' accounting standards. Additionally, the findings of Eliwa et al. (2016) and Houqe et al. (2016) support that higher accounting quality is associated with lower cost of equity.

Secondly, prior studies argue that the adoption of one set of accounting standards allows investors to compare firms across the globe, which in turn can reduce the cost of equity (Barth et al., 2008; Li, 2010). Li (2010) suggests that as more countries adopt IFRS,

the comparability effects are magnified, and this can help to reduce the cost of equity. Several studies also documented that IFRS helps to increase the comparability of accounting information (DeFond et al., 2011; Brochet, Jagolinzer, & Riedl, 2013; Cascino & Gassen, 2015).

Although the previous literature focuses mostly on developed nations, their findings are consistent with the expectations of regulators in Latin America.[7] The regulators expect an increase in accounting quality in Latin America, which is consistent with the evidence of increased accounting quality stemming from IFRS adoption in Latin America (Rodríguez et al., 2017). Although Latin American countries have weak institutional settings, information asymmetry problems are expected to decline by adopting high-quality accounting standards that improve disclosures and the comparability of information. Therefore, considering that IFRS requires greater disclosure in comparison to previous domestic accounting standards, and it has the capacity to increase comparability across firms, which in turn can reduce information asymmetry. The proposed hypothesis is as follows:

H1: *The cost of equity decreased after IFRS adoption in Latin America.*

Our second objective is to investigate the impact of IFRS on the cost of debt. Generally, lenders face information asymmetry when lending money to companies because they do not have complete information about the company, which can increase perceived risk in debt contracting (Moscariello et al., 2014). As a result, lenders need to evaluate the quality and reliability of firms' financial statements, and this generates additional risk and cost as information is costly to acquire and verify (Moscariello et al., 2014). This situation is exacerbated if firms do not disclose relevant information or if the accounting standards are not perceived as high-quality. Therefore, accounting quality can be a measure of information risk (Bharath, Sunder, & Sunder, 2008). Consistent with this view, past literature also indicates that reporting quality affects firms' estimated risk (Barry & Brown, 1985; Coles, Loewenstein, & Suay, 1995), and lower accounting quality is associated with higher debt interest rates (Francis, LaFond, Olsson, & Schipper, 2005b).

[7] For additional details refer to footnote 4, which contains links to the documents released by each securities and market regulator.

In Latin America, the previous domestic General Accepted Accounting Principles (GAAPs) were designed to meet tax regulations, and as such were poorly prepared to inform external users. For instance, prior to the adoption of IFRS in Brazil, there was no separation between short-term and long-term liabilities, and leasing contracts as well as intangibles were not properly recognised. In comparison to IFRS, these issues in previous GAAPs compromised complete and accurate information about a firm. This leads to an increase in lenders' costs and time in acquiring information, which also denotes an information asymmetry problem. In turn, lenders would increase the debt rates when the perceived risk is high. The shift to IFRS is expected to increase firms' accounting quality, hence, firms should disclose more reliable and material information. As such, more reliable and material disclosures help to mitigate the information asymmetry problem and reduce the risk that lenders perceive when lending money (Easley & O'Hara, 2004; Lambert et al., 2007).

For Chile, Bertin and Moya (2013) document higher timely recognition of losses after IFRS adoption, which may facilitate debt contracting. This is consistent with high-quality accounting reducing debt interest rates (Bharath et al., 2008; Schenone, 2010). Following the adoption of IFRS, Florou and Kosi (2015) also provide evidence of a decline in debt interest rates in countries with weak institutional settings and a large gap between previous GAAPs and IFRS. Thus, we propose the second hypothesis of this study as follows:

H2: *The cost of debt decreased after IFRS adoption in Latin America.*

3. Data and Sampling Procedures

3.1 Sampling Criteria

We focus on non-financial services firms listed on Latin American stock exchanges. Banks and financial institutions are excluded because their accounting standards are different from those of other firms. After identifying the official dates of IFRS adoption of Latin American countries per the website of IFRS, our sampling period is from January 1, 2005 to December 31, 2015.[8] We investigate the long-term effect of IFRS, so we focus on four years before and four years after the official dates of mandatory IFRS adoption

[8] http://www.ifrs.org/Use-around-the-world/Documents/Jurisdiction-profiles/

for each country. We check the date of adoption of IFRS manually for each firm on the respective website of the securities and market regulator. This is because some companies were given a grace period to adapt to the change in standards. Following these sampling criteria, we find only Argentina, Brazil, Chile, Mexico, and Peru have data available for conducting the required empirical analyses.

3.2 Data

Data for the cost of equity were obtained from the Institutional Brokers' Estimate System (I/B/E/S), whereas data for the cost of debt were obtained from DataStream (Thomson Reuters). The data (analysts' forecasts) for the cost of equity analyses were sourced from the I/B/E/S detail file and price information from DataStream. Other financial variables such as return on assets, size, variability of returns, leverage, country specific one-year-ahead inflation, risk-free rates, book to market value, interest coverage, tangibility, and standard deviation of net income are sourced from DataStream. These variables are presented in section 4.

This study also requires the availability of five-year-ahead forecasts or long-term growth rate available from I/B/E/S (Gode & Mohanram, 2003). Following Li (2010), we do not include firms whose earnings forecasts are negative. Unlike previous studies (Claus & Thomas, 2001; Li, 2010), this study relies only on the forecasts issued by the analysts. That is, we do not use the long-term earnings growth rate to forecast the three-year through five-year-ahead earnings forecasts if analyst forecasts are not available. Only using forecasts as generated by the analysts will better reflect their expectation for the firms' future. Pseudo forecasts do not have this key feature.[9]

3.3 Sampling Procedures

In order to calculate the mean of the cost of equity, this study requires that the data must be available for all models. This study produces two sets of results. First, in order to mitigate the estimation problems incurred in the calculation of the cost of equity, we estimate the mean of four methods further described in the research design section (Claus & Thomas, 2001; Gebhardt, Lee, & Swaminathan, 2001; Gode & Mohanram, 2003; Easton, 2004).

Second, we must consider evidence that clean surplus accounting did not exist before IFRS adoption in Brazil (Pinheiro et al., 2012) and possibly in other Latin

[9] As an additional robustness test, this study forecasts the third-year through five-year-ahead if they are missing using the long-term growth rate. The results are similar, and the inferences remain unchanged.

American countries. This is important because the models from Claus and Thomas (2001) as well as Gebhardt, Lee, and Swaminathan (2001) rely on the assumption of clean surplus accounting. Therefore, we also estimate the average of models from Gode and Mohanram (2003) and Easton (2004) that do not rely on the clean surplus assumption. The population and sample for the analyses of the cost of equity are illustrated in Table 1.

[Table 1 Here]

It is worth noting that the data for the required analyses on the cost of equity limited our sample size. While 534 firms are covered by I/B/E/S, excluding companies without anyone-year-ahead or two-year-ahead earnings forecasts decreased our sample size to 422 firms. To ensure that firms have already disclosed their financial statements, we get both the stock price and forecast data in local currencies 7 months[10] after the fiscal year-end. Thus, ensuring that analysts have priced and digested the latest information in their forecasts (Hail & Leuz, 2006; Li, 2010).

We include a firm *i* at year *t* if there are at least two analysts issuing earnings forecasts for at least two periods ahead and the long-term growth rate is available. These criteria reduce the sample size to 122 firms. It is worth noting that we delete the cost of equity estimates at the far end of the distribution (below 0 and above 100%) following Li (2010). This further decreases the sample size to 98 companies. When we estimate the cost of equity for these companies, we lose more observations due to their calculated cost of equity (which is the root of the equations on the 4 models) being a complex number. Following these criteria, we have 91 firms for which a meaningful cost of equity can be calculated for all 4 methods, and 95 firms for which a meaningful cost of equity can be calculated for Models 3 and 4. We also lose two firms due to the control variables not being available for the regressions with all 4 models for the cost of equity, and lose one firm due to the control variables not being available for regressions with models from Gode and Mohanram (2003), and Easton (2004). Therefore, our final sample consists of 89 firms for all cost of equity models and 94 firms for the models of Gode and Mohanram

[10] Li (2010) uses the data after 7 months of the financial year-end, whereas Hail and Leuz (2006) use 7 and 10 months after the financial year-end. Please note that according to this criterion the data for stock price and forecast data is ranging from July 31, 2006 to July 31, 2016.

