Financial Reporting Regulation and Financing Decisions

Patricia Naranjo
patricia.naranjo@rice.edu
Jesse H. Jones Graduate School of Business, Rice University

Daniel Saavedra
daniel.saavedra@anderson.ucla.edu
UCLA Anderson School of Management

Rodrigo S. Verdi*
rverdi@mit.edu
Sloan School of Management, MIT

Abstract

We study the influence of a major reform in financial reporting regulation on financing decisions. Across a battery of tests, we document an increase in the issuance of external financing around the new regime. Further, firms make different financing decisions around the new regulation depending on their ex-ante debt capacity, allowing them to adjust their capital structure. Our results are accentuated across firms facing higher adverse selection costs and are consistent with the new regulation reducing underinvestment among constrained firms. Our findings highlight the importance of financial reporting regulation in explaining financing as well as investment policies, and provide insights into which firms are more likely to benefit from it.

Current draft: April 2017

---

* Corresponding author contact information: 100 Main Street, Cambridge, MA 02142; Phone: (617) 253-2956; E-mail: rverdi@mit.edu. We thank Manuel Adelino, Joshua Anderson, Mark Bradshaw, John Core, Xavier Giroud, João Granja, Nick Guest, Michelle Hanlon, Amy Hutton, Christian Leuz, Gustavo Manso, Stewart Myers, Jeff Ng, Scott Richardson, Michael Roberts, Antoinette Schoar, Nemit Shroff, Eric So, Jerry Zimmerman, and workshop participants at University of Arizona, Boston College, University of British Columbia, Catholic-Lisbon University, INSEAD, LBS, MIT, Penn State, Rice University, the University of Sao Paulo, and conference participants at the AAA, EAA and IAS for helpful comments. The authors gratefully acknowledge financial support from the MIT Sloan School of Management, Rice University and UCLA. Patricia Naranjo and Daniel Saavedra are also grateful for financial support from the Deloitte Foundation.

1. Introduction

We study the influence of a major reform in financial reporting regulation on financing decisions around the world. Specifically, we use the adoption of the International Financial Reporting Standards (IFRS) as a setting in which a new regulation substantially alters the information environment of the adopting firms (hereafter the 'new regulation').[1] We refer to the new regulation broadly, which includes the new set of standards, as well as supporting infrastructure such as enforcement efforts by regulators to increase compliance with the new standards.[2] We then frame our predictions based on the pecking order theory developed by Myers and Majluf 1984.

Our motivation is twofold: First, despite a large literature on the pros and cons of IFRS and more broadly on the role of mandatory disclosure, there is little evidence on the impact of financial reporting regulation on financing (and investment) decisions (see, e.g., De George, Li, and Shivakumar 2016; Leuz and Wysocki 2016 for recent reviews). The lack of evidence is particularly noticeable in an international context; Myers 2003, for example, calls for more research in this area. To date, the international literature that studies the implications of regulatory reforms on financing decisions has mostly centered around creditor control rights (e.g., La Porta et al. 1997, 1998; Vig 2013) or market liberalization (see Bekaert and Harvey 2000; Henry 2000). In contrast, our paper exploits a major reform in financial reporting to study the extent to which reporting regulation influences financing choices.[3]

[1] Throughout the paper, we use the terms new "regulation", "reform", "mandate" interchangeably.
[2] The literature has recently focused on the specific drivers of the economic consequences around IFRS (see, e.g., Christensen, Hail, and Leuz 2013; Barth and Israeli 2013). While this is unquestionably an important debate, our focus is on whether a financial reporting regulation, broadly defined, can influence a firm's financing decisions by changing the information environment of affected firms.
[3] We focus on financing decisions such as the likelihood of engaging in external financing (debt or equity), as well as its investment and leverage implications. This approach differs from prior studies which focus on the *cost* of financing using measures of adverse selection costs as proxied by bid-ask spreads (e.g., Leuz and Verrecchia 2000).

Second, despite decades of research on capital structure, academics have not come to an agreement about the extent to which the pecking order theory, and information frictions in particular, affect financing decisions (we review this literature in Section 2). Part of the challenge is that it is difficult to obtain exogenous variation in information asymmetry to isolate its effect on financing decisions. In this context, Garmaise and Natividad (2010; p. 1) note that "Credible exogenous information proxies are hard to find, and there are relatively few natural experiments that result in significant shifts in the information environment." We contribute to this literature by using a financial reporting reform as a regulatory change aimed at reducing information asymmetry. Because the reform we study is determined at the country level it is less likely to reflect the endogenous preferences of a single firm.[4] Further, we are also not aware of empirical evidence suggesting that IFRS systematically affects other determinants of capital structure decisions such as tax rates and/or financial distress. As a result, our setting allows us to frame our hypotheses based on predictions from the pecking order theory.[5]

A key prediction from the pecking order theory is that information asymmetry is an important determinant of financing decisions. In particular, information asymmetry between managers and (new) investors increases adverse selection costs, and, as a result, the cost of raising external capital. The key intuition is that managers have an information advantage over outside investors and, as a result, are more inclined to raise external financing when they believe outside investors are overvaluing the company's stock. Investors, however, anticipate this behavior and respond to an equity issuance by discounting the stock price. Therefore, information asymmetry leads to adverse selection costs that make external financing less attractive and, in equilibrium,

[4] While a country's decision to adopt IFRS is certainly endogenous (see, e.g., Hope, Jin, and Kang 2006; Ramanna and Sletten 2014), our hypotheses rely on a less stringent assumption that the country adoption is (arguably) exogenous to idiosyncratic financing preferences of a given firm.

[5] In Section 2, we discuss in more detail alternative capital structure theories and how they relate to our results.

firms end up passing profitable investment opportunities. To the extent that the new financial reporting regulation reduces information asymmetry between managers and investors among adopting firms (we review this literature in section 2), then it would reduce adverse selection costs. As a result, in the context of Myers and Majluf's 1984 model, firms adopting the new regulation should be more inclined to seek external financing and fund investment opportunities. We test this hypothesis (and additional predictions described below).

Notwithstanding our prediction, there are several arguments in support for a null result. First, while the pecking order theory has existed for over three decades, researchers are still debating whether and to what extent this theory explains financing decisions (Shyam-Sunder and Myers 1999; Fama and French 2002, 2005; Bharath, Pasquariello, and Wu 2009; Leary and Roberts 2010, among many others). Second, as we discuss in Section 2, the accounting literature has debated the pros and cons of IFRS (and of financial reporting regulation more generally) and the extent through which it would result in lower information asymmetry and ultimately in differential financing decisions (Leuz and Wysocki 2016). Last, as with any accounting standard, IFRS allows for substantial managerial discretion in its implementation and compliance, which raises the possibility that firms might adopt the new standards without a material effect on their reporting practices (Daske et al. 2013). Thus, whether the new regulation alters financing decisions is an empirical issue that we investigate in this paper.

We test our hypotheses using a sample that consists of 76,661 firm-year observations from 34 countries that adopted the new regulation between 2003 and 2012 and from seven countries that did not adopt it. To implement a difference-in-difference research design (DID henceforth), we require firms to have non-missing data for the year before and at least one year after the adoption date as well as a propensity-matched control firm. We limit the pre- and post-adoption

periods to a maximum of four years and exclude the adoption year to avoid confounding effects around the adoption transition period (Loyeung et al. 2016). Our sample consists of countries that adopted the new standard in 2005 (such as the E.U.) as well as 12 countries that adopted it afterwards (e.g., Brazil, Canada, China, Russian Federation, and South Korea, among others). The staggered adoption helps us mitigate the effects of concurrent changes, unrelated to the reform, around the large adoption of IFRS in 2005 (Leuz and Wysocki 2016).

Using a DID research design, we find that firms that adopted the new regulation are 3-4% more likely (relative to the benchmark samples) to raise external capital in a given year, a change of 10-13% relative to pre-adoption financing levels. These findings are robust to controlling for a large set of control variables related to other determinants of financing decisions (e.g., distress risk, investment opportunities, and market timing) as well as year and firm fixed effects. We supplement these results with two tests to mitigate the concern that confounding factors, unrelated to the financial reporting reform, could drive our findings. First, we follow Bertrand and Mullainathan 2003 and allow for a non-linear (yearly) effect around the mandate. The idea is that, if our results reflect a time trend (e.g., a gradual change towards market integration or a worldwide decline in corporate tax rates (Dyreng et al. 2017)), we would expect the increase in external financing to reflect a gradual change, as opposed to a discontinuity around the new regulation. In contrast, we find no changes in financing decisions in the years before the mandate. Rather, the effect becomes relevant after the adoption and peaks 2-3 years subsequent to the new regime. Second, we exploit the fact that 2005 adopters with a December fiscal year end were required to adopt the regulation in 2005, whereas the remaining firms adopted in 2006.[6] Consistent with this staggered implementation of the reform, we find that 2005 adopters increased their external

[6] For this test we use a subsample of firms whose adoption dates are at least six months apart. That is, we compare firms that adopted the new regime in December 2005 to firms that adopted during June to November 2006.

financing starting in 2005 (peaking in 2007), whereas 2006 adopters increased their external financing starting in 2007 (peaking in 2008).

Our second hypothesis exploits cross-sectional predictions in Myers 1984. A central friction in Myers and Majluf 1984 is the existence of information asymmetry between insiders and outsiders (new investors) about growth opportunities and assets in place. Thus, to the extent that information frictions drive financing choices, the effect should be more accentuated for firms with financial constraints, which tend to suffer more from information asymmetry (Fazzari, Hubbard, and Petersen 1988). In addition, because the new regulation can have heterogeneous effects on information asymmetry across firms, only firms experiencing a reduction in information asymmetry would actually benefit from lower adverse selection costs. Using a DID research design that controls for country-specific effects around the adoption date (e.g., variations in enforcement across countries), we find results supporting these predictions. These findings are consistent with information asymmetry and financial constraints being an important mechanism behind the changes in financing we document.

Our third hypothesis focuses on whether firms would issue debt or equity depending on their financing capacity. The idea is that firms will first raise external financing in the form of debt capital and then, as the costs of raising additional debt increase (i.e., when debt capacity has been reached), firms will raise equity capital (Myers (1984) terms this the "modified pecking order"; see also Lemmon and Zender 2010 for a recent test of this theory). We test this hypothesis by conditioning our sample on pre-adoption leverage and distress risk as proxies for a firm's existing debt capacity at the adoption of the new regulation. We find that, relative to the control sample of matched firms, adopting firms with debt capacity increased leverage (i.e., issued more debt) whereas firms without debt capacity maintained their leverage (i.e., issued both debt and equity).

This result suggests that firms make different external financing choices around the new regulation depending on their debt capacity, which alters their capital structure.

Last we provide two sensitivity analyses. First, a prediction from the Pecking Order Theory is that a reduction in information asymmetry allows financially constrained firms to increase investment. Consistent with this prediction, we find that in the post-regulation period investment increases, but that this effect only exists among financially constrained firms and firms experiencing a reduction in information asymmetry. This finding is consistent with the new regulation mitigating underinvestment among financially constrained firms. Second, we examine whether our results are robust across different subsamples. Consistent with prior research, we find that our results are stronger among EU countries, in particular the ones experiencing increases in enforcement. Most importantly, our inferences remain for both E.U. and non-E.U. countries and, to a lesser extent, for 2005 and non-2005 adopters. Overall, these findings mitigate the concern that an omitted factor around the adoption of the new regime by E.U. countries or during 2005 could be driving our results.

Our study provides three main contributions. First, our study contributes to the international literature that studies the role of regulation on financing decisions. In contrast to prior research that focuses on market liberalization, control rights, etc., there is little evidence on the role of *financial reporting* reforms on financing decisions. An exception is Petacchi 2015, who uses the Regulation Fair Disclosure (Reg-FD) as a setting with asymmetric changes in information asymmetry in equity and debt markets to study its effect on the capital structure of U.S. firms. Our paper, in contrast, focuses on whether the adoption of IFRS worldwide facilitated external financing, in particular among financially constrained firms. Our findings suggest that financial

reporting reforms can have an important influence on financing decisions, resulting in reduced underinvestment among financially constrained firms.

