The Role of Foreign Shareholders in Disciplining Financial Reporting

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ABSTRACT

We investigate the role of foreign shareholders in improving the quality of accounting information provided by firms domiciled in countries with low de facto institutional quality. Using a sample of firms from four South-European countries (Greece, Italy, Portugal and Spain) for which we observe detailed ownership evolutions over the period 2002-2007, we find that increases in foreign ownership lead to increases in financial reporting quality but only if the foreign shareholders are domiciled in countries with strong investor protection mechanisms. Further, we find that the improvement in financial reporting quality is more pronounced in the case of foreign institutional investors. Finally, our results hold before and after the introduction of the International Financial Reporting Standards (IFRS) in 2005.

1. INTRODUCTION

We examine the role that foreign shareholders play in shaping the financial reporting quality of the firms in which they hold equity stakes. Ferreira and Matos (2008) find that because of the potentially fewer direct business ties that foreigners have compared to local investors, foreign investors are involved in monitoring corporations worldwide. We study one of the outcomes of this monitoring role, and provide evidence as to whether foreign shareholders contribute to curbing firm-level earnings management in the firms in which they participate and that are domiciled in countries with relatively high "de-jure" but low "de-facto" institutional quality. Analyzing the effects of foreign shareholders on the financial reporting system is important as they play an increasingly important role in the economy (Ferreira and Matos, 2008), and, to the best of our knowledge, there is no prior evidence on how the monitoring that they exert potentially affects corporate financial reporting outcomes.

There is evidence that the presence of foreign shareholders based in the U.S. and in other countries with strong investor protection improves firm-level corporate governance mechanisms of firms domiciled in countries with weak investor protection (Aggarwal et al., 2011). However, the evidence on the outcomes of such improvements in corporate governance so far remains undocumented. In this paper, we directly analyze one of the expected outcomes of improved corporate governance: higher quality accounting numbers. Consistent with the arguments in Aggarwal et al. (2011), we conjecture that, for firms domiciled in countries with high "de-jure" but low "de-facto" institutional quality, an increase in foreign ownership will cause a subsequent increase in firm-level earnings quality. We expect this increase in accounting quality given the monitoring role of foreign

shareholders. This monitoring role is supported in studies like Ferreira and Matos (2008). Foreign investors can impose governance changes in the firms in which they participate in several ways (Aggarwal et al., 2011). They can tighten the monitoring structure of the firm directly exercising their voting rights (for instance by nominating directors or installing audit committees), or indirectly by threatening managers to sell their shares ("vote with their feet") if the desired mechanisms are not implemented. Finally, we expect this effect of foreign investors on earnings quality to be more pronounced if institutional investors are involved, since this type of investors have superior monitoring capabilities (Chung et al., 2002; Ferreira and Matos, 2008; Aggarwal et al., 2011).

In our empirical tests we focus on foreign ownership evolutions in four Southern European countries: Greece, Italy, Portugal, and Spain. We select these countries for a variety of reasons. First, they have substantial foreign direct ownership holdings (FESE, 2008) but at the same time rank relatively low in investor protection mechanisms and other institutional features relative to the U.S., the UK and other developed countries (La Porta et al., 1998, 2000; Djankov et al., 2008). These Southern European countries are often viewed as a cluster of low governance-ranked countries in many respects and prior literature reports that, on average, firms domiciled in these countries are more likely to engage in earnings management than firms in other developed countries (Bhattacharya et al., 2003; Leuz et al., 2003; Leuz, 2010). Consistent with the view that these countries are perceived as having a weak institutional design and poor reporting practices, the financial press has referred to them with the pejorative acronym "PIGS".

Nevertheless, the economic activity in these countries has been growing fast and foreign shareholdings have followed this trend. In particular, the percentage of ownership

held by foreigners in these countries increased from 19% in 2002 to 27% in 2007. At the same time, these countries typically have been considered as more stable and culturally closer to developed markets like the U.S., United Kingdom or Germany, than other high-growth countries like Brazil, Russia, India, China and South-Africa (the so-called "BRICS" countries). Also, even if the institutional framework is weaker in Greece, Italy, Portugal and Spain compared to other developed countries, they are all European-Union countries and follow EU-wide regulations, making the legal and institutional framework substantially better than in developing countries. Thus, we believe that these four countries are an interesting case to study, as they have "de jure" a developed institutional framework that is backboned by the European Union, but weak implementation and lax enforcement of regulations might lead to a weaker than expected "de facto" institutional quality.[1]