(2003), and Easton (2004).[11] We winsorize the control variables return on assets, size, variability of returns, and leverage at the 1% level to mitigate the influence of outliers.

With regard to the analyses on the cost of debt, initially there were 1,226 companies in the population, which was trimmed to 875 firms with data available for at least one of the years during the period of 2005 to 2015 (see Table 2 for sample information). In order to provide a robust comparison, we investigate the long-term effects of the IFRS adoption by requiring all data to be available 4 years before and 4 years after the IFRS adoption date.[12] Following these criteria, there are 293 firms with all 8 years of data available.

[Table 2 Here]

It is worth noting that according to Florou and Kosi (2015), the financial crisis affected the interest rates for lenders, so an analysis in the period from 2008 to 2010 would affect the results.[13] As such, we adopt as the pre-adoption window the span from 2004 to 2007 and as the post-adoption window the period from 2011 to 2015 (varying according to the date of mandatory IFRS adoption for each country). On the one hand, the advantage of this analysis is that it avoids the intense macroeconomic shocks following the financial crisis on debt interest rates. On the other hand, the periods investigated as pre- and post-adoption represent a gap of 3 years (2008 to 2010). This could weaken the inferences, if any, that would be attributable to the IFRS adoption. In order to mitigate this possibility, this study also investigates the pre-adoption period immediately before IFRS adoption (4 years before adoption) in comparison to 4 years after IFRS adoption and achieves similar results.[14]

We winsorize the variables size, standard deviation of returns, book to market value, leverage, return on assets, interest coverage, tangibility, and standard deviation of net income at the 5% level in order to mitigate the effect of outliers.[15]

[11] Our sample for the cost of equity is composed mainly of Brazilian firms, which is a limitation of this analysis. However, we run additional tests with Brazilian firms only, and our results remained qualitatively unchanged. These test results are available from the corresponding author upon request.
[12] We also estimate the model on the cost of debt for Brazilian firms only, and our results are qualitatively unchanged.
[13] We try to adopt the same sampling window for the analysis on the cost of equity, but the data available 7 years before the adoption drops dramatically and affects the robustness of the analyses. In order to overcome this issue, we adopt several macroeconomic variables as well as year fixed effects in our regressions to control for any shocks arising from extenuating economic factors.
[14] For example, similar results for Brazil are achieved if we consider the pre-adoption window from 2006 to 2009 and the post-adoption period from 2010 to 2013.
[15] This study also winsorizes the data at 1% and achieves similar results.

4. Research Design

4.1 Cost of Equity Measures

To test *H1*, as in Li (2010), we adopt the mean of the four models of Claus and Thomas (2001), Gebhardt et al. (2001), Gode and Mohanram (2003), and Easton (2004). This is because all models that estimate the cost of equity are subject to econometric estimation errors. For instance, Easton and Monahan (2005) show that accounting-based proxies are biased in estimating the expected rate of return in cost of equity studies. Accordingly, previous literature indicates that it is more accurate to investigate the topic based on an average of several models as this approach decreases the risk of estimation error (Daske et al., 2008; Li, 2010; Daske et al., 2013). These models are based on earnings analysts' forecasts and different versions of the residual income model (Ohlson, 1995; Ohlson & Juettner-Nauroth, 2005), which were benefited from initial theory of investment of Williams (1938) and the dividend growth model of Gordon (1962). The four models presented in the following pages have been largely used in investigating the cost of equity in emerging markets (Chen, Chen, & Wei, 2009; Kim, Shi & Zhou, 2014; Houqe, Ahmed, & Zijl, 2017).

The first model is from Claus and Thomas (2001), who propose to calculate the cost of equity through the abnormal earnings approach. Equation 1 illustrates the abnormal earnings as follows:

$$ae_{i,t}=e_{i,t} - ke_{1_{i,t}} * bv_{i,t-1} \tag{1}$$

where: $ae_{i,t}$ is the abnormal earnings per share for firm *i* at time *t*; $e_{i,t}$ is the earnings per share for firm *i* at time *t*; $ke_{1_{i,t}}$ is the cost of equity, derived from the abnormal earnings model for firm *i* at time *t*; $bv_{i,t-1}$ is the book value per share for firm *i* at time *t*-1.

It is worth noting that the model of Claus and Thomas (2001) requires clean surplus accounting. They derive the following equation to calculate the cost of equity:

$$P_{i,t}=bv_{i,t}+\frac{ae_{1_{i,t}}}{1+ke_{1_{i,t}}}+\frac{ae_{2_{i,t}}}{(1+ke_{1_{i,t}})^2}+\frac{ae_{3_{i,t}}}{(1+ke_{1_{i,t}})^3}+\frac{ae_{4_{i,t}}}{(1+ke_{1_{i,t}})^4}+\frac{ae_{5_{i,t}}}{(1+ke_{1_{i,t}})^5} + \frac{ae_{5_{i,t}}(1+gae_{i,t})}{(ke_{1_{i,t}}- gae_{i,t})(1+ke_{1_{i,t}})^5} \tag{2}$$

where: $P_{i,t}$ is the stock price for firm *i* at time *t*; $ae_{1\ldots5_{i,t}}$ is the one-year-ahead through five-year-ahead abnormal earnings for firm *i* at time *t*; $gae_{i,t}$ is the long-term growth rate provided by analysts for firm *i* at time *t*.

The second model we adopt is from Gebhardt et al. (2001), which is illustrated in Equations 3 and 4.

$$P_{i,t}=B_{i,t}+\frac{FROE_{i,\,t+1}-ke_{2_{i,t}}}{1+ke_{2_{i,t}}}B_t+\frac{FROE_{i,t+2}-ke_{2_{i,t}}}{(1+ke_{2_{i,t}})^2}B_{i,t+1}+\text{TV} \quad (3)$$

$B_{i,t}$ = book value divided by the number of shares outstanding for firm *i* at time *t*; $ke_{2_{i,t}}$ = the cost of equity for firm *i* at time *t*; $FROE_{i,\,t+h}$= forecasted return on equity (ROE) for firm *i* for period *t* + *h*. For the first three years, this variable is computed as $FEPS_{i,\,t+h}/B_{i,t+h-1}$, where $FEPS_{i,\,t+h}$ is the I/B/E/S mean forecasted EPS for firm *i* for year *t*+*h* and $B_{i,t+h-1}$ is the book value per share for firm *i* for year *t*+*h*-1. As in Gebhardt et al. (2001), we forecast *FROE* from the fourth year using a linear interpolation based on the industry median ROE; $B_{i,t+h}=B_{i,t+h-1}+FEPS_{i,\,t+h}+FDPS_{i,\,t+h}$, where $FDPS_{i,\,t+h}$ is the forecasted dividend per share for firm *i* for year *t*+*h*, estimated using the actual dividend payout ratio (*dk*). This study assumes that $FDPS_{i,\,t+h}=FEPS_{i,\,t+h}*dk$ (Gebhardt et al., 2001).

The terminal value (TV) is given for any horizon T as follows:

$$\text{TV}=\sum_{h=3}^{T-1}\frac{FROE_{i,t+h}-ke_{2_{i,t}}}{(1+ke_{2_{i,t}})^h}B_{i,t+h-1}+\frac{FROE_{i,t+T}-ke_{2_{i,t}}}{ke_{2_{i,t}}(1+ke_{2_{i,t}})^{T-1}}B_{i,t+T-1} \quad (4)$$

Similarly, Gebhardt et al.'s (2001) model also requires clean surplus accounting. This model relies on the industry growth rate as a long-term growth rate.

The third model we use is from Gode and Mohanram (2003), henceforth GM. Unlike the previous models of Claus and Thomas (2001) and Gebhardt et al. (2001), the model of Gode and Mohanram (2003) does not require the clean surplus accounting assumption to hold. They present an adapted version of the Ohlson and Juettner-Narouth (2005) model as follows:

$$P_{i,t}=\frac{eps_{1_{i,t}}}{ke_{3_{i,t}}}+\frac{(eps_{2_{i,t}}-eps_{1_{i,t}}-ke_{3_{i,t}}(eps_{1_{i,t}}-dps_{1_{i,t}}))}{ke_{3_{i,t}}(ke_{3_{i,t}}-g_{p_{i,t}})} \quad (5)$$

where: $P_{i,t}$ is the stock price for firm *i* at time *t*; $ke_{3_{i,t}}$ is the cost of equity for firm *i* at time *t*; $eps_{1_{i,t}}$ is the one-year-ahead earnings per share for firm *i* at time *t*; $eps_{2_{i,t}}$ is the two-year-ahead earnings per share for firm *i* at time *t*; $dps_{1_{i,t}}$ is the one-year-ahead dividend per share for firm *i* at time *t*; $g_{p_{i,t}}$ is the long-term growth rate for firm *i* at time *t*.