Second, we contribute to the literature on the economic consequences around IFRS. Despite a large literature on this topic, it is only recently that studies have focused on the implications to financing decisions. Our results are most closely related to Florou and Kosi 2015, who study the choice of issuing public vs. private debt after the adoption of IFRS.[7] Our findings are distinct from and complement theirs in that we analyze different financing choices available to firms (i.e., debt and equity) based on the pecking-order theory, as well as its investment and capital structure implications. Our results also complement evidence in DeFond et al. 2011 and Khurana and Michas 2011 that studied the impact of IFRS on capital mobility across countries. Our study flips the analysis from the suppliers to the users of capital and suggests that firms take advantage of lower adverse selection costs to mitigate financing frictions and increase investment.

Last, we contribute to the debate about the relevance of the pecking order theory. The finance literature has long argued about the importance of this theory, with mixed conclusions (Shyam-Sunder and Myers 1999; Fama and French 2002, 2005; Bharath et al. 2009; Leary and Roberts 2010, among many others). An important challenge for empirical tests of the pecking order is to obtain exogenous variation in information asymmetry, which allows its effect on financing decisions to be isolated (Garmaise and Natividad 2010). We use the new financial reporting regulation as a setting with a regulatory change in the information environment of affected firms and show that the changes in financing and investment patterns for these firms are consistent with predictions from the pecking order theory.

[7] See also Chen et al. 2015 and Ball, Li, and Shivakumar 2015, who study features of private debt contracting such as loan spreads and the use of covenants without modelling firms' financing choices.

The remainder of the paper is organized as follows: Section 2 provides background on the related literature and presents our hypotheses. Section 3 presents the research design. Section 4 presents the results and Section 5 concludes.

2. Motivation and hypothesis development

Financial reporting regulation

Our paper is broadly related to a literature that studies the financing consequences of regulatory reforms. For instance, La Porta et al. (1998) and the subsequent research link creditor rights to financial development by documenting a positive correlation between an index of creditor rights and the size of credit markets. These findings support the view that ownership protection fosters financial development by lowering financing costs. More closely related to our paper, prior studies analyze the effects of reforms enhancing market liberalization and financial integration on firms' capital budgeting and financing choices (e.g., Bekaert and Harvey 2000; Henry 2000; and Kim and Singal 2000). Our study adds to this literature by exploiting a reform in financial reporting regulation, an issue of frequent debate among regulators but with limited empirical evidence on financing (and investment) decisions (see, e.g., De George et al. 2016; Leuz and Wysocki 2016 for recent reviews). The lack of evidence is particularly noticeable in an international context; Myers (2003), for example, calls for more research in this area. In our study, we use the adoption of IFRS as a setting in which a new regulation substantially alters the information environment of the adopting firms and frame our predictions based on the pecking order theory developed by Myers and Majluf 1984.

The pecking order theory

The pecking order theory, developed by Myers and Majluf 1984, argues that firms follow a financing pattern that allows them to minimize the information costs associated with raising external financing. The basic argument is that managers have an information advantage over outside investors and that such information asymmetry leads to adverse selection costs being borne by current shareholders, which make equity issuances less attractive. As a result, to avoid incurring adverse selection costs, managers prefer to use internally generated funds over raising external capital and may pass up profitable investment opportunities that require external financing.

Myers and Majluf (1984) then show that debt issuances can mitigate, but not eliminate, this effect. This occurs because debt is less sensitive to information asymmetry than equity; debt has the prior claim on assets, whereas equity is the residual claim. Thus, debt investors are less exposed to errors in valuing the firm. As a result, lenders price protect to a lower extent than equity holders in order to compensate for their own informational disadvantage. In response, Myers and Majluf predict that managers attempting to minimize information costs will follow a financing pecking order in which internally generated funds are preferred, and if the manager decides to raise external capital, debt is preferred over equity.

Pecking order predictions have been empirically tested in numerous studies, with mixed evidence. Initial studies focus on the consequences around equity issuances. For example, Asquith and Mullins (1986) provide evidence that the announcement of a stock issuance immediately drives down the stock price. Further, the price drop at the announcement is greater when the information asymmetry is larger (Dierkens 1991), and among firms followed by fewer security analysts and with a greater dispersion of analysts' earnings forecasts (D'Mello and Ferris 2000).

More recently, researchers focus on the implications of the Myers and Majluf model on capital structure decisions. Shyam-Sunder and Myers (1999) find that pecking order explains a

significant portion of capital structure decisions. However, Frank and Goyal (2003) argue that pecking order has little predictive power and that prior results are mainly driven by large firms, whereas Fama and French (2005) find evidence consistent with pecking order among small firms only. In support of pecking order, Lemmon and Zender (2010) find that pecking order is a good descriptor of financing behavior after taking financial distress into account (i.e., the debt capacity of the firm) and Bharath et al. (2009) find that firms facing low information asymmetry account for the bulk of pecking order's failings. Nonetheless, researchers again disputed these claims. Specifically, Leary and Roberts (2010) suggest that firms do not follow financing decisions consistent with pecking order behavior; they question whether information asymmetry is a key driver of capital structure. In a recent study, Graham, Leary, and Roberts (2015) find no evidence that information asymmetry has played a material role in explaining the changes in capital structure over the last century. In sum, while the literature has existed for over three decades, researchers are still debating whether and to what extent the pecking order theory explains financing decisions.

An important challenge for empirical tests of pecking order lies in the difficulty of obtaining exogenous variation in information asymmetry, which permits isolation of the effect of information asymmetry on capital structure (Garmaise and Natividad 2010). Bharath et al. (2009) attempt to address this issue by computing information asymmetry measures derived from the market microstructure literature (e.g., the adverse selection component of bid-ask spreads). While Bharath et al. make an important contribution, they are not able to account for the fact that firms can endogenously choose (e.g., through disclosures) the degree of information asymmetry between managers and investors. Our paper takes advantage of the introduction of a new financial reporting regulation that substantially altered the information environment of affected firms to revisit predictions from the pecking order theory.

Alternative capital structure theories

Besides the pecking order theory, the finance literature offers other models of financing decisions. Of these the most important one is the trade-off model (see e.g., Fama and French 2002). In this model, firms identify their optimal leverage by weighing the costs and benefits of an additional dollar of debt. The benefits of debt include, for example, the tax deductibility of interest and the reduction of free cash flow problems. The costs of debt include potential bankruptcy costs and agency conflicts between stockholders and bondholders. At the leverage optimum, the benefit of the last dollar of debt perfectly offsets the cost.

More recent theories include predictions about market timing and capital structure (Baker and Wurgler 2002). These theories suggest that firms are more likely to issue equity when their market values are high, relative to book and past market values, and to repurchase equity when their market values are low. As a consequence, current capital structure is strongly related to historical market values. In a more recent development, Leary and Roberts (2005) suggest that firms engage in a dynamic rebalancing of their capital structures while allowing for costly adjustment. The argument is that the presence of adjustment costs has significant implications for corporate financial policy and that firms actively rebalance their leverage within an optimal range.

While we cannot completely rule out that these alternative theories affect our results, we are not aware of empirical evidence suggesting that the new regulation that we study (i.e., IFRS) systematically affects determinants related to other theories (i.e., tax rates and/or financial distress or market timing). Nonetheless, as we discuss in the research design section, we include controls for variables related to the other theories and perform additional tests to closely link our results to variation in information asymmetry.

The Adoption of IFRS as a setting for studying pecking order

We use the adoption of IFRS as a regulatory financial reporting change aimed at improving the information environment of the adopting firms. The introduction of IFRS for listed companies around the world is one of the most significant regulatory changes in financial reporting in accounting history. Since its establishment in 2001, over 100 countries have switched to IFRS reporting.[8]

An emerging literature has studied the economic consequences around the adoption of IFRS. As discussed in Leuz and Wysocki 2016 and De George et al. 2016, there are arguments for and against IFRS, particularly with regard to whether IFRS would translate into material changes in financial reporting behavior and a reduction in information asymmetry. Nonetheless, several authors investigated and documented capital market consequences around the adoption of IFRS. Important to our hypotheses are studies that look at proxies for information asymmetry. For example, Daske et al. (2008) find that IFRS is associated with higher stock market liquidity (e.g., lower bid-ask spreads and trading costs) among investors. Brochet et al. (2012) show that abnormal returns to insider purchases (a measure of information advantage by the insider) decreased around the introduction of IFRS in the U.K. Tan, Wang, and Welker (2011) find that analysts' forecast accuracy (an inverse measure of information uncertainty among market participants) increased

[8] Standards Board (IASB) was established to develop International Financial Reporting Standards (IFRS). For a list of adopting countries, see http://www.iasplus.com/en/jurisdictions. Conceptually, IFRS involves replacing national accounting standards with a single set of rules that firms have to follow when preparing financial reports. Compared to previous national accounting standards in certain countries, IFRS adoption can lead to substantial increases in accounting disclosures (Bae, Tan, and Welker 2008). For instance, under IFRS, firms operating in Greece were required to report related party transactions, discontinued operations, segment reporting, and cash flows statements (GAAP, 2001). This information can be valuable to external investors, both national and foreign, who are considering an investment in a Greek company.

post IFRS. Hong, Hung, and Lobo (2014) document a decrease in IPO underpricing and a relative increase in IPO capital raised in foreign markets (vis-à-vis domestic markets) after IFRS adoption.[9]

It is important to note that these findings do not imply that the changes in information asymmetry are driven by IFRS (strictly defined as the new set of reporting rules) per se. In particular, Christensen et al. (2013) show that the impact of IFRS on information asymmetry depends on whether adopting countries also implemented contemporaneous changes in enforcement around the new regime. While understanding the key sources driving the changes in information asymmetry around IFRS is unquestionably an important question in the literature, we note that this distinction is not necessary to the development of our predictions. Rather, the two key necessary features are that (i) information asymmetry influences financing decisions, as laid out by the pecking order theory and (ii) that the new regulation changes the information asymmetry of adopting firms. As a result, while we use IFRS as a proxy for the new regulation, we refer to it broadly as encompassing the new set of standards and the supporting infrastructure such as enforcement efforts to increase compliance with the new standards.

Hypothesis development

As previously discussed, the key prediction of the pecking order theory is that information asymmetry leads to adverse selection costs such that managers avoid raising external capital. To the extent that financial reporting regulation can reduce information asymmetry between managers and investors, adverse selection costs will be reduced and we would expect that firms adopting the new regulation will be more likely to raise external capital.

[9] See also Chen et al. 2015 and Ball et al. 2015, who study features of private debt contracting such as loan spreads and the use of covenants without modelling firms' financing choices.

As discussed in the prior section, there are a few reasons why a reporting regulation, and IFRS in particular, could reduce information asymmetry in the context of the pecking order theory. First, compared to previous national accounting standards in certain countries, IFRS leads to substantial increases in accounting disclosures (Bae et al. 2008). Second, by increasing mandated reporting, the new regulation can also alter voluntary disclosure choices made by adopting firms. For instance, Li and Yang (2015) show that firms increased the issuance of forward-looking disclosures such as management earnings forecasts around the adoption of the new regime. Last, together with the adoption of IFRS, several countries increased the enforcement of financial reporting rules to increase compliance with the new standards (Christensen et al. 2013).

To the extent that (i) the mandatorily reported additional information, (ii) the voluntarily disclosed information, and/or (iii) the enhanced enforcement efforts improved the information set produced by adopting firms, we would expect the new regulation to reduce information asymmetry between the firm and investors. If so, then the predictions of the pecking order theory would apply. Thus, our main prediction is that the new regulation allows firms to increase their use of external financing. Our first hypothesis is:

> **H1:** Firms will rely more on external financing after the adoption of the new financial reporting regulation.