We study changes in foreign and domestic ownership for the four countries under study over the time-period 2002-2007 and find that increases in foreign ownership lead to a subsequent increase in firm-level earnings quality but only if the foreign shareholders are domiciled in countries with strong institutional quality. This evidence is in line with the results in Aggarwal et al. (2011), who show that foreign shareholders from strong enforcement countries are the main drivers of corporate governance change in firms domiciled in countries with weak enforcement. We measure earnings quality using a performance-adjusted abnormal accruals estimation procedure especially designed for small samples, like in DeFond and Park (2001) and Francis and Wang (2008). We obtain consistent results if we use derivations from performance-adjusted Jones (1991) type

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[1] Because of the poor enforcement of regulations in these countries, we refer to them as *de facto* weak institutional quality countries.

abnormal accruals model. To address the concern that our results might be attributable to foreign investors investing only in firms with either good corporate governance provisions or high quality accounting numbers (Leuz et al., 2009), we employ causality tests in the spirit of Granger (1969). We find that increases in ownership by firms from strong institutional quality countries lead to subsequent increases in earnings quality, while the opposite does not hold. The results are stronger when foreign shareholders are institutional investors. We also find that the results hold for the periods before and after the implementation of the International Financial Reporting Standards (IFRSs), which became compulsory in the four countries under study in 2005. This is an important result, as our main results could be driven by a concurrent increase in foreign ownership and in accounting quality, both triggered by IFRS adoption. That our results hold before and after IFRS adoption decreases this concern substantially.

Our study contributes to the literature in a number of ways. First, we add to the international evidence on the impact of ownership structure on the properties of accounting numbers. Prior work on U.S. corporations documents that managerial ownership (Warfield et al., 1995) and family ownership (Wang, 2006) positively impact earnings quality, potentially because concentrated ownership permits greater monitoring by controlling owners (Demsetz and Lehn, 1985; Shleifer and Vishny, 1997). Based on international samples, Gopalan and Jayaraman (2012) and Haw et al. (2004) find, however, that firms with concentrated ownership in weak investor protection countries have lower earnings quality. These results are in line with the argument that insiders in weak investor protection countries expropriate outside shareholders and subsequently conceal the expropriation through low quality financial reporting (Leuz et al., 2003). We add to these studies by

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analyzing the particular case of countries with "de-jure" strong but "de-facto" weak institutions, and how financial reporting quality in these countries is affected by the presence of foreign shareholders. While the role of other types of investors on accounting quality has been tackled in prior literature (Bushee, 1998; Chung et al., 2002 or Ramalingegowda and Yu, 2012 for institutional investors, and Beuselinck et al., 2008 or Katz, 2009 for private equity investors), we are not aware of prior evidence on the impact of different foreign ownership types and origin on the financial reporting practices of the firms in which they hold equity stakes.

Second, the current study also brings important insights into the interaction between foreign investment activity and financial reporting quality. Several studies investigate the impact of an exogenous transparency shock like voluntary/mandatory IAS/IFRS adoption on the level of foreign investments (e.g. Covrig et al., 2007; Florou and Pope, 2012). Covrig et al. (2007) show that voluntary IAS adoption reduces home bias among mutual fund investors. Similarly, more recent research finds that mandatory IFRS adoption results in an increase of foreign mutual fund ownership (DeFond et al., 2011) and, more generally, in foreign institutional shareholdings (Florou and Pope, 2012) and that, in both cases, this increase is less pronounced in countries with weaker rule enforcement. While these studies focus on how a change in accounting standards leads to increases in foreign investments, the current study explores the potentially reverse linkage between foreign investor origin and type and the *ex post* observed financial reporting quality.

Finally, our evidence also provides support to claims made by authoritative voices such as Ball (2001), who view changes in accounting standards as a necessary yet insufficient condition to reach higher reporting quality and argue that, in the process of

improving the financial reporting system, improvements in the institutional framework (i.e., enforcement mechanisms) play a more pivotal role. Our results showing that the role of foreign shareholders in improving financial reporting quality remains equally important after the mandatory adoption of IFRS in all four countries in 2005 support these claims.