Rearranging the equation for the function of the cost of equity $\left(ke_{3_{i,t}}\right)$, one gets the following:

$$ke_{3_{i,t}}=\mathrm{A}+\sqrt{\mathrm{A}^2+\frac{eps_{1_{i,t}}}{P_{i,t}}(g_{2_{i,t}}-g_{p_{i,t}})} \tag{6}$$

where: $\mathrm{A}=\frac{1}{2}\left(g_{p_{i,t}}+\frac{dps_{1_{i,t}}}{P_{i,t}}\right)$ and $g_{2_{i,t}}$ is the short-term growth rate for firm *i* at time *t*.

In comparison to previous models, this model requires two growth rates, a short-term one and a long-term one. The short-term growth rate is defined as the growth ratio between the one-year-ahead and two-year-ahead earnings forecast, whereas the long-term growth rate is for periods over five-years-ahead.

The fourth model that we adopt is the price earnings growth model (PEG) from Easton (2004), as described in Equation 7:

$$ke^2_{4_{i,t}}-ke_{4_{i,t}}\left(\frac{dps_{1_{i,t}}}{P_{i,t}}\right)-(eps_{2_{i,t}}-eps_{1_{i,t}})/P_{i,t}=0 \tag{7}$$

The cost of equity is denoted by the variable ($ke_{4_{i,t}}$) for firm *i* at time *t*, and is the positive real root of this equation.

Afterwards, we calculate two different averages of the cost of equity, denoted by a common variable $KE_{i,t}$, and regress them according to Equation 8 (Li, 2010). The first average is denoted by the variable $KE_{1234_{i,t}}$, which is the cost of equity mean calculated based on the four models described in this paper. The second average is calculated based on the average of the third model (GM) and the fourth model (Easton, 2004) adopted in this study, which is denoted by the variable $KE_{34_{i,t}}$. We adopt this second average because these models do not rely on the clean surplus accounting assumption, as this assumption does not hold in Latin America before IFRS adoption (Pinheiro, Macedo, & Vilamaior, 2012).

$$\begin{aligned}KE_{i,t}=&\alpha+\beta_1 IFRS_{i,t}+\beta_2 SIZE_{i,t}+\beta_3 RETVAR_{i,t}+\beta_4 LEV_{i,t}+\beta_5 INFLA_{i,t}+\beta_6 RFR_{i,t}\\&+\sum_{d=1}^{12}\beta_{d+6}NAICS_i+\sum_{c=1}^{5}\beta_{c+18}COUNTRY_i+\sum\beta_y YearControls_t+\varepsilon_{i,t}\end{aligned} \tag{8}$$

where: $KE_{i,t}$ denotes a common variable for $KE_{1234_{i,t}}$, which is the cost of equity achieved by calculating the mean of the four models for firm *i* at time *t*, and for $KE_{34_{i,t}}$, which is the cost of equity achieved by the mean of Models 3 (GM) and 4 (Easton, 2004) for firm

i at time *t*. $IFRS_{i,t}$ is the variable of interest, which is equal to 1 if the cost of equity is calculated in the post-IFRS period and is 0 otherwise. There are several control variables.

First, we employ three variables controlling for firms' financial and risk characteristics that would impact the variation of stock returns (Fama & French, 1993), which in turn would affect the cost of equity (Li, 2010). $SIZE_{i,t}$ is the natural log of market value of equity for firm *i* at year *t*. $RETVAR_{i,t}$ is the yearly standard deviation of monthly stock returns[16] for firm *i* at year *t*. $LEV_{i,t}$ is total liabilities over total assets for firm *i* at year *t*.

Second, two variables are used to control for the expected return of buying the stock and to account for the cross-country variation as firms' cost of equity are estimated according to local currencies (Hail & Leuz, 2006, 2009). First, the expected one-year-ahead inflation ($INFLA_{i,t}$) is defined as the country-year annual one-year-ahead inflation for firm *i* at time *t*, provided by DataStream. Second, the risk-free rate ($RFR_{i,t}$) is defined as the country-year risk-free rate for firm *i* at time *t*, calculated using the yields of local treasury bills, also provided by DataStream. As the expected inflation may not be the only factor affecting nominal interest rates, previous studies include the risk-free rates as they can affect the real interest rates (Hail & Leuz, 2006; Li, 2010).

We employ 12 North American Industry Classification System ($NAICS_i$) dummy variables that classify firms to control for the effect of different operating risks in different industries and the effect of different regulations. $COUNTRY_i$ represents a dummy variable for each country It captures the effects of the different institutional settings of the target countries.[17] Additionally, there are year-fixed effects to control for shocks over time. These are particularly helpful for long-term analysis as controls for macroeconomic shocks in specific years.

In order to reflect the macroeconomic situation experienced by Latin American countries in during these years, we also include an interactive variable in the model, which is $IFRSINFLA_{i,t}$ (represented by the product of $IFRS_{i,t}$ and $INFLA_{i,t}$). This is to control for the joint effect of these two variables. After introducing this variable into the model, this study expects that the coefficient on $IFRS_{i,t}$ will be significantly negative. This would

[16] As in Li (2010), we also include the book to market value ratio ($BTMV_{i,t}$) as another control to substitute for $RETVAR_{i,t}$. The results are similar.

[17] The results are similar if the enforcement proxy of Brown et al. (2014) is used.

indicate that even considering the strong effect of the expected one-year-ahead inflation, the adoption of IFRS still contributed to reducing the cost of equity.

4.1.1 Cost of Equity and Firm-level Reporting Incentives

An additional check is to investigate whether IFRS can still reduce firms' cost of equity after controlling for firms' incentives. Previous studies report that other factors can affect the adoption of IFRS, including firms' incentives (stronger operating performance, increased internationality, auditing by strong auditors), enforcement of accounting standards, and investor protection mechanisms (Ball et al., 2003; Daske et al., 2008; Byard, Li & Yu, 2011; Christensen et al., 2013). Thus, we postulate that firms' incentives can play a significant role in affecting a firms' cost of equity when the institutional setting is weak and has not changed significantly since the adoption of IFRS. In order to control for this, Equation 9 includes proxies for firms with regard to: (1) operating performance measured in terms of return on assets ($ROA_{i,t}$), (2) internationality measured by the number of foreign stock exchanges that a firm lists on ($NUMEX_{i,t}$), and (3) stronger auditors measured by a firm being audited by a Big 4 auditor ($AUD_{i,t}$).

$$\begin{aligned} KE_{i,t} = {} & \alpha + \beta_1 IFRS_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 RETVAR_{i,t} + \beta_4 LEV_{i,t} + \beta_5 INFLA_{i,t} + \beta_6 RFR_{i,t} \\ & + \beta_7 AUD_{i,t} + \beta_8 NUMEX_{i,t} + \beta_9 ROA_{i,t} + \sum_{d=1}^{12} \beta_{d+9} NAICS_i \\ & + \sum_{c=1}^{5} \beta_{c+21} COUNTRY_i + \sum \beta_y YearControls_t + \varepsilon_{i,t} \end{aligned} \tag{9}$$

where $AUD_{i,t}$ equals 1 if a firm i is audited by Ernst & Young (E&Y), Klynveld Peat Marwick Goerdeler (KPMG), PricewaterhouseCoopers (PwC), Deloitte Touche (D&T) in year t, otherwise 0. $NUMEX_{i,t}$ is the number of foreign stock exchanges that a firm i lists on year t. It signals a firm's international exposure. $ROA_{i,t}$ is equal to net income divided by total assets.[18]

This study expects that the coefficient on $IFRS_{i,t}$ will be significantly negative. Moreover, we expect that the coefficients of $AUD_{i,t}$, $ROA_{i,t}$, and $NUMEX_{i,t}$ will be negative, indicating that firms with stronger reporting incentives have a lower cost of equity. This is because as firms disclose more information, this increased disclosure can

[18] Please refer to Appendix A for a complete list of definition of variables used in the analyses on the cost of equity.

help to mitigate information asymmetry problems, which in turn can reduce the cost of equity.