While we state Hypothesis 1 in alternate form, there are several reasons why the null hypothesis might be descriptive. First, as previously discussed, a large number of finance studies challenge the importance of information asymmetry in explaining financing decisions. Second, holding the finance debate aside, the accounting literature has debated the pros and cons of IFRS (and of regulation more generally) and the extent through which it would result in lower information asymmetry. Last, as with any accounting standard, the new regime allows for

substantial discretion in its implementation, which allows for the possibility that firms might adopt the new standards without a material effect on its reporting practices (Daske et al. 2013).

Cross-sectional predictions

Our second hypothesis exploits cross-sectional variation in information asymmetry. Key to Myers and Majluf's 1984 prediction is the existence of information asymmetry between insiders and outsiders about growth opportunities and assets in place. As a result, we would expect that the new regulation should benefit more firms facing high levels of information asymmetry, which we proxy by measuring a firm's financial constraints (Fazzari et al. 1988; Myers 1984). In addition, because the new regulation can have heterogeneous effects on information asymmetry across firms, only firms experiencing a reduction in information asymmetry would actually benefit from lower adverse selection costs. We formalize these predictions as follows:

> **H2:** Firms with financial constraints and/or exhibiting ex-post reductions in information asymmetry will rely more on external financing after the adoption of the new financial reporting regulation.

We next exploit cross-sectional predictions that evolved from the original Myers and Maluf 1984 framework. Specifically, our third hypothesis studies capital structure conditional on debt capacity. Myers (1984) labels this conditional prediction as the 'modified pecking order' theory, which has been recently studied in Lemmon and Zender 2010. The key idea is that when firms approach their debt capacity, they no longer follow a strict pecking order. This occurs because issuing more debt leads to disproportionately higher financing costs due to greater financial distress. As a result, these firms might follow a 'modified pecking order' in which they do not clearly prefer debt over equity when relying on external capital. This choice allows them to either maintain their capital structure (by issuing both debt and equity) or move it towards healthier levels

of financial distress (by preferring equity over debt). On the other hand, firms with debt capacity are those that can raise debt as their primary external financing choice and increase their leverage.

In our setting, the modified pecking order theory predicts that the effect on leverage around the new regulation depends on the firms' ex-ante debt capacity. We formalize this prediction as follows:

> **H3:** Firms with debt capacity will increase their leverage more than firms without debt capacity after the adoption of the new financial reporting regulation.

3. Research design

Main regression specification – Hypothesis 1

To test Hypothesis 1, we model the change in the probability of a firm raising external financing around the adoption of the new regulation. Specifically, we estimate the following linear probability model with a DID specification:[10]

$$P(Ext\ Fin_{it}) = \alpha_{fe} + \beta_1 Post_{it} \times Adopter_i + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (1)$$

where *Ext_Fin* equals one if a firm issues external financing (debt or equity) above 5% of the beginning period assets in a given year, and zero otherwise.[11] α_{fe} is one of two alternative sets of fixed effects. The first set of fixed effects includes country, industry, and year fixed effects. However, to mitigate concerns about firm-specific time-invariant omitted variables, we also estimate a more stringent specification that includes firm and year fixed effects. *Adopter* is an indicator variable equal to one if the firm belongs to a country that adopted the new regulation. Due to the inclusion of fixed effects (i.e., either country or firm fixed effects), the main effect for

[10] Consistent with the suggestion by Angrist and Pischke 2009, throughout the paper we use a linear probability model, as opposed to a non-linear limited dependent variable model. This allows for the use of a larger set of fixed effects as well as an easier interpretation of the coefficients. We obtain similar results when using a Probit model.

[11] The 5% cutoff follows Leary and Roberts 2010. It is intended to reduce measurement error from confounding transactions (e.g., stock option exercises). In untabulated analyses, we use a 2% cutoff and find similar inferences.

Adopter is subsumed from the model. *Post*, which is an indicator variable for the years following the adoption of the new regime, is partially subsumed by year fixed effects. As with our fixed effects, we do not report the *Post* coefficient in our regressions. However, we still include the main effect for *Post* because our treatment sample consists of different adoption dates. For example, in 2005 *Post*=1 for December adopters in Germany, whereas *Post*=0 for non-December adopters in Germany or later adopters (e.g., Turkey). $Control_m$ is a set of control variables (we describe all these variables below and in the appendix).

In Eq. 1, β_1 is the DID estimator that compares the change in external financing for treatment firms vis-à-vis benchmark firms after the adoption of the new regulation. In other words, the interaction terms *Post x Adopter* (i.e., β_1) allow us to identify the effect of mandatorily adopting the new regulation relative to a propensity-matched control firm (described below). We cluster our standard errors at the country level because our identification strategy relies on country-level adoptions of the new regime.[12]

We conduct our tests using a sample of treatment firms from countries that adopted the new regulation between 2003 and 2012 with non-missing data for the year before and at least one year after the adoption and a propensity-matched control sample. The benefit of using a propensity-matched sample is that it allows us to compare the change in financing behavior for the treatment firms vis-à-vis the change for the control firms around the new regime.[13] Moreover, given that our sample consists of firms with different adoption dates, we can better control for concurrent changes around a particular adoption period (Leuz and Wysocki 2016).

[12] We do not cluster at the year level because for countries that adopted IFRS in later years we have a short time-series (Petersen 2009; Gow, Ormazabal, and Taylor 2010).

[13] Note that doing so means that if a treatment firm adopts IFRS in (say) 2008, we assign *Post*=1 starting in 2008 for both the treatment firm as well as its respective propensity-matched control firm.

Our propensity-matched control sample is based on a matching procedure discussed in Rosenbaum and Rubin 1983. This methodology allows us to mitigate potential concerns related to endogeneity and non-linear relationships in our data (Roberts and Whited 2011). We construct a propensity-matched control sample that has the closest probability of raising external capital to each treatment firm in the pre-adoption year. Specifically, we use a 1-to-1 nearest neighborhood matching procedure without replacement to identify a control firm that has the closest probability of issuing external financing in the year prior to the adoption of the new regulation based on the following variables: *Zscore, Tangibility, Q, Profitability*, *Log(Sales), Cash*, *Returns,* and *Deficit* (we define these variables below and in the appendix).

Cross-sectional tests

Partitioning on information asymmetry – Hypothesis 2

Hypothesis 2 predicts that treated firms with high levels of financial constraints and/or ex-post changes in information asymmetry will rely more on external financing in the post adoption period. To test this prediction we expand Eq. (1) to compare firms with high vs. low information asymmetry as well as controls for country-effects around the adoption date. Specifically we estimate the following models:

$$P(Ext\ Fin_{it}) = \alpha_f + \alpha_y + \beta_0 Post_{it} \times Adopter + \beta_1 Post_{it} \times Adopter \times Partition_{it} + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (2a)$$

$$P(Ext\ Fin_{it}) = \alpha_f + \alpha_y + \beta_c Post_{it} \times \alpha_c + \beta_1 Post_{it} \times Adopter \times Partition_{it} + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (2b)$$

where *Partition* is one of our partitioning variables based on information asymmetry (described below) and the other variables are the same as in model (1). α_f and α_y are firm and year fixed

effects. We estimate our specification using two slightly different models. In our first model (i.e., 2a), we include an interaction between *Post* and adopting firms (i.e., $Post_{it}\ x\ Adopter$); in the second (i.e., 2b), we drop this dummy and include an interaction between *Post* and the country fixed effect ($i.e., Post_{it} \times \alpha_c$). An important feature of the second model is that it allows us to estimate *within-country* differences in our firm-level partitions, which controls for country-level confounding factors around the adoption date in each individual country (e.g., country-level changes in enforcement).

We exploit two cross-sectional partitions. We first partition our sample on the ex-ante level of financial constraints. As discussed in Myers 1984, the pecking order theory's predictions depend on the level of information asymmetry about growth opportunities and assets in place. To proxy for ex-ante information asymmetry, we calculate the firm's ex-ante level of financial constraints. The idea being that financially constrained firms are more likely to suffer from information problems (Fazzari et al. 1988). To measure financial constraints we use the Hadlock and Pierce 2010 financial constraint index.[14] The index is calculated as (−0.737* *Size*) + (0.043* $Size^2$) − (0.040**Age*), where *Size* is the log of total assets, and *Age* is the number of years the firm has been on the database. We follow Whited and Wu 2006 and rank the Hadlock-Pierce index measure based on within industry-country quartiles and rescale it to range from 0 to 1 (*Partition = Financial Constraint*).

Our second partition explores ex-post changes in information asymmetry around the new regulation. Prior research has shown substantial cross-sectional firm-level variation in the changes in information asymmetry around the new regime (Daske et al. 2013). Thus, an important implication of pecking order is that only firms experiencing a reduction in information asymmetry

[14] Our results are qualitatively unchanged if instead we use the Whited-Wu 2006 index.

would actually benefit from lower adverse selection costs and change their financing choices. Our second partition (*Partition = ΔAsymmetry*) is then assigned a 1 for *firms* (not industries) that exhibit a decrease in information asymmetry around the adoption of the new regulation, zero otherwise. We proxy for information asymmetry using the first principal component (*IA Factor*) of three measures of stock liquidity and transaction costs, namely *Amihud* illiquidity (Amihud 2002), the percentage of zero return days and the LDV measure (Lesmond, Ogden, and Trzcinka 1999) described in detail in the appendix.

Leverage – Hypothesis 3

Our third hypothesis predicts that firms with debt capacity will increase their leverage more than firms without debt capacity after the adoption of the new regulation. To test this hypothesis, we model firm leverage around the adoption of the new regime and partition the sample on proxies for debt capacity. Specifically, we estimate the following model with a DID specification:

$$Leverage_{it} = \alpha_f + \alpha_y + \beta_1 Post_{it} \times Adopter_i + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (3)$$

where *Leverage* equals total debt divided by the market value of assets.[15] α_f and α_y are firm and year fixed effects. As before, *Adopter* is an indicator variable equal to one if the firm belongs to a country that adopted the new regulation. Due to the inclusion of firm fixed effects, the main effect for *Adopter* is subsumed from the model. Although not reported, we still include the main effect for *Post* because, as explained above, our treatment sample consists of different adoption dates. $Control_m$ is a set of control variables (we describe all these variables below and in the appendix).

Similar to equation (1), we estimate equation (3) using a DID methodology where we benchmark our treatment sample with the propensity-score-matched sample (described above).

[15] Our results are similar when using book leverage as our dependent variable.

We then condition our sample on two proxies for a firm's existing debt capacity at the time of the adoption of the new regulation. First, we use book leverage, defined as the ratio of total debt to total assets. Second, we use *Zscore* as defined below and in the appendix. In each case, we sort firms into four groups within each country-industry based on their leverage ratios and *Zscore* in the year before the adoption of the new regime, respectively.[16] The intuition behind both proxies is that when firms have high leverage or low *Zscore* (relative to firms in the same industry-country), they do not have debt capacity and can no longer issue "safe" debt without a substantial increase in default risk. Hypothesis 3 predicts that firms with debt capacity will increase their leverage more than firms without debt capacity after the adoption of the new financial reporting regulation.

Variable definitions

External financing

Our main dependent variable, *Ext_Fin*, equals one if a firm issues debt or equity above 5% of the beginning period assets in a given year, and zero otherwise. We measure debt issuances (*Debt*) as the change in long-term debt normalized by lagged total assets. By focusing on long-term debt, we avoid including other liabilities (e.g., pensions) that could be directly affected by the adoption of IFRS.[17]

As for equity issuances, we follow Leary and Roberts 2010 and measure equity issuances (*Equity*) from changes in the market value of equity. This approach avoids using balance sheet

[16] In robustness tests, we also use firms' BSM score (i.e., Black, Scholes, Merton probabilities of default; see Hillegeist et al. 2004) as the partitioning variable. Our results are unchanged. However, our sample is smaller because not all firms have sufficient data to calculate their BSM score.