4.2 Cost of Debt Measure

Unlike the cost of equity that must be estimated, the cost of debt is directly observable and can be calculated using the interest rates charged in the lending contracts. In order to investigate this, we adopt the methodology of Francis et al. (2005b), Moscariello et al. (2014), and Florou and Kosi (2015) as follows:

$$K_{D_{i,t}}=\alpha+\beta_1 IFRS_{i,t}+\beta_2 INFLA_{i,t}+\beta_3 RFR_{i,t}+\beta_4 LOGNIBE_{i,t}+\beta_5 BTMV_{i,t}+\beta_6 SIZE\_TA_{i,t} +\beta_7 INTCOV_{i,t}+\beta_8 TANGIBILITY_{i,t}+\beta_9 CURRRATIO_{i,t} +\sum_{d=1}^{12}\beta_{d+9} NAICS_i+\sum_{c=1}^{5}\beta_{c+21} COUNTRY_i+\sum \beta_y YearControls_t+\varepsilon_{i,t} \quad (10)$$

In Equation 10, the dependent variable ($K_{D_{i,t}}$) is firm *i*'s net interest expense in time *t* divided by the average interest-bearing overall debt (short-term and long-term) outstanding during time *t* and *t-1* (Francis et al., 2005b; Moscariello et al., 2014; Persakis & Iatridis, 2017). Following Moscariello et al. (2014), variables included in Equation 10 control for several factors: macroeconomic factors, company risk, the sensitivity of debt payments to company risk, the debt holders' risk in the face of technical default, country and industry fixed effects, and year-fixed effects.

Macroeconomic factors: risk-free rates ($RFR_{i,t}$) and one-year-ahead expected inflation ($INFLA_{i,t}$); as lenders will take into consideration these factors prior to lending money to a firm. These factors capture the economic influences on a firm's borrowing costs, and are similar to those used in previous studies to control for economic effects (Moscariello et al., 2014; Florou and Kosi, 2015). Both variables are expected to have a positive coefficient as the cost of debt will rise if the risk-free-rate and expected inflation increase.

Company risk: As done in Francis et al. (2005b) and Moscariello et al. (2014), this study includes the natural logarithm of the standard deviation of net income before extraordinary items in terms of the previous five-year period ($LOGNIBE_{i,t}$) to control for any effects arising from income volatility, as that affects the price on the debt contracts. We expect that $LOGNIBE_{i,t}$ will be positively associated with $K_{D_{i,t}}$. We also include the

book to market value ratio ($BTMV_{i,t}$) to control for company risk (Li, 2010), and expect it to be negatively associated with $K_{D_{i,t}}$.

The sensitivity of debt payments to company risk: this study uses firm size ($SIZE\_TA_{i,t}$) proxied as the log of total assets for firm *i* at year *t*, and interest cover ($INTCOV_{i,t}$, defined as operating income divided by interest expense for firm *i* at year *t*) to control for firms' specific performance factors that could affect interest payments.[19] Interest coverage is frequently used by bank covenants and in prior research (Francis et al., 2005b; Moscariello et al., 2014). We expect these variables to be negatively associated with $K_{D_{i,t}}$.

Risk in the face of technical default: this study includes two variables to control for the risk that a firm will default on a loan: *TANGIBILITY*, the percentage of property, plant and equipment (PPE) in relation to total assets, and *CURRRATIO*, current assets over current liabilities (Moscariello et al., 2014). $TANGIBILITY_{i,t}$ is expected to be negatively related to $K_{D_{i,t}}$, as a higher ratio indicates a lesser risk in lending to a firm. $CURRRATIO_{i,t}$ is expected to be positive (Florou & Kosi, 2015), as firms with more current liabilities would need to disclose more information to get access to borrowings, which may imply lower debt costs. [20]

Consistent with Equation 8, there are 12 ($NAICS_i$) dummies that classify the firms, $COUNTRY_i$ represents dummy variables for each country,[21] and there are year-fixed effects to control for shocks over time. In Equation 10, the variable of interest is $IFRS_{i,t}$. This study expects that the coefficient of $IFRS_{i,t}$ will be negatively significant, which would indicate that IFRS contributed to a reduction in the cost of debt.

5. Results and Discussion

We start by discussing the descriptive statistics of our sample and then presenting the regression results in subsequent sections. In our multivariate analysis, we use the robust heteroskedasticity matrix of White (1980) in all our estimations to mitigate concerns of heteroskedasticity. We also conduct the Variance Inflation Factor (VIF) test, which

[19] We also use the log of sales ($LOGSALES_{i,t}$, defined as the log of net sales for firm *i* at year *t*) as an alternative. We, however, do not consider it in the main analysis because it is colinear with our metric of firm size.

[20] Please refer to Appendix B for a complete list of definition of variables used in the analyses on the cost of debt.

[21] Again, the results are similar if the enforcement proxy of Brown et al. (2014) is used.

indicates no independent variable with a higher value than 2. Additionally, we run correlation tests which indicate that none of the independent variables have a significant correlation close to 0.7. In fact, most of the correlations are close to 0.1 and 0.2.[22] These indicate that our estimations do not suffer from multicollinearity problems. Additionally, we cluster the standard errors for robustness and also rerun the models with firm-fixed effects and year-fixed effects. Our results remain qualitatively unchanged. Further, we provide additional robustness tests to support our main analyses.

5.1 Descriptive Statistics: Cost of Equity

Table 3 reports the descriptive statistics for the variables regarding the analysis of the cost of equity in the pre- and post-adoption periods.

[Table 3 Here]

With regard to the test variables, Table 3 shows that $KE_{1234_{i,t}}$ decreases following mandatory IFRS adoption by approximately 3%, and the difference is significant at 1% level. As this represents the average for the four models, we also discuss the descriptive statistics of each model below in addition to the average of Models 3 and 4, because these do not rely on the clean surplus accounting assumption. The average of models 3 and 4 ($KE_{34_{i,t}}$) show a decline in the post-IFRS period by approximately 3.8%, and the difference between the pre- and the post-adoption period is significant at 1%. Thus, these two metrics provide consistent results that the cost of equity is lower after IFRS adoption.

The end of Table 3 shows the average of each model adopted to compute the averages of $KE_{1234_{i,t}}$ and $KE_{34_{i,t}}$. Although this study does not regress each of these averages separately, we introduce these to show that all models indicate a significant decline in the cost of equity following IFRS adoption. Model 1 of Claus and Thomas (2001) is denoted by the variable $ke_{1_{i,t}}$ and it is significantly lower in the post-IFRS period by approximately 3.2%, at a significance level of 1%. Model 2 of Gebhardt et al. (2001) is denoted by the variable $ke_{2_{i,t}}$, which is significantly lower in the post-IFRS period by approximately 2.5%, at a 1% significance level. Model 3 of Gode and Mohanram (2003) is represented by the variable $ke_{3_{i,t}}$, which is significantly lower in the post-IFRS period by approximately 5%, at a 5% significance level. Lastly, the variable $ke_{4_{i,t}}$ that represents the cost of equity calculated according to the approach of Easton (2004), is significantly

[22] The results of the statistical tests are not tabulated but available upon request.

negative in the post-IFRS period by approximately 2.5%, at a 1% significance level. These results indicate that the cost of equity indeed decreased following IFRS.

The one-year-ahead inflation ($INFLA_{i,t}$) and $SIZE_{i,t}$ are significantly higher following IFRS adoption, at a 1% significance level. The higher inflation reflects the instability of Latin American countries and stagnant Gross Domestic Product (GDP) in recent years, whereas $SIZE_{i,t}$ indicates that firms are slightly bigger in the post-IFRS period. The variable $RETVAR_{i,t}$, which represents the standard deviation of stock returns, is lower following IFRS adoption and the difference is significant at 1%. Moreover, the risk-free rate ($RFR_{i,t}$) is also lower and significant at 1% following mandatory IFRS adoption.