[17] Due to data limitations, we compute debt issuances using changes in long-term debt, which exclude the current portion. In untabulated robustness tests, we find that our results are similar if we include the current portion of long-term debt in our measure if available (and assign it equal to zero otherwise). In addition, we find that our results are stronger among firms without collateralizable assets, which rely more on public financing.

data, which could be mechanically affected by changes in accounting methods (e.g., due to a higher use of fair value estimates) following IFRS.[18] To obtain equity issuances, we first calculate the daily changes in equity as follows:

$$\Delta Equity\ Daily_t = MV_t - MV_{t-1}(1 + ret_t), \tag{4}$$

where $\Delta Equity\ Daily_t$ is the daily change in equity for day t, MV_t is the market value of equity at day t and ret_t is the daily split adjusted price return at day t, unadjusted for dividends. We then obtain equity issuances by adding the daily changes in equity for the fiscal year normalized by lagged total assets.

Control variables

We include a number of controls from the previous literature (Rajan and Zingales 1995; Bharath et al. 2009; Leary and Roberts 2010). *Zscore* proxies for the cost of financial distress and is based on the measure proposed by Altman 1968. Firms with a lower *Zscore* are more likely to be distressed.[19] *Tangibility* corresponds to property, plant, and equipment (PP&E) normalized by total assets. *Q* corresponds to the ratio of the market value of assets to total assets. The market value of assets is defined as the book value of total assets plus market equity minus common equity. Market equity is defined as shares outstanding times the fiscal year closing price. *Q* is a proxy for firms' investment opportunities. *Profitability* corresponds to operating income normalized by total assets. *Log(Sales)* corresponds to the logarithm of total sales.

[18] Leary and Roberts (2010) estimate equity issuances either via changes in market capitalization or directly from statements of cash flow. We use the first method because we are not able to compute equity issuances from cash flow statements, as this information is not widely available internationally, especially in the pre-IFRS period. However, our results are similar if we measure the change in equity from changes in the balance sheet or if we use equity issuances data from SDC platinum (the sample of firms with information in SDC platinum is limited).

[19] We use a modified measure of Zscore due to data availability, which excludes retained earnings. Our results are robust when using the subsample of firms for which we have retained earnings available. For this sample the mean Zscore is 3.73.

We also control for the amount of financing needed by the firm (Shyam-Sunder and Myers 1999). *Deficit* is defined as the sum of dividends, capital expenditures, and changes in working capital minus operating cash flow, deflated by lagged total assets. Because *Deficit* focuses on cash flow measures (as opposed to the stock of cash), we also control for the amount of cash available at the beginning of the year (*Cash*) defined as cash over total assets. To control for the possibility that firms may time the market when issuing external financing (Baker and Wurgler 2002), we control for stock market returns. *Returns* is defined as the one year buy-and-hold return for the corresponding fiscal year. Financing deficit and returns are measured concurrently to capture firms' current capital needs and market timing opportunities, respectively. All other variables are measured at the beginning of the fiscal year.

In addition, we control for a set of macroeconomic variables capturing macroeconomic changes in the supply of capital such as bilateral trade and interest rates. This is important because our hypothesis attempts to isolate the effect of financial reporting regulation, not changes in the supply of capital affecting financing decisions. *Trade* is defined as the ratio of the sum of exports and imports to a country's GDP. Bekaert and Harvey (2000) show that market liberalization has substantially altered the supply of cross-border capital. We also control for interest rates (*Tbill)* and GDP growth (*ΔGDP)*. *Tbill* is a country's three month Treasury bill rate. *ΔGDP* is the percentage change of real gross domestic product.[20]

[20] To address concerns that the IFRS adoption affected the measurement of the variables used in the study, we also conducted the following (untabulated) analyses. First, we include an interaction term between the *Post* indicator and each control variable in the model. Second, we use the firm's assets in the pre-Adoption period to scale our external financing variable. Our inferences are unchanged from the ones presented in the paper.

4. Results

Sample and descriptive statistics

Our sample consists of firms from countries that adopted IFRS between 2003 and 2012 and a propensity-matched control sample. We exclude firms that voluntarily adopted the new regulation before the mandate and that are cross-listed so we can focus on first-time mandatory adopters of the new regulation. A country is included if it has an average of at least 10 observations per year. We exclude financial firms and utilities (ICB codes 7000 and 8000). To mitigate the influence of small firms, we exclude firms with a market value of less than US$1 million and with negative equity. We winsorize all continuous variables at the 1% and 99% levels to limit the influence of outliers. Each firm is required to have available price data from Datastream and the necessary financial accounting data from Worldscope. Following Daske et al. 2008, we assign firms from countries that adopted IFRS in 2005 but that have a non-December fiscal year end as adopting IFRS in 2006.[21] Finally, we exclude the specific year of adoption to avoid the influence of transitional errors (Loyeung et al. 2016), and limit the pre- and post-adoption period to a maximum of four years to avoid confounding effects.

Table 1, Panel A presents descriptive statistics for the countries in our treatment sample. For each country, the table includes the number of firms, the number of firm-years; the number of firm-years pre and post adoption; and IFRS adoption dates. The total sample consists of a set of 76,661 firm-year observations from 41 countries, with 38,486 firm-year observations from 34 adopting countries (Panel A) and a matched sample of 38,175 firm-year observations from 7 countries that did not adopt the new regime (Panel B). The treatment sample includes developed

[21] For example, a firm with a June fiscal year end in Germany did not have to comply with the new rule in June 2005 because the rule was applicable to fiscal years starting after January 1 2005. Thus, the first set of financial statements required to follow IFRS is the one ending in June 2006. We exploit this staggered adoption in additional analyses.

economies (e.g., Australia, France, Germany, the U.K., and Singapore) as well as growing economies (e.g., Brazil, China, and Hong Kong). As for adoption dates, the treatment sample consists of firms from Singapore that adopted the new regulation in 2003, from 21 countries that adopted in 2005, and from 12 countries that adopted the new regime after 2005 (e.g., Brazil, Canada, China, Russian Federation, and South Korea, among others). The control sample is composed of developed economies (e.g., the United States and Japan) as well as developing economies (e.g., India, Malaysia, and Vietnam).

Table 2 provides descriptive statistics. Panel A includes all firm-years in our sample. On average, 27% of firms raise external financing each year. This number is broadly consistent with Leary and Roberts (2010), who find that 32.5% of firms raise external capital.[22] Firms' mean leverage ratio is 22.22%. Moreover, around 30% of their assets are tangible, a value very similar to what Leary and Roberts (2010) report. Cash holdings amount to 16% of total assets which is higher than what Leary and Roberts (2010) obtain.[23] Finally, the mean *Zscore* is 1.30 and the mean financing deficit equals 4% of assets.

Panel B presents descriptive statistics for the treatment and control firms in the matching year (i.e., the year before the adoption of the new regime for each respective treatment firm). 30% of treatment firms raised external capital in the matching year, compared to 27% for the control firms. The treatment and control samples are similar (i.e., indistinguishable in a statistical sense) along all dimensions. Overall, Panel B suggests that the treatment and control firms are similar along the firms characteristics associated with external financing.

[22] More specifically, Leary and Roberts (2010) use a large sample of Compustat firms during the period 1980-2005. They find the following decomposition of financing decisions: 67.5% internal, 22.6% debt, 7.1% equity, and 2.8% dual issuances (i.e., debt and equity). Our sample has the following decomposition of financing decisions: 73.3%, internal, 13.2% debt, 10.3% equity, and 3.2% dual issuance.

[23] Leary and Roberts (2010) report averages for different sample partitions. Their tangible assets range between 0.27 and 0.31, whereas cash holdings range between 0.04 and 0.07 relative to book assets.

Main results – Hypothesis 1

Table 3 reports the results for Hypothesis 1. Columns one and two present the results with and without firm fixed effects, respectively. The coefficient of interest is *Post* x *Adopter*, which is statistically significant in both specifications. In economic terms, the estimated coefficient of 0.038 on *Post* x *Adopter* in model 2 implies that the probability of issuing external financing increases by 3.8% for the mandatory adopters relative to the benchmark sample after the new regime. This increase represents a relative increase of 12.6% when compared to the 30% probability of raising external financing, as shown in Table 2, Panel B.[24]

Overall, the results in Table 3 are consistent with Hypothesis 1. Before we proceed to Hypotheses 2 and 3, we present two additional tests to mitigate a concern that confounding factors, unrelated to financial reporting reforms, could drive the findings in our main hypothesis.

Time trend driven by a confounding factor

A potential concern is that our findings in Table 3 could capture an omitted correlated factor (e.g., a gradual change towards market integration or a worldwide decline in corporate tax rates) instead of the adoption of the new accounting regime. We follow Bertrand and Mullainathan 2003 and allow for the adoption of the regulation having a non-linear (yearly) effect around the mandate. The idea is that, if our results reflect a gradual change towards market integration, we would expect external financing to similarly reflect a gradual change, as opposed to a discontinuity around adoption.

To conduct this test, we align the data in event time and replace the *Adopter* dummy variable with separate interaction variables by year. In particular, we include six interactions (*Post (-2) x*

[24] When we exclude year fixed effects from our analysis (untabulated) the *Post* coefficient is -0.009 (vs. -0.008 when including firm fixed effects).

Adopter, Post (-1) x Adopter, Post (+1) x Adopter, Post (+2) x Adopter, Post (+3) x Adopter, and *Post (+4) x Adopter*), thereby isolating the effect of the two years before and the four years after the mandate (note that years -4 and -3 serve as the benchmark).

Table 4, Column 1 presents these results. We find little evidence of changes in external financing decisions in the years prior to the new regulation. Rather, we observe that the probability of raising external financing increases and becomes significant up to three years after the new regime.[25]

Staggered adoption

Our second test follows Daske et al. 2008 and Christensen et al. 2013 and takes advantage of the new regime's staggered adoption. For most of the countries in our sample, IFRS applies to fiscal years starting after January 1, 2005. Thus, firms with a fiscal year ending on December 31, 2005 (i.e., starting on January 1 and ending on December 31) were required to adopt the regulation in 2005; the remaining firms in this subsample adopted in 2006. This staggered adoption mitigates endogeneity concerns to the extent that the specific cut-off date (i.e., December 2005) is decided at the country level and firms' fiscal year ends are largely pre-determined. Further, this staggered adoption driven by different fiscal year end periods helps mitigate the confounding effects of concurrent changes that are unrelated to financial reporting, such as the Market Abuse Directive (MAD) studied in Christensen, Hail, and Leuz 2016.

To conduct this test, we focus on countries that adopted the new regulation in 2005 to better align the observations in calendar time. To mitigate confounding effects, for this test we use a subsample of firms whose adoption dates are at least six months apart (i.e., we compare December

[25] We still find a 3.8% increase in the probability of raising external financing in year +4, which is the same as the average effect documented in Table 3. However, as shown in Table 4, this effect is statistically insignificant.

2005 adopters to firms that adopted the new regime during June to November of 2006). We are able to do that because fiscal year ends (and consequently the adoption date) range from December 2005 to November 2006. We include the corresponding year zero (i.e., 2005 for firms with a December fiscal year end, 2006 otherwise) and require firms to have available observations from 2002 to 2008. We replace the Adopter dummy variable with six separate dummy variables (*Year03, Year04, Year05, Year06, Year07,* and *Year08* – we do not include a dummy for year 2002 because we use it as the benchmark) and then re-estimate the regressions in Table 3 using this non-linear specification separately for 2005 and 2006 adopters.

Table 4, Column 2 presents the results for 2005 adopters, whereas Column 3 presents the model for 2006 adopters; Column 4 tests the difference between these two groups. Consistent with the staggered effect of the reform, we find that 2005 adopters increased their external financing starting in 2005 (peaking in 2007), whereas 2006 adopters increased their external financing starting in 2007 (peaking in 2008).[26] In other words, 2005 and 2006 adopters have similar financing patterns during most of the sample period, except during the transition period of 2006 and 2007.[27]

Overall, the results in Table 4 mitigate the concern that an omitted correlated variable unrelated to financial reporting regulation drives our findings.

[26] Our finding that 2005 adopters had already increased their external financing in 2005 is arguably puzzling, given the adjustment costs to financing (Leary and Roberts 2005). We note, however, that this evidence is consistent with the findings in Daske et al. 2008, who document a decrease in firms' cost of capital and an increase in equity valuations prior to the official adoption date. In other words, the findings in Daske et al. 2008 allow for the possibility that firms can tap into external financing at higher valuations even before the new regime.

[27] In additional analyses, we pool 2005 and 2006 adopters into a single model and include indicator variables for *Post x Country* fixed effect. Doing so permits the specification to capture the yearly *within-country* difference between 2005 and 2006 adopters. We find the same inferences as in Table 4. Specifically, there is no statistical difference between 2005 and 2006 adopters in all years, except for 2006 and 2007 (t-statistics of 2.01 and 3.33 for these years, respectively).

Cross-sectional tests – Hypotheses 2 and 3

Partitions by information asymmetry – Hypothesis 2

In this section, we exploit within-country variation with respect to ex-ante levels of financial constraints and ex-post changes in information asymmetry. Table 5 presents our results. To facilitate comparison, Column 1 repeats the full sample results in Table 3 Column 2. The coefficient on *Post x Adopter* suggests that on average adopters of the new regulation increase access to external financing by 3.8% after the adoption. Columns 2 and 3 present the results by splitting firms into ex-ante levels of financial constraints (i.e., *Financial Constraints*). In Column 2, the coefficient on *Post x Adopter* is statistically insignificant, whereas the coefficient on *Post x Adopter x Financial Constraint* equals 0.045 and is statistically significant. The sum of *Post x Adopter+ Post x Adopter x Financial Constraint* is statistically significant. This finding suggests that our results are driven by firms with high ex-ante levels of financial constraints, and that unconstrained firms did not alter their external financing decisions around the new regime. Column 3 presents similar results for the specification that includes an interaction between *Post* and the country fixed effects ($i.e., Post_{it} \times \alpha_c$). This result suggests that our findings are not confounded by cross-country variation around the new regime, and rather are driven by within-country variation in financial constraints.

Columns 4 and 5 present the results after partitioning firms into positive and negative changes in information asymmetry around the new regulation. The results are similar to the results in Columns 2 and 3. Specifically, in Column 4 we find that the coefficient on *Post x Adopter* is statistically insignificant, whereas the coefficient on *Post x Adopter* x *ΔAsymmetry* equals 0.049. These findings suggest that our results are driven by firms with decreases in information

asymmetry. Finally, Column 5 presents similar results for the specification that includes an interaction between *Post* and the country fixed effect ($i.e., Post_{it} \times \alpha_c$).

Overall, the results in Table 5 suggest that adopting firms with high ex-ante levels of financial constraints and ex-post decreases in information asymmetry were the ones whose financing decisions were affected by the adoption of the new regime. These findings are consistent with arguments in Myers 1984 about the types of firms that are more likely to benefit from a reduction in adverse selection costs.

Leverage – Hypothesis 3

Table 6 Panel A presents our results for Hypothesis 3. We measure leverage as the percentage of total debt to the market value of assets and use it as our dependent variable.[28] Model (1) presents the leverage results for the full sample. We find that the average adopter increases leverage post adoption of the new regime. However, this result is not statistically significant. Next, we estimate separate leverage regressions for firms with and without debt capacity groups. The with (without) debt capacity firms are those that are in the bottom (top) quartile of book leverage pre-adoption of the new regime. Model (2) presents results for firms with debt capacity. We find that adopters with debt capacity increase leverage by 3.3%, which represents a 15.4% increase in leverage as compared to the mean value for treatment firms before the adoption of 21.4%. Model (3) presents the results for firms without debt capacity. We find that these firms decrease their leverage, although the coefficient is not statistically significant. However, we find that the difference between the coefficients of models (2) and (3) is significant at the 1% level.

[28] We use market leverage as our dependent variable to mitigate measurement errors due to the adoption of IFRS on the measurement of assets. The results are robust to using book leverage as an alternative dependent variable.

Models (4) and (5) present our second set of findings. Here we classify firms with (without) debt capacity as those that are in the top (bottom) quartile of *Zscore* pre-adoption of the new regime. Consistent with our previous results, we find that firms with debt capacity significantly increase their leverage. In particular, the coefficient on *Post x Adopter* of 2.258 suggests that adopters with debt capacity increase their leverage by 2.3 percentage points around the new regime (vis-à-vis the control sample). For firms without debt capacity, we find no statistically significant result. Finally, we find that the difference in coefficients between the with and without debt capacity groups is significant at the 10% level.

To provide further evidence for Hypothesis 3, we estimate a multinomial logit specification that separately estimates the probability of issuing debt and equity financing. [29] Table 6 Panel B presents the results for this specification. We find that firms with debt capacity as measured by their market leverage, increase debt issuances more than equity issuances post-IFRS adoption (columns 1 and 2). For debt issuances the coefficient on *PostxAdopter* is 5.2% and significant, while for equity issuances the coefficient is 2.5%. The difference between the coefficients significant at the 5% level. Conversely, firms without debt capacity reduce debt financing and rely more on equity financing after the adoption of the regulation. Specifically, the coefficient on *Post x Adopter* is negative and significant for debt financing, but positive and significant for equity financing. The difference between the coefficients is significant at the 1% level. For the partition based on *Zscore* we find similar results (columns 5-8), although for the firms with debt capacity, the difference in coefficients between debt and equity is not statistically significant.

[29] Following Leary and Roberts 2010, we classify dual issuances of debt and equity as equity issuances. In addition, due to the non-linear structure of the multinomial model, we do not include firm fixed-effects to avoid biases due to the incidental parameter problem (Lancaster 2000) and include country and industry fixed effects.

Overall, Table 6 presents results in support of Hypothesis 3. Specifically, we find that adopters with available debt capacity increase leverage, whereas adopters without debt capacity maintain their leverage around the adoption. This result suggests that firms make different external financing choices around the new regulation depending on their debt capacity.

Sensitivity analyses

Investment

In this section, we test the implication of our prior results for investment policies. An important implication in Myers and Majluf 1984 is that information asymmetry leads firms to pass up on profitable investment opportunities. Our findings above show that the new regulation increased external financing among treatment firms, in particular, financially constrained firms and firms that experienced a reduction in information asymmetry after the new regime. We then predict that these firms should be able to use additional funds to increase investment after the new regulation.

Following prior research (e.g., Almeida and Campello 2007), we proxy for investment using capital expenditures deflated by beginning period PP&E. We then estimate the following models:

$$Investment_{it} = \alpha_f + \alpha_y + \beta_0 Post_{it} \times Adopter + \beta_1 Post_{it} \times Adopter \times Partition_{it} + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (5a)$$

$$Investment_{it} = \alpha_f + \alpha_y + \beta_c Post_{it} \times \alpha_{c_1} + \beta_1 Post_{it} \times Adopter \times Partition_{it} + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (5b)$$

where *Partition* is either *Financial Constraint* or ∆*Asymmetry*. Moreover, consistent with prior investment research (e.g., Fazzari et al. 1988; Almeida and Campello 2007) we include controls for investment opportunities (*Q*) and cash flows (*Cash Flow*). α_f and α_y are firm and year fixed effects.

As in the models 2a and 2b discussed before, we estimate our specification using two different models. In our first model (i.e., 5a), we include an interaction between *Post* and adopting firms (i.e., $Post_{it}\ x\ Adopter$); in the second (i.e., 5b), we replace this variable by multiple interactions between *Post* and the country fixed effect ($i.e., Post_{it} \times \alpha_c$). An important feature of the second model is that it allows us to estimate *within-country* differences in our firm-level partitions, while the first model allows for an easier comparison of the effects across *Partition* groups.

Table 7 presents our results.[30] Column 1 shows results for our full sample with a simple indicator variable for the *Post x Adopter* (analogous to the difference-in-difference estimates in Table 3). We find that the coefficient on *Post x Adopter* is positive but not statistically significant. This result suggests that the average adopter of the new regulation did not increase capital expenditures after the adoption relative to the control group. Columns 2 and 3 present the results after partitioning the treatment sample based on ex-ante levels of financial constraints (i.e., *Financial Constraint*). In Column 2, we find that the coefficient on *Post x Adopter* is not statistically significant whereas the coefficient on *Post x Adopter x Financial Constraint* equals 0.409 and is statistically significant. This finding suggests that the increase in investment is driven by firms with high ex-ante levels of financial constraints. Column 3 presents similar results for the specification that includes an interaction between *Post* and the country fixed effect ($i.e., Post_{it} \times \alpha_c$). This result suggests that our findings are not confounded by cross-country variation, and rather driven by within-country variation in financial constraints. Columns 4 and 5 present the results for ex-post changes in information asymmetry. The results are similar to the ones in Columns 1 and 2. Specifically, in Column 4 we find that the coefficient on *Post x Adopter* is

[30] Due to data availability, our sample is slightly smaller for the investment tests.

insignificant, whereas the coefficient on *Post x Adopter x ΔAsymmetry* equals 0.194. These findings suggest that our results are stronger for adopting firms with decreases in information asymmetry. Finally, Column 5 presents similar results for the specification that includes an interaction between *Post* and the country fixed effect ($i.e., Post_{it} \times \alpha_c$).

Sub-sample analyses

In our main tests, we focus on the new financial reporting regulation as a whole without attempting to isolate its different aspects. In this section, we exploit a number of sub-sample analyses to assess the robustness of our results. First, we focus on (i) the change in enforcement concurrent with IFRS adoption as suggested by Christensen et al. 2013. These authors find that mandatory IFRS reporting had a larger impact on liquidity in five E.U. countries that concurrently made substantive changes in reporting enforcement (Finland, Germany, Netherlands, Norway, and the U.K.).[31] Second, we partition the sample on (ii) whether a firm is an E.U. vs. non-E.U. adopter, and (iii) whether the firm is a 2005 vs. non-2005 adopter to assess confounding effects specific to the EU or around 2005.

To test our cross-country partitions, we expand our main specification to allow for differential effects across samples. We estimate the following model:

$$P(Ext\ Fin_{it}) = \alpha_f + \alpha_y + \beta_1 Post_{it} \times Adopter_{PARTITION\ 1} + \beta_2 Post_{it} \times Adopter_{PARTITION2} + \Sigma\beta_m Control_{mit} + \varepsilon_{it}, \quad (6)$$

Table 8, Column 1 presents our results for the enforcement partition. Consistent with Christensen et al. 2013 we find that firms in countries with high enforcement (*CHL*) have larger coefficients, consistent with firms from countries with stronger institutional features experiencing

[31] Our sample includes countries that adopted IFRS post 2005 and not included in Christensen et al. 2013. The results are robust when we perform this test including only the countries included in their sample (untabulated).

bigger changes in the likelihood of issuing external financing. However, the coefficient for the *OTHER* partition of 3% is also statistically significant and of similar magnitude than our main results in Table 3. Columns 2 and 3 present our results for the next two partitions. First, we find that both *EU* and *Non-EU* firms experience increases in external financing. The magnitude of the coefficients is similar across partitions. Second, we find that both *2005 adopters* and *Non-2005 adopters* experience increases in external financing. Although this result is only significant for the *2005 adopters*, the economic magnitude of the coefficients is similar and the difference between both groups is not statistically significant. Overall, these findings mitigate a concern that an omitted confounding factor around the adoption of the new regulation by E.U. countries could be driving our results.

5. Conclusion

We study the influence of a major reform in financial reporting regulation – the adoption of the International Financial Reporting Standards (IFRS) – on financing decisions. Across a battery of tests, we document an increase in the issuance of external financing around the adoption of the new regulation. Further, firms make different leverage choices (i.e., debt vs. equity) around the new regime depending on their ex-ante debt capacity, and use their access to external financing to rebalance their capital structure. Our results are accentuated across firms facing higher adverse selection costs and are consistent with constrained firms using the access to external financing after the new regime to increase investment. Our findings highlight the importance of financial reporting regulation in explaining financing and investing policies, and also provide insights into which firms are more likely to benefit from such regulation.