With regard to the incentives variables, the variables $AUD_{i,t}$, $NUMEX_{i,t}$, and $ROA_{i,t}$ are similar across the two periods. These suggest that firms may change auditors over time, but if they are audited by a Big 4 auditor, they just switch to another Big 4 auditor. Thus, there is no difference in this pattern, or in firm listing in other markets or in terms of performing a higher return on assets across the periods.

5.2 Descriptive Statistics: Cost of Debt

Table 4 reports the descriptive statistics for the variables regarding the analysis of the cost of debt in the pre- and post-adoption periods.

[Table 4 Here]

With regard to the test variable, Table 4 shows that the ($K_{D_{i,t}}$) is lower in the post-IFRS period by approximately 3.2%, and the difference is significant at 1%. This illustrates that the cost of debt is lower following IFRS adoption, suggesting that lenders and banks perceive a lower risk associated with lending to Latin American firms since IFRS adoption.

The one-year-ahead inflation ($INFLA_{i,t}$) and $SIZE_{i,t}$ are significantly greater following IFRS adoption, at a 1% significance level. The risk-free rate also increased in the post-adoption period, but only the median value is significant at 1%. $LOGNIBE_{i,t}$ is also higher following IFRS adoption, and the difference is significant at 1%. These indicate that the operational activity increases in the post-adoption period, as well as the volatility of the net income. Moreover, $TANGIBILITY_{i,t}$, and $CURRRATIO_{i,t}$ decreased and the difference is significant at 1%. These facts indicate that companies lost fixed assets over the period from pre- to post-adoption, and overall the current liabilities are bigger than the current assets in the post-adoption period, which illustrates why

$CURRRATIO_{i,t}$ decreased in the post-adoption period. This might be due to the stagnant GDP in recent years and economic and political instability in Latin America. Lastly, $BTMV_{i,t}$ is lower in the post-adoption period, indicating that there are higher growth opportunities for Latin American companies, and the difference is significant at 1%.

5.3 Effect of IFRS Adoption on the Cost of Equity (H1)

Table 5 reports the results of estimating Equation (8), which regresses the average of the implied cost of equity (measured by $KE_{1234_{i,t}}$ (average of all 4 models), and $KE_{34_{i,t}}$ (average of Models 3 and 4 that do not require a clean surplus assumption to hold)) on $IFRS_{i,t}$ and control variables. These results demonstrate whether the mandatory adoption of IFRS can reduce the cost of equity in Latin American countries.

[Table 5 Here]

It is noteworthy that inflation in Latin American countries rose considerably during the investigated period. As this variable can materially influence the cost of equity measure, we include the interaction of $IFRS_{i,t}$ and $INFLA_{i,t}$ in the second and fourth columns of Table 5. These results show that the coefficients on $IFRS_{i,t}$ are significantly negative for the regressions on $KE_{1234_{i,t}}$ and $KE_{34_{i,t}}$, except in the first regression. The second and fourth columns include the interactive variable $IFRSINFLA_{i,t}$, in these cases the coefficient of $IFRS_{i,t}$, is negatively significant at 10%. The coefficient of $INFLA_{i,t}$ is positively significant, which indicates that the cost of equity increases if the expected inflation increases. Overall, our results provide limited support for *H1*, indicating that IFRS has a limited effect of reduction on the cost of equity in the post-IFRS adoption period.

5.4 Impact of IFRS on the Cost of Equity after Controlling for Firm-level Reporting Incentives

Building on the results in Table 5, this study now examines whether mandatory adoption of IFRS helps to reduce firms' cost of equity after controlling for firm-level reporting incentives based on Equation 9. Thus, we regress the average of the cost of equity (measured by $KE_{1234_{i,t}}$ and $KE_{34_{i,t}}$) on $IFRS_{i,t}$, firm-level reporting incentives ($AUD_{i,t}$, $NUMEX_{i,t}$, and $ROA_{i,t}$) as well as on the other control variables. Results are presented in Table 6.

[Table 6 Here]

Similar to the results in Table 5, Table 6 shows that $IFRS_{i,t}$ is negatively associated with the regressions on $KE_{1234_{i,t}}$ and $KE_{34_{i,t}}$, except in the first regression reported in column 1. The second and fourth columns, which include the interactive variable $IFRSINFLA_{i,t}$, indicate that for both models $IFRS_{i,t}$ is still significantly negative at 5%. This illustrates that IFRS can contribute to reducing the cost of equity. It is worth noting that as the clean surplus accounting relation may not hold in the pre-adoption period, both regressions on $KE_{34_{i,t}}$ report the coefficient of $IFRS_{i,t}$ is negative and significant. These indicate that IFRS can still be beneficial in reducing the cost of equity even after controlling for firms' incentives, which again provides some limited support for *H1*. This result is understandable after taking into consideration the institutional settings of Latin American countries, where the enforcement of accounting standards and investor protection mechanisms are weak and without significant changes in the pre- and post-IFRS adoption periods.

Table 6 shows that the coefficient on $NUMEX_{i,t}$ is significantly negative for almost all regressions at 5% and 1% significance levels. This illustrates that firms listed on foreign stock exchanges have a lower cost of equity in comparison to the others. This fact may arise due to increased comparability of accounting standards. As these firms are listed on overseas stock exchanges, investors can more easily compare and rely on their financial statements, which implies a lower premium to invest in these companies in comparison to other Latin American firms only listed on domestic stock exchanges.

The coefficients on $AUD_{i,t}$ and $ROA_{i,t}$ are insignificant, which indicate that firms audited by Big 4 auditors or with greater performance do not present a statistically different cost of equity. In other words, investors do not necessarily imply that the amount of information disclosed by these firms is sufficient for them to demand a lower premium to invest in these firms.

5.5 Overall Effect of IFRS on the Cost of Debt (H2)

Table 7 reports the results of estimating Equation 10, which regresses the cost of debt (measured by $K_{D_{i,t}}$) on $IFRS_{i,t}$ and the control variables. In Column 1 the reported results use firms with at least 1 year of data, whereas Column 2 reports the analysis with only firms that have 8 complete years of data.

[Table 7 Here]

These results indicate that the coefficient of $IFRS_{i,t}$ is negatively significant. In particular, the coefficient is significant at 1% for the regression with all firms. The results

illustrate that the adoption of IFRS can benefit Latin American firms in reducing their cost of debt. These results are consistent with *H2*. With regard to the control variables, the coefficient on $RFR_{i,t}$ is positive and significant at 1%, which implies that the cost of debt is higher if the risk-free rates increase. Additionally, $INTCOV_{i,t}$ is significantly negative, which indicates that if a company has higher capacity of payment with regard to the debt, lenders reduce the interest rates for these firms, as these firms are less risky. Moreover, $CURRRATIO_{i,t}$ is positive and significant, which indicates that firms with greater current liabilities in relation to current assets may disclose more information in order to achieve lower debt costs (Florou & Kosi, 2015). These firms with greater liabilities probably must disclose more information to get access to loans, which will also infer lower debt costs.

5.6 Additional Robustness Tests

Although we control for many factors (size, variability of returns, leverage, one-year-ahead inflation, and risk-free rates as well as fixed effects to capture any shocks in the global and local economy) that could affect the cost of equity as well as tracking the forecast of each analyst, there is a problem due to a limited sample size. In order to test the robustness of our result, i.e. if IFRS is really the factor which explains a reduction on the cost of equity, we have tried to use a difference-in-difference design. However, there is a major problem with this approach in our case. There is no other country that shares the same institutional settings as Latin American countries that did not adopt IFRS prior 2016 with data available to conduct the analyses.

To some extent we tried to use data on firms from Colombia that adopted IFRS in 2014 and Bolivia that has not adopted IFRS. However, there are no firms with data available using the I/B/E/S detail file. Moreover, we also tried to use the I/B/E/S summary file. However, the only 2 Colombian firms with data available had many missing control variables as well as missing long-term mean provided by the analysts. Therefore, in order to compare a sample of adopters and non-adopters, we used data on firms from 5 other countries (Saudi Arabia, Malaysia, Egypt, Indonesia, and India) that did not adopt IFRS during the sampling period. As these non-adopters have substantially different institutional settings to Latin American countries but have not adopted IFRS during the study period, we aim to compare the marginal effect of firms that adopted IFRS in comparison to the non-adopters. To reach this objective as we are comparing firms from countries with significant differences, we use a propensity score matching (PSM) method.