Our study complements the findings in three important literatures. First, our study contributes to the international literature that studies the role of regulation on financing decisions.

Our results inform academics and regulators interested in the impact of regulatory reforms on financing decisions around the world. Second, we contribute to the literature on the economic consequences around IFRS. Our study helps our understanding of the potential impact of financial reporting reforms on the spectrum of financing and investing choices. Last, we contribute to the debate about the relevance of the pecking order theory developed by Myers and Majluf 1984. We use the new financial reporting regulation as a setting with a regulatory change in the information environment of complying firms and show that the changes in financing patterns for these firms are consistent with predictions from the pecking order theory.

References

Almeida, H., and M. Campello. 2007. Financial Constraints, Asset Tangibility, and Corporate Investment. *Review of Financial Studies* 20: 1429–60.

Altman, E. I. 1968. Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance* 23 (4): 589–609.

Amihud, Y. 2002. Illiquidity and stock returns: cross-section and time-series effects. *Journal of Financial Markets* 5 (1): 31–56.

Angrist, J. D., and J.-S. Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

Asquith, P., and D. W. Mullins Jr. 1986. Equity issues and offering dilution. *Journal of Financial Economics* 15 (1–2): 61–89.

Bae, K., H. Tan, and M. Welker. 2008. International GAAP Differences: The Impact on Foreign Analysts. *The Accounting Review* 83 (3): 593–628.

Baker, M., and J. Wurgler. 2002. Market Timing and Capital Structure. *The Journal of Finance* 57 (1): 1–32.

Ball, R., X. Li, and L. Shivakumar. 2015. Contractibility and Transparency of Financial Statement Information Prepared Under IFRS: Evidence from Debt Contracts Around IFRS Adoption. *Journal of Accounting Research* 53 (5): 915–963.

Barth, M. E., and D. Israeli. 2013. Disentangling mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics* 56 (2–3, Supplement 1). Conference Issue on Accounting Research on Classic and Contemporary Issues University of Rochester, Simon Business School: 178–188.

Bekaert, G., and C. R. Harvey. 2000. Foreign Speculators and Emerging Equity Markets. *The Journal of Finance* 55 (2): 565–613.

Bertrand, M., and S. Mullainathan. 2003. Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy* 111 (5): 1043–1075.

Bharath, S. T., P. Pasquariello, and G. Wu. 2009. Does Asymmetric Information Drive Capital Structure Decisions? *Review of Financial Studies* 22 (8): 3211–3243.

Brochet, F., A. D. Jagolinzer, and E. J. Riedl. 2013. Mandatory IFRS Adoption and Financial Statement Comparability. *Contemporary Accounting Research* 30 (4): 1373–1400.

Chen, T. Y., C. L. Chin, S. Wang, and W. R. Yao. 2015. The Effects of Financial Reporting on Bank Loan Contracting in Global Markets: Evidence from Mandatory IFRS Adoption. *Journal of International Accounting Research* 14 (2): 45–81.

Christensen, H. B., L. Hail, and C. Leuz. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics* 56 (2–3, Supplement 1). Conference Issue on Accounting Research on Classic and Contemporary Issues University of Rochester, Simon Business School: 147–177.

Christensen, H. B., L. Hail, and C. Leuz. 2016. Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement. *Review of Financial Studies* 29 (11): 2885–2924.

D'Mello, R., and S. P. Ferris. 2000. The Information Effects of Analyst Activity at the Announcement of New Equity Issues. *Financial Management* 29 (1): 78–95.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research* 46 (5): 1085–1142.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2013. Adopting a Label: Heterogeneity in the Economic Consequences Around IAS/IFRS Adoptions. *Journal of Accounting Research* 51 (3): 495–547.

DeFond, M., X. Hu, M. Hung, and S. Li. 2011. The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability. *Journal of Accounting and Economics* 51 (3): 240–258.

DeGeorge, E. T. D., X. Li, and L. Shivakumar. 2016. A review of the IFRS adoption literature. *Review of Accounting Studies* 21 (3): 898–1004.

Dierkens, N. 1991. Information Asymmetry and Equity Issues. *Journal of Financial and Quantitative Analysis* 26 (02): 181–199.

Dyreng, S., M. Hanlon, E. Maydew, J. Thornock. 2017. Changes in Corporate Effective Tax Rates Over the Past 25 years. *Journal of Financial Economics*, forthcoming.

Fama, E. F., and K. R. French. 2002. Testing Trade-Off and Pecking Order Predictions About Dividends and Debt. *Review of Financial Studies* 15 (1): 1–33.

Fama, E. F., and K. R. French. 2005. Financing decisions: who issues stock? *Journal of Financial Economics* 76 (3): 549–582.

Fazzari, S., R. G. Hubbard, and B. Peterson. 1988. Financing constraints and corporate investment, Brookings Papers on Economic Activity, 141-195.

Florou, A., and U. Kosi. 2015. Does mandatory IFRS adoption facilitate debt financing? *Review of Accounting Studies* 20 (4): 1407–1456.

Frank, M. Z., and V. K. Goyal. 2003. Testing the pecking order theory of capital structure. *Journal of Financial Economics* 67 (2): 217–248.

GAAP. 2001. A Survey of National Accounting Rules Benchmarked Against International Accounting Standards. Eds.: Anderson, BDO, Deloitte Touche Tohmatsu, Ernst & Young, Grant Thornton, KPMG, PricehouseWaterhouseCoopers, Christopher W. Nobes.

Garmaise, M. J., and G. Natividad. 2010. Information, the Cost of Credit, and Operational E□ciency: An Empirical Study of Microfinance. *Review of Financial Studies* 23 (6): 2560–2590.

Gow, I. D., G. Ormazabal, and D. J. Taylor. 2010. Correcting for Cross-Sectional and Time-Series Dependence in Accounting Research. *The Accounting Review* 85 (2): 483–512.

Graham, J. R., M. T. Leary, and M. R. Roberts. 2015. A century of capital structure: The leveraging of corporate America. *Journal of Financial Economics* 118 (3). NBER Symposium on New perspectives on corporate capital structures: 658–683.

Hadlock, C., and Pierce, J. 2010. New evidence on measuring financial constraints: Moving beyond the KZ Index. *Review of Financial Studies*, 23, 1909–1940.

Henry, P. B. 2000. Do stock market liberalizations cause investment booms? *Journal of Financial Economics* 58 (1–2). Special Issue on International Corporate Governance: 301–334.

Hillegeist, S. A., E. Keating, D. P. Cram, and K. G. Lunstedt. 2004. Assessing the probability of bankruptcy. *Review of Accounting Studies* 9, 5-34.

Hong, H. A., M. Hung, and G. J. Lobo. 2014. The Impact of Mandatory IFRS Adoption on IPOs in Global Capital Markets. *The Accounting Review* 89 (4): 1365–1397.

Hope, O., J. Jin, and T. Kang. 2006. Empirical Evidence on Jurisdictions that Adopt IFRS. *Journal of International Accounting Research* 5 (2): 1–20.

Kim, H. E., and V. Singal. 2000. The fear of globalizing capital markets. *Emerging Markets Review* 1 (3): 183–198.

Khurana, I., and P. Michas. 2011.Mandatory IFRS Adoption and the US Home Bias. *Accounting Horizons* 25 (2011): 729–53.

Lancaster, T. 2000. The incidental parameter problem since 1948. *Journal of Econometrics* 95 (2): 391–413.

La Porta, R., J. Lakonishok, A. Shleifer, and R. Vishny. 1997. Good News for Value Stocks: Further Evidence on Market Efficiency. *The Journal of Finance* 52 (2): 859–874.

La Porta, R., F. López de Silanes, A. Shleifer, and R. Vishny. 1998. Law and Finance. *Journal of Political Economy* 106.

Leary, M. T., and M. R. Roberts. 2005. Do Firms Rebalance Their Capital Structures? *The Journal of Finance* 60 (6): 2575–2619.

Leary, M. T., and M. R. Roberts. 2010. The pecking order, debt capacity, and information asymmetry. *Journal of Financial Economics* 95 (3): 332–355.

Lemmon, M. L., and J. F. Zender. 2010. Debt Capacity and Tests of Capital Structure Theories. *Journal of Financial and Quantitative Analysis* 45 (5): 1161–1187.

Lesmond, D. A., J. P. Ogden, and C. A. Trzcinka. 1999. A New Estimate of Transaction Costs. *Review of Financial Studies* 12 (5): 1113–1141.

Leuz, C., and R. E. Verrecchia. 2000. The Economic Consequences of Increased Disclosure. *Journal of Accounting Research* 38: 91–124.

Leuz, C., and P. D. Wysocki. 2016. The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research. *Journal of Accounting Research* 54 (2): 525–622.

Li, X., and H. I. Yang. 2015. Mandatory Financial Reporting and Voluntary Disclosure: The Effect of Mandatory IFRS Adoption on Management Forecasts. *The Accounting Review* 91 (3): 933–953.

Loyeung, A., Z. P. Matolcsy, J. Weber, and P. A. Wells. 2016. Accounting for business combinations and takeover premiums: Pre-and post-IFRS. *Australian Journal of Management* 41 (4): 611-632.

Myers, S. C. 1984. The Capital Structure Puzzle. *The Journal of Finance* 39 (3): 574–592.

Myers, S. C. 2003. Chapter 4 - Financing of Corporations. In *Handbook of the Economics of Finance*, edited by M. H. and R. M. S. George M. Constantinides, 1, Part A:215–253. Corporate Finance. Elsevier.

Myers, S. C., and N. S. Majluf. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13 (2): 187–221.

Petacchi, R. 2015. Information asymmetry and capital structure: Evidence from regulation FD. *Journal of Accounting and Economics* 59 (2): 143–162.

Petersen, M. A. 2009. Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies* 22 (1): 435–480.

Rajan, R. G., and L. Zingales. 1995. What Do We Know about Capital Structure? Some Evidence from International Data. *The Journal of Finance* 50 (5): 1421–1460.

Ramanna, K., and E. Sletten. 2014. Network Effects in Countries' Adoption of IFRS. *The Accounting Review* 89 (4): 1517–1543.

Roberts, M. R., and T. M. Whited. 2013. Chapter 7 - Endogeneity in Empirical Corporate Finance1. In *Handbook of the Economics of Finance*, edited by M. H. and R. M. S. George M. Constantinides, 2, Part A:493–572. Elsevier.

Rosenbaum, P. R., and D. B. Rubin. 1983. The central role of the propensity score in observational studies for causal effects. *Biometrika* 70 (1): 41–55.

Shyam-Sunder, L., and S. C. Myers. 1999. Testing static tradeoff against pecking order models of capital structure1. *Journal of Financial Economics* 51 (2): 219–244.

Tan, H., S. Wang, and M. Welker. 2011. Analyst Following and Forecast Accuracy After Mandated IFRS Adoptions. *Journal of Accounting Research* 49 (5): 1307–1357.

Vig, V. 2013. Access to Collateral and Corporate Debt Structure: Evidence from a Natural Experiment. *The Journal of Finance* 68 (3): 881–928.

Whited, T., and G., Wu. 2006. Financial Constraints Risk. *Review of Financial Studies*, 19, 531–559.

Appendix: Variable Definitions

Financing and Investment Variables

Ext_Fin: Indicator variable that equals one if a firm issues debt or equity above 5% of the beginning period assets in a given year, and zero otherwise.

Leverage: Total debt divided by the market value of assets.

Investment: Capital expenditures deflated by beginning period PP&E.

Indicator Variables

Post: Indicator variable that equals one if the firm or country has adopted IFRS in that year, zero otherwise. IFRS adoption dates by country are obtained from Ramanna and Sletten (2014). For the control sample, the adoption date is assumed to be fiscal year 2005.

Adopter: Indicator variable that equals one if the firm mandatorily adopts IFRS, zero otherwise.