For the cost of equity analysis, in order to maximize the sample size, we relax the assumption of using and forecasting data up to 7 months after the financial year end.[23] Thus, we use the I/B/E/S summary file to calculate the cost of equity using the averages of one- to five-year-ahead forecasts provided by the analysts and estimate three- to five-year-ahead forecasts using the long-term mean provided by analysts as reported in previous research (Li, 2010). We match firms based on industry, return on assets, size, variability of returns, leverage, country specific one-year-ahead inflation, and risk-free rates (i.e. consistent with the control variables defined in Equation 9). As shown in Table 8, we match 1,752 firm-year observations.

For the cost of debt analysis, we used data from DataStream for the same 5 countries (Saudi Arabia, Malaysia, Egypt, Indonesia, and India), and match the firms based on industry, size, standard deviation of returns, book to market value, leverage, return on assets, country-specific one-year-ahead inflation and risk-free rates, interest coverage, tangibility, and standard deviation of net income (i.e. consistent with the control variables defined in Equation 10). We match 2,258 firm-year observations (see Table 8).

[Table 8 Here]

Table 8 shows that adopting IFRS (the treatment effect) indicates that IFRS adopters have on average a 2.6% lower cost of equity considering the average of 4 models (significant at 1% level), and about 2% lower considering the average of Models 3 and 4 (significant at 5% level). This result shows that on average IFRS adopters have a 2% lower cost of equity in comparison to non-adopters. This is consistent with results presented in Tables 5 and 6, which indicate that the cost of equity decreased by about 3% due to IFRS adoption. Table 8 also shows that IFRS adopters have on average 0.5% lower cost of debt than non-adopters. This is consistent with our results in Table 7, Columns 1 and 2, although materially lower. These results confirm that indeed there is evidence that IFRS is associated with lower cost of equity and lower cost of debt. Additionally, our additional tests reveal that the magnitude of the IFRS effect is less pronounced than previously estimated. That is, a reduction of about 2% for the cost of equity and 0.5% for the cost of debt. This suggests that the IFRS effect is more pronounced for equity holders than debt holders. This is consistent to equity costs being more difficult to observe and to

[23] We use price of the end of the year in the equations for the cost of equity, as well as test the price for 7 months after the financial year end. Both specifications provide very similar results and the inferences are qualitatively unchanged.

measure, i.e. better information quality mitigates information asymmetry which helps to reduce the risk and consequently the cost of equity.

6. Conclusion

We provide evidence about whether mandatory adoption of IFRS can contribute to a reduction in the cost of equity and debt in Latin American countries whose institutional settings of enforcement and investor protection are consistently weak. In contrast to previous literature, the results reported in this study on the cost of equity are based solely on data provided by the analysts, and this study also achieves similar results by calculating the cost of equity using the long-term growth rate to forecast the four-year through five-year-ahead earnings forecasts if they are not available.

The results provide support that the cost of equity declined after the mandatory adoption of IFRS in five Latin American countries. Additionally, firm-level reporting incentives can affect the cost of equity to a certain degree. Finally, we document that the cost of debt also declined after the adoption of IFRS in five Latin American countries. Overall, according to the economic and financial condition, Latin American countries with weak institutional settings can still benefit from the mandatory adoption of IFRS.

Our paper has significant implications for investors, debt holders, regulators, and the IASB. For investors, it can be beneficial for forming portfolios and achieving higher yields as they compare the performance of these firms with other international firms. Following the economic and political crisis that these countries have faced in recent years, lower inflation rates and higher growth rates alongside the increase in the reliability of financial statements of public companies may attract more investments (Moura & Gupta, 2019). This should be beneficial in the long-term as recent news affirm that investments in these countries look promising in 2019 and beyond, and that the credit ratings in these countries are stable.[24]

For debt holders, banks, and other lenders, the results illustrate that the cost of debt declined in the post-IFRS period, which suggests that lenders will be more confident in providing funding for Latin American firms. An increase in funding and lower interest rates can help Latin American firms to grow and to develop their capital markets in the long-term, as external users demand high-quality information in order to continue their

[24] Please see the news from Forbes on 10th December 2018, available at: https://www.forbes.com/sites/mayrarodriguezvalladares/2018/12/10/latin-american-markets-look-promising-in-2019-and-beyond/#3867aa085724

funding operations. Finally, the results of this study support the beneficial outcome of IFRS adoption. This is a reference point for the IASB in supporting the adoption of IFRS for other developing or underdeveloped countries which have not yet adopted IFRS.

It is worth noting that even though we find evidence that mandatory adoption of IFRS is beneficial on a long-term basis, we acknowledge some of the challenges in implementing IFRS in emerging economies. Weak enforcement following the adoption of IFRS as issued by the IASB has been a challenge to emerging countries. Countries have had to adapt their national accounting policy choices to IFRS, which sometimes bring difficulties to comparability (Kvaal & Nobes, 2012; Zeff, 2012). Additionally, the standards and the process of convergence to IFRS are ongoing. As the IASB issues corrections or adjustments to the existing standards, each country has a different time schedule for approving and issuing the new legislation.

We also suggest an interesting avenue for future research: that is to investigate the impact of IFRS in Latin American countries on the cost of debt according to whether the loans are from public or private sources. After the adoption of IFRS, the cost of debt might be reduced more for firms that rely on public debt as the quality of their financial statements increases. However, the cost of debt for firms that rely on private sources may not have decreased in comparison to those firms that rely on public sources. This is because firms relying on private sources of funding may have fewer incentives to improve disclosure.

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Table 1. Sample structure for the analyzes on the cost of equity (2005-2015)

Panel A. Number of firms from I/B/E/S

NAICS	Argentina	Brazil	Chile	Mexico	Peru	Total
11	3	1	3	2		9
21	7	17	8	9	16	57
22	12	30	20	7	5	74
23	8	13	16	25	6	68
31–33	16	41	29	38	22	146
42						
44–45	1	18	9	17	1	46
48–49	3	11	8	4		26
51	1	2	2	7	1	13
54	1	3	1	2		7
72		4	6	10	2	22
81	3	34	6	19	4	66
Total	55	174	108	140	57	534

Panel B. Number of firms whose data is available for at least one of the years during the period of eight years around the date of mandatory adoption of IFRS.

NAICS	Argentina	Brazil	Chile	Mexico	Peru	Total
11			1			1
21		5	2			6
22		3	6			10
23		6	0			8
31–33		16	3	1		20
42						0
44–45		9	2	1		12
48–49		5	1	1		6
51	1	1				2
54		1				1
72			1			1
81		22	1			23
Total	1	68	17	3	0	89

Notes: Panel A reports the number of Latin American firms downloaded from I/B/E/S for the sample period from 2005 to 2015. North American Industry Classification System (NAICS) 11: agriculture, forestry, fishing and hunting; NAICS 21: mining, quarrying, oil and gas extraction; NAICS 22: utilities; NAICS 23: construction; NAICS 31–33: manufacturing; NAICS 42: wholesale trade; NAICS 44–45: retail trade; NAICS 48–49: transportation and warehousing; NAICS 51: information; NAICS 54: professional scientific and technical services; NAICS 72: accommodation and food services; NAICS 81: other services (excludes public administration, religious organisations, grantmaking and giving services, voluntary organisations, social advisory services, human rights organisations, civil and social organisations, business and professional, political and labour organisations, business associations, professional organisations, private households etc.). Panel B shows the number of firms whose I/B/E/S data is available for at least one year between the four years before and after the date of mandatory adoption of IFRS.

Table 2. Sample structure for the analyzes on the cost of debt (2004-2015)

Panel A. Number of firms from DataStream

NAICS	Argentina	Brazil	Chile	Mexico	Peru	Total
11	9	3	4	4		20
21	20	46	12	25	41	144
22	39	66	37	25	18	185
23	12	33	18	61	14	138
31–33	42	100	44	90	79	355
42	1	4	3	6		14
44–45	3	29	11	44	4	91
48–49	5	17	12	12	1	47
51	4	3	3	22	1	33
54	1	6	2	4		13
72	1	10	19	23	3	56
81	9	49	17	37	18	130
Total	146	366	182	353	179	1226

Panel B. Number of firms whose data is available for at least one of the years during the period of eight years around the date of mandatory adoption of IFRS.