Control Variables

Zscore: Modified Altman's (1968) Z-score = (1.2*working capital+ 0.6* Market Value of Equity + 3.3*EBIT + 0.999*sales)/total assets.

Tangibility: Property, plant, and equipment (PP&E) normalized by total assets.

Q: Ratio of the market value of assets to total assets. The market value of assets is defined as the book value of total assets plus market equity minus common equity. Market equity is defined as shares outstanding times the fiscal year closing price.

Cash Flow: Operating cash flow normalized by lag total assets.

Profitability: Operating income normalized by total assets.

Log(Sales): Logarithm of total sales.

Cash: Cash normalized by total assets.

Returns: One year buy-and-hold returns for the corresponding fiscal year.

Deficit: (dividend payments + capital expenditures + net change in working capital - operating cash flow after interest and taxes)/lag total assets.

Trade: Ratio of the sum of exports and imports to a country's GDP.

Tbill: Country's three month Treasury bill rate.

ΔGDP: Percentage change of real gross domestic product.

Information Asymmetry Variables

Amihud: The yearly median of the daily ratio of absolute stock return to its dollar volume (Amihud 2002).

ZeroRet: The proportion of trading days with zero daily stock returns out of all potential trading days in a given year.

LDV: Estimate of total round trip transaction based on a yearly time-series regression of daily stock returns on the aggregate market returns (Lesmond, Ogden, and Trzcinka 1999).

IA Factor: Principal component of *Amihud*, *Zero Ret*, and *LDV*.

Partitioning Variables

F. Constraint: Within country-industry quartile of the Hadlock-Pierce index. The variable is rescaled to range from 0 to 1. The index is calculated as $(-0.737 * Size) + (0.043 * Size^2) - (0.040 * Age)$, where *Size* is the log of total assets, and *Age* is the number of years the firm has been on the database.

ΔAsymmetry: Indicator variable that equals one if the change in the *IA Factor* after the adoption of IFRS is negative, zero otherwise.

Leverage: Total debt divided by the market value of assets.

Zscore: Modified Altman's (1968) Z-score = (1.2*working capital+ 0.6* Market Value of Equity + 3.3*EBIT + 0.999*sales)/total assets.

Table 1

Descriptive Statistics by Country

Panel A: Treatment firms

	Treatment Firms				
Country	Firms	Firm-Years	Pre	Post	Year Adoption
Argentina	12	59	47	12	2012
Australia	480	3,071	1,584	1,487	2005
Austria	11	82	43	39	2005
Belgium	38	273	135	138	2005
Brazil	150	919	523	396	2010
Canada	502	2,459	1,688	771	2011
Chile	40	261	155	106	2010
China	114	689	314	375	2007
Denmark	54	410	209	201	2005
Finland	88	662	335	327	2005
France	356	2,566	1,321	1,245	2005
Germany	212	1,527	788	739	2005
Greece	59	370	167	203	2005
Hong Kong	501	3,584	1,709	1,875	2005
Ireland	24	168	89	79	2005
Israel	170	937	379	558	2008
Italy	69	487	251	236	2005
Mexico	40	189	149	40	2012
Netherlands	84	624	325	299	2005
New Zealand	32	207	103	104	2007
Norway	71	481	235	246	2005
Pakistan	77	536	238	298	2007
Philippines	55	371	190	181	2005
Poland	47	275	105	170	2005
Portugal	31	223	116	107	2005
Russian	15	52	37	15	2012
Singapore	315	1,843	669	1,174	2003
South Africa	107	797	410	387	2005
South Korea	1,248	6,855	4,434	2,421	2011
Spain	62	457	231	226	2005
Sweden	175	1,239	626	613	2005
Switzerland	47	358	185	173	2005
Turkey	96	680	317	363	2012
United Kingdom	703	4,775	2,486	2,289	2005
Total	6,085	38,486	20,593	17,893	

Table 1 (continued)

Panel B: Control firms

	Control Firms			
Country	Firms	Firm-Years	Pre	Post
India	635	3,414	1,777	1,637
Indonesia	156	1,030	549	481
Japan	1,991	13,347	6,999	6,348
Malaysia	442	2,845	1,435	1,410
Thailand	247	1,603	834	769
United States	2,494	15,467	8,484	6,983
Vietnam	120	469	253	216
Total	6,085	38,175	20,331	17,844

The table reports descriptive statistics by country. The treatment sample consists of a set of 38,486 firm-year observations from 34 countries between 2001 and 2013 that adopted between 2003 and 2012. The control sample consists of a set of 38,175 firm-year observations from seven countries between 2001 and 2013. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. We exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million.

Table 2
Descriptive Statistics

Panel A: Descriptive statistics for the full sample (N=76,661)

Variable	*Mean*	*STD*	*Min*	*Median*	*Max*
Ext_Fin $_t$	0.27	0.44	0.00	0.00	1.00
Leverage $_t$	0.22	0.19	0.00	0.20	0.83
Z Score $_{t-1}$	1.30	1.13	-4.78	1.32	4.63
Tangibility $_{t-1}$	0.30	0.22	0.00	0.26	0.91
Q $_{t-1}$	1.51	1.21	0.38	1.13	14.05
Profitability $_{t-1}$	0.02	0.16	-1.22	0.05	0.35
Log(Sales) $_{t-1}$	11.82	2.16	-0.40	11.80	19.89
Cash $_{t-1}$	0.16	0.17	0.00	0.10	0.87
Returns $_t$	0.17	0.74	-0.93	0.03	5.50
Deficit $_t$	0.04	0.26	-0.70	0.01	1.89
Trade $_t$	0.01	0.07	-0.14	0.00	0.31
Tbill $_t$	2.56	3.10	-0.08	2.10	49.58
ΔGDP $_{t-1}$	2.70	2.81	-8.27	2.44	14.20

Panel B: Descriptive statistics the year before the adoption of the new regulation

Variable	*Treatment Firms N=6,085*	*Control Firms N=6,085*	*Difference*
Ext_Fin $_t$	0.30	0.27	0.03
Leverage $_t$	0.21	0.23	-0.02
Z Score $_{t-1}$	1.24	1.30	-0.06
Tangibility $_{t-1}$	0.31	0.31	0.00
Q $_{t-1}$	1.50	1.58	-0.08
Profitability $_{t-1}$	0.01	0.03	-0.02
Log(Sales) $_{t-1}$	11.32	11.80	-0.48
Cash $_{t-1}$	0.17	0.17	0.00
Returns $_t$	0.25	0.37	-0.12
Deficit $_t$	0.06	0.05	0.01
Trade $_t$	0.03	0.00	0.03
Tbill $_t$	2.82	2.10	0.72
ΔGDP $_{t-2,t-1}$	2.68	2.29	0.39

The table reports descriptive statistics. Panel A presents descriptive statistics for the full sample. Panel B reports descriptive statistics for the treatment and control samples in the year before the adoption. The treatment sample consists of a set of 38,486 firm-year observations from 34 countries between 2001 and 2013 that adopted the new regime between 2003 and 2012. The control sample consists of a set of 38,175 firm-year observations from seven countries between 2001 and 2013. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Standard errors are clustered by country.

Table 3
Probability of Issuing External Financing – Hypothesis 1

Variables	*(1)*	*(2)*
Post x Adopter	**0.030****	**0.038*****
	(2.684)	**(3.371)**
Zscore $_{t-1}$	-0.030***	0.033***
	(-4.581)	(3.933)
Tangibility $_{t-1}$	0.004	-0.006
	(0.753)	(-0.906)
Q $_{t-1}$	0.083***	0.079***
	(10.878)	(10.309)
Profitability $_{t-1}$	0.006*	-0.007
	(1.895)	(-1.680)
Log(Sales) $_{t-1}$	-0.013*	-0.098***
	(-2.011)	(-9.295)
Cash $_{t-1}$	-0.047***	-0.050***
	(-6.377)	(-7.926)
Returns $_{t}$	0.030***	0.025***
	(5.541)	(4.023)
Deficit $_{t}$	0.098***	0.081***
	(10.879)	(10.945)
Trade $_{t}$	-0.017*	-0.031**
	(-1.885)	(-2.422)
Tbill $_{t}$	0.008	0.006
	(1.644)	(0.992)
ΔGDP $_{t-2,t-1}$	0.006	0.008
	(0.751)	(1.027)
Observations	76,661	76,661
RSquare	0.1313	0.3504
Cluster	Country	Country
Country and Ind FE	Yes	No
Year FE	Yes	Yes
Firm FE	No	Yes

The table reports coefficients for different specifications for a linear regression model predicting *External Financing.* Model (1) includes country, year, and industry fixed effects based on the ICB two-digit industry code. Model (2) includes firm and year fixed effects. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4
Additional Identification tests

Variables	*(1)* *Yearly Effects Full Sample*	*(2)* *2005 Adopters*	*(3)* *2006 Adopters*	*(4)* *t-statistics for 2005 vs 2006*
*Post (-2)*x *Adopter*	-0.004			
	(-0.191)			
*Post (-1)*x *Adopter*	0.010			
	(0.744)			
Post (+1)x Adopter	**0.028***			
	(1.683)			
Post (+2)x Adopter	**0.049*****			
	(3.009)			
Post (+3)x Adopter	**0.054****			
	(2.088)			
Post (+4)x Adopter	**0.038**			
	(1.015)			
Year 03		-0.029	0.004	-1.019
		(-1.383)	(0.129)	
Year04		-0.016	-0.015	-0.039
		(-0.748)	(-0.622)	
Year05		**0.058***	**0.043**	**0.310**
		(2.012)	**(1.140)**	
Year06		**0.048***	**-0.012**	**1.741***
		(1.767)	**(-0.353)**	
Year07		**0.093*****	**0.041****	**1.744***
		(3.356)	**(2.190)**	
Year08		**0.093*****	**0.068*****	**1.112**
		(3.933)	**(2.943)**	
Observations	76,661	9,395	3,596	
RSquare	0.3502	0.2724	0.3654	
Controls	Included	Included	Included	
Cluster	Country	Country	Country	
Year FE	Yes	No	No	
Firm FE	Yes	Yes	Yes	

The table reports coefficients for different samples and specifications for a linear regression model predicting *External Financing* for countries adopting in 2005. Model (1) shows yearly effects for our sample. Model (2) presents yearly coefficients for December fiscal year end firms in the treatment sample. Model (3) presents yearly coefficients for non-December fiscal year end firms. Model (4) presents the difference in coefficients between models (2) and (3). The model includes firm fixed effects. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5

Cross-Sectional Partitions – Hypothesis 2

Variables	*Main*	*Financial Constraint* $_{t-1}$		*ΔAsymmetry* $_{t-1, t+1}$	
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
(1) Post x Adopter	**0.038*** **	0.016		0.005	
	(3.371)	(1.315)		(0.275)	
(2) Post x Adopter x F. Constraint $_{t-1}$		**0.045** **	**0.044** **		
		(2.296)	**(2.332)**		
(2) Post x Adopter x ΔAsym $_{t-1, t+1}$				**0.049** **	**0.044** **
				(2.637)	**(2.368)**
Zscore $_{t-1}$	0.033***	0.033***	0.033***	0.034***	0.034***
	(3.933)	(3.876)	(4.017)	(4.205)	(4.299)
Tangibility $_{t-1}$	-0.006	-0.007	-0.006	-0.005	-0.005
	(-0.906)	(-0.968)	(-0.911)	(-0.776)	(-0.728)
Q $_{t-1}$	0.079***	0.079***	0.079***	0.078***	0.078***
	(10.309)	(10.216)	(10.289)	(9.869)	(10.001)
Profitability $_{t-1}$	-0.007	-0.008*	-0.008*	-0.008*	-0.008*
	(-1.680)	(-1.772)	(-1.932)	(-1.840)	(-1.930)
Log(Sales) $_{t-1}$	-0.098***	-0.098***	-0.095***	-0.101***	-0.098***
	(-9.295)	(-9.379)	(-9.135)	(-10.013)	(-9.936)
Cash $_{t-1}$	-0.050***	-0.050***	-0.050***	-0.050***	-0.050***
	(-7.926)	(-7.986)	(-7.838)	(-7.910)	(-7.784)
Returns $_{t}$	0.025***	0.025***	0.025***	0.025***	0.025***
	(4.023)	(4.033)	(4.276)	(4.032)	(4.277)
Deficit $_{t}$	0.081***	0.081***	0.081***	0.081***	0.081***
	(10.945)	(10.941)	(10.810)	(10.879)	(10.773)
Trade $_{t}$	-0.031**	-0.031**	-0.029*	-0.030**	-0.030*
	(-2.422)	(-2.475)	(-1.938)	(-2.339)	(-1.984)
Tbill $_{t}$	0.006	0.005	0.014**	0.006	0.015**
	(0.992)	(0.971)	(2.274)	(1.048)	(2.314)
ΔGDP $_{t-2.t-1}$	0.008	0.009	0.014	0.009	0.014
	(1.027)	(1.082)	(1.466)	(1.064)	(1.457)
F-test sum of (1)+(2) p-value		**0.0010**		**0.0000**	
Observations	76,661	76,661	76,661	76,661	76,661
RSquare	0.3504	0.3506	0.3521	0.3507	0.3522
Cluster	Country	Country	Country	Country	Country
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
PostxCountry FE	No	No	Yes	No	Yes