NAICS	Argentina	Brazil	Chile	Mexico	Peru	Total
11	4	2	1	4		11
21	18	29	8	24	33	112
22	27	44	28	17	14	130
23	10	26	16	56	11	119
31–33	31	71	36	71	54	263
42	1	5	3	6		15
44–45	3	17	8	33	4	65
48–49	5	12	8	12	1	38
51	3	3	2	19	1	28
54	1	8	2	4		15
72		4	8	18	2	32
81	2	24	8	8	5	47
Total	105	245	128	272	125	875

Panel C. Number of firms whose data for four years pre- and four years post- the date of mandatory adoption of IFRS are all available.

NAICS	Argentina	Brazil	Chile	Mexico	Peru	Total
11	2		1			3
21	4	14	6	6	10	40
22	5	16	14	5	3	43
23	5	11	8	14	6	44
31–33	11	32	20	17	17	97
42		2	2	4		8
44–45	2	6	5	8	1	22
48–49	1	1	7			9
51		2	1	6		9
54	1		1			2
72			3	6	2	11
81		2	3			5
Total	31	86	71	66	39	293

Notes: Panel A reports the number of Latin American firms downloaded from DataStream for the sample period from 2004 to 2015. Definitions for the NAICS codes are shown at the bottom of Table 1. Panel B shows the number of firms whose data is available in four years pre- and four years post- the date of mandatory adoption of IFRS.

Table 3. Descriptive statistics for the analysis on the cost of equity

	Pre				Post			
	N	Mean	Median	Std. Dev	N	Mean	Median	Std. Dev
Test variables								
$KE_{1234_{i,t}}$	134	0.213	0.183	0.094	208	**0.181*** **	**0.168** **	0.067
$KE_{34_{i,t}}$	143	0.246	0.210	0.120	222	**0.208*** **	**0.184***	0.094
Control Variables								
$INFLA_{i,t}$	166	0.048	0.049	0.012	256	**0.054*** **	**0.054** **	0.025
$SIZE_{i,t}$	166	7.428	7.320	1.247	256	**7.649** **	**7.596***	1.176
$RFR_{i,t}$	166	0.090	0.102	0.047	256	**0.087*** **	**0.090*** **	0.027
$LEV_{i,t}$	165	1.614	1.074	2.529	254	1.340	1.148	0.913
$RETVAR_{i,t}$	154	0.132	0.119	0.064	254	**0.089*** **	**0.083*** **	0.030
Incentives Variables								
$AUD_{i,t}$	166	0.928	1	0.260	256	0.949	1	0.220
$NUMEX_{i,t}$	166	0.373	0	0.742	256	0.266	0	0.638
$ROA_{i,t}$	165	0.064	0.058	0.046	254	0.069	0.063	0.050
Cost of Equity								
$ke_{1_{i,t}}$	158	0.235	0.186	0.160	241	**0.203*** **	0.183	0.112
$ke_{2_{i,t}}$	165	0.147	0.128	0.089	254	**0.122*** **	**0.112*** **	0.068
$ke_{3_{i,t}}$	146	0.325	0.261	0.188	228	**0.275** **	0.242	0.148
$ke_{4_{i,t}}$	146	0.166	0.148	0.082	227	**0.141*** **	0.135	0.061

Notes: *, **, *** significant difference between means (medians) in Pre and in Post at 10%, 5%, 1% level, two-tailed test, respectively. Please refer to Appendix A for the definition of variables.

Table 4. Descriptive statistics for the analysis on the cost of debt

	Pre				Post			
	N	Mean	Median	Std. Dev	N	Mean	Median	Std. Dev
Test variable								
$K_{D_{i,t}}$	1,172	0.137	0.083	0.147	1,172	**0.105*** **	**0.068*** **	0.119
Control Variables								
$INFLA_{i,t}$	1,172	0.044	0.040	0.022	1,172	**0.064*** **	**0.041*** **	0.071
$RFR_{i,t}$	1,172	0.076	0.069	0.062	1,172	0.075	**0.066*** **	0.049
$TANGIBILITY_{i,t}$	1,172	0.463	0.468	0.218	1,172	**0.421*** **	**0.416*** **	0.229
$CURRRATIO_{i,t}$	1,172	1.692	1.486	1.022	1,172	**1.678*** **	1.414	1.140
$INTCOV_{i,t}$	1,172	4.391	2.564	5.384	1,172	**3.903*** **	**1.890*** **	5.774
$LOGNIBE_{i,t}$	1,172	10.29	10.10	1.948	1,172	**10.33*** **	**10.26*** **	1.929
$SIZE\_TA_{i,t}$	1,172	5.421	5.497	2.406	1,172	**6.240*** **	**6.329*** **	2.437
$BTMV_{i,t}$	1,172	2.128	0.844	5.700	1,172	**1.929*** **	**0.724*** **	5.659

Notes: *, **, *** significant difference between means (medians) in Pre and in Post at 10%, 5%, 1% level, two-tailed test, respectively. Please refer to Appendix B for the definition of variables.

Table 5. Overall impact of mandatory adoption of IFRS on the cost of equity

$$KE_{1234_{i,t}} or\, KE_{34_{i,t}} = \alpha + \beta_1 IFRS_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 RETVAR_{i,t} + \beta_4 LEV_{i,t} + \beta_5 INFLA_{i,t} + \beta_6 RFR_{i,t}$$

$$+ \sum_{d=1}^{12} \beta_{d+6} NAICS_i + \sum_{c=1}^{5} \beta_{c+18} COUNTRY_i + \sum \beta_y YearControls_t + \varepsilon_{i,t}$$

Independent Variables	Pred. Sign	Dependent Variables			
		$KE_{1234_{i,t}}$	$KE_{1234_{i,t}}$	$KE_{34_{i,t}}$	$KE_{34_{i,t}}$
		(1)	(2)	(3)	(4)
$IFRS_{i,t}$	-	-0.021	-0.104**	-0.031*	-0.118**
		(-1.593)	(-2.284)	(-1.768)	(-2.078)
$INFLA_{i,t}$	+	0.694***	-1.155	0.731**	-1.179
		(2.700)	(-0.957)	(2.570)	(-0.838)
$SIZE_{i,t}$	-	-0.002	-0.004	-0.033	-0.035
		(-0.141)	(-0.227)	(-1.470)	(-1.527)
$IFRSINFLA_{i,t}$	+		1.762*		1.823
			(1.773)		(1.570)
$RFR_{i,t}$	+	0.099	-0.014	-0.141	-0.255
		(0.561)	(-0.079)	(-0.633)	(-1.106)
$RETVAR_{i,t}$	+	0.0721	0.111	0.194	0.229
		(0.474)	(0.752)	(0.884)	(1.053)
$LEV_{i,t}$	-	0.003	0.002	0.004	0.004
		(1.237)	(1.055)	(1.230)	(1.153)
Fixed Effects					
Year		Included	Included	Included	Included
Industry		Included	Included	Included	Included
Country		Included	Included	Included	Included
Constant		0.044	0.102	0.307*	0.358**
		(0.342)	(0.745)	(1.800)	(1.995)
Adjusted R-squared		0.109	0.115	0.088	0.090
Observations		339	339	361	361
Number of Firms		90	90	94	94

Notes: Robust t-statistics in parentheses: *** p<0.01, ** p<0.05, * p<0.10. Columns 2 and 4 include the variable $IFRSINFLA_{i,t}$ (represented by the product of $IFRS_{i,t}$ and $INFLA_{i,t}$) as an additional robustness check; this is to control for the joint effect of these two variables. Please refer to Appendix A for the definition of variables.