Table 5 (continued)

The table reports the coefficients for a linear regression model when estimating the probability of issuing external financing for the full sample using different partitions. We exclude observations corresponding to the year of adoption. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6

Results Conditional on Debt Capacity – Hypothesis 3

Panel A: Market Leverage (%)

		Leverage		*Zscore*	
Variables	*(1) All*	*(2) With Debt Capacity*	*(3) Without Debt Capacity*	*(4) With Debt Capacity*	*(5) Without Debt Capacity*
Post* x *Adopter	**1.297**	**3.298*** **	**-1.584**	**2.258** **	**0.710**
	(1.299)	**(2.976)**	**(-1.106)**	**(2.015)**	**(0.520)**
Zscore $_{t-1}$	-2.126***	-2.586***	-2.170***	-1.494***	-2.001***
	(-6.326)	(-5.328)	(-4.858)	(-3.388)	(-5.414)
Tangibility $_{t-1}$	1.815***	1.075***	1.951***	1.282***	2.143***
	(7.496)	(3.174)	(4.116)	(2.850)	(5.066)
Q $_{t-1}$	-0.871***	-0.806***	-1.239***	-0.782***	-0.928***
	(-4.545)	(-4.517)	(-3.280)	(-3.662)	(-3.062)
Profitability $_{t-1}$	-0.581**	0.290	-1.823**	-0.343	-0.763**
	(-2.178)	(1.320)	(-2.223)	(-1.235)	(-2.186)
Log(Sales) $_{t-1}$	4.882***	3.483***	6.933***	3.814***	4.336***
	(7.056)	(4.130)	(6.765)	(4.176)	(5.887)
Cash $_{t-1}$	-2.489***	-2.351***	-3.093***	-2.130***	-2.565***
	(-8.663)	(-9.752)	(-5.739)	(-10.244)	(-9.759)
Returns $_{t}$	-0.679***	-0.552***	-0.950***	-0.557***	-0.886***
	(-8.108)	(-7.697)	(-4.530)	(-5.297)	(-5.790)
Deficit $_{t}$	1.972***	1.716***	2.250***	1.629***	1.860***
	(11.652)	(9.516)	(7.469)	(7.231)	(10.340)
Trade $_{t}$	0.478*	0.596	0.901	0.449	0.165
	(1.771)	(1.293)	(1.069)	(0.968)	(0.284)
Tbill $_{t}$	0.398*	0.246	0.308	0.694**	0.383
	(1.934)	(1.035)	(0.619)	(2.711)	(1.238)
ΔGDP $_{t-2.t-1}$	-0.171	-0.315	-0.203	0.080	-0.247
	(-1.043)	(-1.139)	(-0.405)	(0.331)	(-0.729)
Difference *Post x Adopter* (p-value)		**<0.001**		**0.082**	
Observations	76,661	23,366	16,504	15,875	22,539
Pseudo R-Square	0.7925	0.7845	0.7769	0.7809	0.7798
Cluster	Country	Country	Country	Country	Country
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Table 6 (continued)

Panel B: Multinomial

Variables	*Leverage*				*Zscore*			
	With Debt Capacity		*Without Debt Capacity*		*With Debt Capacity*		*Without Debt Capacity*	
	(1)Debt	*(2) Equity*	*(3) Debt*	*(4) Equity*	*(5) Debt*	*(6) Equity*	*(7) Debt*	*(8) Equity*
Post* x *Adopter	**0.052*** **	**0.025*** **	**-0.030***	**0.038** **	**0.045*** **	**0.023** **	**-0.013**	**0.028*** **
	(4.885)	**(3.023)**	**(-1.798)**	**(2.479)**	**(3.680)**	**(2.159)**	**(-0.977)**	**(2.956)**
Zscore $_{t-1}$	-0.010***	-0.015***	-0.018***	-0.006	-0.001	-0.013**	-0.011*	-0.008***
	(-2.993)	(-4.591)	(-3.148)	(-1.304)	(-0.268)	(-2.365)	(-1.875)	(-2.679)
Tangibility $_{t-1}$	0.009***	-0.010*	0.015***	-0.008**	0.008**	-0.010	0.016***	-0.010*
	(3.693)	(-1.788)	(3.376)	(-2.080)	(1.985)	(-1.171)	(4.338)	(-1.933)
Q $_{t-1}$	0.012***	0.045***	0.029***	0.051***	0.010**	0.048***	0.014	0.044***
	(3.115)	(10.594)	(3.208)	(15.218)	(2.329)	(9.845)	(1.579)	(9.283)
Profitability $_{t-1}$	0.012***	0.000	0.030***	-0.006	0.010**	-0.007**	0.031***	0.001
	(5.006)	(0.171)	(3.493)	(-1.111)	(2.187)	(-2.307)	(7.593)	(0.176)
Log(Sales) $_{t-1}$	0.014***	-0.033***	0.031***	-0.030***	0.015***	-0.030***	0.028***	-0.031***
	(3.044)	(-9.129)	(6.936)	(-11.440)	(2.964)	(-7.186)	(5.620)	(-9.190)
Cash $_{t-1}$	-0.035***	-0.019***	-0.041***	-0.006*	-0.039***	-0.020**	-0.039***	-0.013***
	(-12.447)	(-3.415)	(-4.498)	(-1.898)	(-11.625)	(-2.051)	(-5.895)	(-3.476)
Returns $_{t}$	0.001	0.025***	0.001	0.018***	0.001	0.028***	0.006	0.018***
	(0.723)	(11.560)	(0.292)	(5.713)	(0.360)	(10.929)	(1.483)	(4.821)
Deficit $_{t}$	0.038***	0.032***	0.077***	0.029***	0.044***	0.038***	0.067***	0.030***
	(8.282)	(8.159)	(8.686)	(7.688)	(9.627)	(7.839)	(9.256)	(9.229)
Trade $_{t}$	-0.003	0.008	-0.010	-0.009	-0.007	0.001	-0.013	-0.008
	(-0.555)	(1.069)	(-0.920)	(-1.006)	(-0.904)	(0.154)	(-1.283)	(-1.138)
Tbill $_{t}$	0.004	-0.007	0.006	-0.007	0.010**	-0.009	0.012**	-0.017**
	(0.740)	(-0.952)	(0.832)	(-0.852)	(1.968)	(-0.999)	(2.197)	(-2.074)
ΔGDP $_{t-2,t-1}$	0.003	-0.005	0.014	-0.010*	0.005	-0.006	0.010	-0.006
	(0.787)	(-1.091)	(1.626)	(-1.837)	(0.966)	(-0.972)	(1.451)	(-1.211)
Difference *Post x Adopter* (p-value)	**0.0468**		**0.0027**		**0.1721**		**0.0117**	
Observations	23,366	23,366	16,504	16,504	15,875	15,875	22,539	22,539
Pseudo R-Square	0.1788	0.1788	0.1225	0.1255	0.1805	0.1805	0.1341	0.1341
Cluster	Country	Country	Country	Country	Country	Country	Country	Country
Country and Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6 (continued)

Panel A reports the coefficients for a linear regression model when estimating *Market Leverage (%)* for different levels of debt capacity. Model (1) presents the results for the entire sample. Models (2) and (3) present results for the first partition, which is based on quartiles within industry-country *Leverage*. Models (4) and (5) present results for the second partition, which is based on quartiles within industry-country *Zscore*. Panel B reports the coefficients for a multinomial model when estimating debt and equity issuances. The partitions are the same as those in Panel A. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 7
Investment

	Main	*Financial Constraint* $_{t-1}$		*ΔAsymmetry* $_{t-1, t+1}$	
Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
(1) Post x Adopter	**0.105**	-0.095		-0.026	
	(1.294)	(-1.222)		(-0.299)	
(2) Post x Adopter x F. Constraint $_{t-1}$		**0.409*** **	**0.401*** **		
		(4.849)	**(4.754)**		
(2) Post x Adopter x ΔAsym $_{t-1, t+1}$				**0.194*** **	**0.199*** **
				(3.677)	**(3.135)**
Q $_{t-1}$	0.084***	0.084***	0.080***	0.081***	0.078***
	(4.571)	(4.659)	(5.139)	(4.551)	(5.024)
Cash Flow $_{t}$	0.071***	0.068***	0.068***	0.070***	0.070***
	(3.410)	(3.426)	(3.387)	(3.452)	(3.415)
F-test sum of (1)+(2) p-value		**0.0043**		**0.0569**	
Observations	69,421	69,421	69,421	69,421	69,421
RSquare	0.5072	0.5100	0.5151	0.5082	0.5134
Cluster	Country	Country	Country	Country	Country
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
PostxCountry FE	No	No	Yes	No	Yes

The table reports the coefficients for OLS models of investment on its determinants. Investment is defined as capital expenditures deflated by beginning period PP&E. We exclude observations corresponding to the year of adoption. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 8
Cross-Country Partitions

	(1)	*(1)*	*(2)*
Variables	*ΔEnforcement*	*EU vs. Non-EU*	*2005 vs. non-2005 Adopters*
Post x Adopter $_{CHL}$	**0.070*** (6.383)**		
Post x Adopter $_{OTHER}$	**0.030** (2.238)**		
Post x Adopter $_{EU}$		**0.047*** (3.512)**	
Post x Adopter $_{Non\text{-}EU}$		**0.033** (2.095)**	
Post x Adopter $_{2005\ adopters}$			**0.042*** (3.430)**
Post x Adopter $_{Non\text{-}2005\ adopters}$			**0.032 (1.374)**
Observations	76,661	76,661	76,661
RSquare	0.3505	0.3504	0.3504
Controls	Included	Included	Included
Cluster	Country	Country	Country
Firm, Year FE	Yes	Yes	Yes

The table presents results for a linear regression model estimating the probability of issuing external financing for different partitions. Model (1) presents a partition based on the levels of enforcement according to Christensen, Hail, and Leuz 2013 (*Enforcement*). Model (2) presents results based on whether or not a country belongs to the European Union (*EU*). Model (3) presents a partition based on whether or not a country adopted the regulation in 2005. A country is included if it has an average of 10 observations per year in the pre- and post-adoption periods. We exclude observations corresponding to the year of adoption, voluntary adopters, and cross-listed firms. Each firm is required to have price data available from Datastream and the necessary financial accounting data from Worldscope. Following previous research, we exclude financial firms and utilities (ICB codes 7000 and 8000). We exclude firms with negative equity and firms with total assets at the beginning of the year lower than USD$1 million. Refer to the appendix for a definition of each variable. All continuous firm-level variables are winsorized at the 1% and 99% levels. t-statistics are presented in parentheses below the coefficients and are clustered by country. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.