Table 6. Impact of mandatory adoption of IFRS on the cost of equity after controlling for firm-level reporting incentives

$$KE_{1234_{i,t}} or KE_{34_{i,t}} = \alpha + \beta_1 IFRS_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 RETVAR_{i,t} + \beta_4 LEV_{i,t} + \beta_5 INFLA_{i,t} + \beta_6 RFR_{i,t} + \beta_7 AUD_{i,t} + \beta_8 NUMEX_{i,t} + \beta_9 ROA_{i,t} + \sum_{d=1}^{12} \beta_{d+9} NAICS_i + \sum_{c=1}^{5} \beta_{c+21} COUNTRY_i + \sum \beta_y YearControls_t + \varepsilon_{i,t}$$

Independent Variables	Pred. Sign	Dependent Variables			
		$KE_{1234_{i,t}}$	$KE_{1234_{i,t}}$	$KE_{34_{i,t}}$	$KE_{34_{i,t}}$
		(1)	(2)	(3)	(4)
$IFRS_{i,t}$	-	-0.017	-0.096**	-0.034*	-0.126**
		(-1.285)	(-2.037)	(-1.800)	(-2.185)
$INFLA_{i,t}$	+/-	0.673**	-1.074	0.755**	-1.265
		(2.599)	(-0.882)	(2.602)	(-0.895)
$SIZE_{i,t}$	-	-0.005	-0.007	-0.029	-0.030
		(-0.285)	(-0.348)	(-1.220)	(-1.262)
$RFR_{i,t}$	+	0.072	-0.033	-0.120	-0.239
		(0.389)	(-0.172)	(-0.533)	(-1.029)
$RETVAR_{i,t}$	+	0.079	0.116	0.203	0.241
		(0.516)	(0.775)	(0.917)	(1.097)
$LEV_{i,t}$	-	0.004*	0.003	0.003	0.003
		(1.823)	(1.521)	(1.164)	(0.991)
$AUD_{i,t}$	-	-0.018	-0.019	0.070	0.074
		(-0.383)	(-0.413)	(0.813)	(0.861)
$ROA_{i,t}$	-	0.203	0.186	-0.191	-0.208
		(0.794)	(0.714)	(-0.693)	(-0.743)
$NUMEX_{i,t}$	-	-0.014**	-0.009	-0.041***	-0.037***
		(-1.990)	(-1.539)	(-4.347)	(-3.856)
$IFRSINFLA_{i,t}$	+		1.665		1.929
			(1.656)		(1.646)
Fixed Effects					
Year		Included	Included	Included	Included
Industry		Included	Included	Included	Included
Country		Included	Included	Included	Included
Constant		0.176	0.238	0.395**	0.464**
		(1.304)	(1.662)	(2.297)	(2.597)
Adjusted R-squared		0.092	0.099	0.093	0.097
Observations		328	328	350	350
Number of Firms		89	89	94	94

Notes: Robust t-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.10. Please refer to Appendix A for the definition of variables.

Table 7. Impact of mandatory adoption of IFRS on cost of debt

$$K_{D_{i,t}}=\alpha+\beta_1 IFRS_{i,t}+\beta_2 INFLA_{i,t}+\beta_3 RFR_{i,t}+\beta_4 LOGNIBE_{i,t}+\beta_5 BTMV_{i,t}+\beta_6 SIZE_{i,t}+\beta_7 INTCOV_{i,t}$$

$$+\beta_8 TANGIBILITY_{i,t}+\beta_9 CURRRATIO_{i,t}+\sum_{d=1}^{12}\beta_{d+9} NAICS_i+\sum_{c=1}^{5}\beta_{c+21} COUNTRY_i+\sum\beta_y YearControls_t+\varepsilon_{i,t}$$

Independent Variables	Pred. Sign	Dependent Variable $K_{D_{i,t}}$	Dependent Variable $K_{D_{i,t}}$
$IFRS_{i,t}$	-	-0.014***	-0.0312**
		(-2.637)	(-2.521)
$SIZE\_TA_{i,t}$	-	-0.008**	-0.0114*
		(-1.96)	(-1.933)
$BTMV_{i,t}$	-	-0.002*	-0.002*
		(-1.777)	(-1.855)
$INFLA_{i,t}$	+	0.092	0.049
		(1.310)	(0.454)
$RFR_{i,t}$	+	0.337***	0.659***
		(4.950)	(6.343)
$LOGNIBE_{i,t}$	+	-0.005	-0.008
		(-1.140)	(-1.012)
$INTCOV_{i,t}$	-	-0.001***	-0.004***
		(-3.540)	(-4.663)
$TANGIBILITY_{i,t}$	-	0.010	-0.0181
		(0.488)	(-0.459)
$CURRRATIO_{i,t}$	+	0.001**	0.010**
		(2.013)	(2.077)
Fixed Effects			
Year		Included	Included
Industry		Included	Included
Country		Included	Included
Constant		0.051	0.084
		(0.667)	(0.661)
Adjusted R-squared		0.053	0.137
Observations		4,887	2,344
Number of Firms		875	293

Notes: Robust t-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.10. Please refer to Appendix B for the definition of variables.

Table 8. Marginal effect of IFRS between non-adopters and adopters

Treatment-effects estimation			
Treatment	Variable		
	$KE_{1234_{i,t}}$	$KE_{34_{i,t}}$	$K_{D_{i,t}}$
IFRS (1 vs 0)	-0.0262***	-0.0208**	-0.0054**
	(0.0086)	(0.0088)	(0.0025)
Number of obs	1,752	1,752	2,258

Notes: We estimated using a probit estimator. Please refer to Appendix A and B for the definition of variables.

Appendix A

Definition of variables when analyzing the cost of equity

Test variables	
$KE_{1234_{i,t}}$	The mean of the cost of equity calculated according to Claus and Thomas (2001), Gebhardt et al. (2001), Gode and Mohanram (2003), and Easton (2004).
$KE_{34_{i,t}}$	The mean of the cost of equity calculated according to Gode and Mohanram (2003), and Easton (2004).
Variable of Interest	
$IFRS_{i,t}$	It is equal to 1 if the cost of equity is calculated in the post-IFRS period and is 0 otherwise, for firm *i* at time *t*.
Incentives variables	
$AUD_{i,t}$	Dummy variable that equals 1 if a firm *i* is audited by Ernst & Young (E&Y), Klynveld Peat Marwick Goerdeler (KPMG), PricewaterhouseCoopers (PwC), Deloitte Touche (D&T) in year *t*, otherwise 0.
$NUMEX_{i,t}$	Number of foreign stock exchanges that a firm *i* lists on year *t*.
$ROA_{i,t}$	Net income divided by total assets for firm *i* at time *t*.
Control variables	
$SIZE_{i,t}$	Natural logarithm of market value of equity at the end of year *t*.
$INFLA_{i,t}$	Country-year one-year-ahead inflation provided by Datastream.
$RFR_{i,t}$	Country-year risk-free rate calculated using the yields of local treasury bills or central bank papers provided by Datastream.
$RETVAR_{i,t}$	The yearly standard deviation of monthly stock returns at year-end.
$LEV_{i,t}$	The ratio of total liabilities over total assets for firm *i* at year *t*.
Cost of equity variables	
$ke_{1_{i,t}}$	Cost of equity calculated according to Claus and Thomas (2001).
$ke_{2_{i,t}}$	Cost of equity calculated according to Gebhardt et al. (2001).
$ke_{3_{i,t}}$	Cost of equity calculated according to Gode and Mohanram (2003).
$ke_{4_{i,t}}$	Cost of equity computed according to the model of Easton (2004).

Appendix B

Definition of variables when analyzing the cost of debt

Test variable	
$K_{D_{i,t}}$	Net interest expense in year *t* to the average interest-bearing overall debt (short-term and long-term) outstanding during years *t* and *t-1*.
Variable of Interest	
$IFRS_{i,t}$	It is equal to 1 if the cost of debt is calculated in the post-IFRS period and is 0 otherwise, for firm *i* at time *t*.
Control variables	
$INFLA_{i,t}$	Country-year one-year-ahead inflation provided by Datastream.
$RFR_{i,t}$	Country-year risk-free rate calculated using the yields of local treasury bills or central bank papers provided by Datastream.
$LOGNIBE_{i,t}$	Log of the standard deviation of net income before extraordinary items in the prior five-year period.
$BTMV_{i,t}$	The ratio of book value of equity to market value of equity at the end of year *t*.
$SIZE\_TA_{i,t}$	Natural logarithm of total assets at the end of year *t*.
$INTCOV_{i,t}$	Operating income divided by interest expense at the end of year *t*.
$TANGIBILITY_{i,t}$	The percentage of property, plant and equipment in relation to total assets at the end of year *t*.
$CURRRATIO_{i,t}$	The ratio calculated as current assets over current liabilities at the end of year *t*.