The remainder of the paper is set out as follows. In Section 2 we review prior literature and develop our hypotheses. In Section 3 we present the research design. In Section 4 we present the results. Finally, Section 5 summarizes and concludes.

2. LITERATURE AND HYPOTHESES DEVELOPMENT

International research on the properties of accounting numbers finds that institutional factors shape the financial reporting quality of corporations (Ball et al., 2000, 2003; Leuz et al., 2003). However, there are very little insights into how specific economic agents are potentially influential enough for improving the financial reporting quality at the firm-level in countries with weak enforcement and/or poor investor protection mechanisms. One potential mechanism through which firms' activities can be monitored is via foreign shareholdings. Ferreira and Matos (2008) find that foreign institutional investors are effective monitors of firms. This improved monitoring may explain the higher valuation, higher operating performance and reduced capital expenditures for these firms compared to firms with local (domestic) institutional investors. Ferreira et al. (2010) show that foreign investors facilitate cross-border mergers and acquisitions (M&As) and that the impact of foreign investors on cross-border M&A activity is most pronounced when local legal institutions are weaker and capital markets are less developed.

Further, Aggarwal et al. (2011) document that institutional investors from countries with strong protection for minority shareholder rights are the main drivers of improvements in governance outside of the U.S., while institutions from countries with weak shareholder rights are not. While Aggarwal et al. (2011) also address outcomes of these improvements in corporate governance (such as the probability of dismissing poorly performing CEOs and the effects on firm value) they do not address whether the corporate governance changes introduced by foreign shareholders affect financial reporting practices. It is however important to learn about the effects over financial reporting, because improved financial reporting quality leads to non-trivial positive outcomes, like improved pricing and non-pricing conditions for debt contracts (Bharath et al., 2008) and a lower cost of debt and equity (Francis et al., 2005).

In the current study, we examine the financial reporting effects of the corporate governance improvements reported by Aggarwal et al (2011). There is abundant evidence on the association between improved corporate governance and accounting quality (Klein, 2002; Xie et al., 2003; Beekes et al., 2004; Peasnell et al., 2005; Ahmed and Duellman, 2007; García Lara et al., 2009), which even holds for countries with "de-jure" high but "de-facto" low institutional quality (García Lara et al., 2007). Also, prior research shows that there is a causal link between corporate governance and financial reporting quality, and that improved corporate governance causes an improvement in financial reporting quality (Armstrong et al., 2014). Given this prior evidence, we expect that the improvements in corporate governance that Aggarwal et al. (2011) document when there is an increase in foreign ownership will also lead to an improvement in financial reporting quality.

We conjecture that the channel through which an increase in foreign ownership leads to improvements in financial reporting quality is improvements in corporate governance, and, in particular, tightened monitoring. Ferreira and Matos (2008, p. 500) argue that "*Foreign and more independent institutions are many times credited with taking a more active stance, while other institutions that have business relations with local corporations may feel compelled to be loyal to management*". Foreign investors can impose governance changes in the firms in which they participate in several ways (Aggarwal et al., 2011). They can tighten the monitoring structure of the firm directly by exercising their voting rights (such as nominating directors or creating an audit committee), or indirectly, threatening managers to sell their shares ("vote with their feet") if the desired mechanisms are not implemented. While not directly related to direct foreign ownership, Gormley et al. (2012) show that firms adjust their financial reporting quality to the demands of foreign providers of debt financing, and that the presence of foreign shareholders can also trigger an increase in the demand for high quality financial reporting by domestic shareholders. The arguments in Gormley et al. (2012) are therefore in line with those in Aggarwal et al. (2011), and with our expectation of increased accounting quality when foreign ownership increases. This combination of conjectured effects results into our first hypothesis:

> *H1: Foreign shareholder ownership positively impacts earnings quality of firms domiciled in "de facto" low institutional quality countries.*

While hypothesis H1 is not establishing any difference based on whether foreign shareholders are domiciled in a particular country, in our study, we also consider whether the effect of foreign shareholders on financial reporting quality is more pronounced when

the foreign owner is domiciled in a strong institutional quality country. Aggarwal et al. (2011) show that the effects of foreign shareholders on a firm's governance structure depend on foreign shareholder origin. In particular, they find that (p. 155) "*institutions based in countries with strong protection for minority shareholder rights, are the main drivers of improvements in governance outside of the U.S., while institutions from countries with weak shareholder rights are not*". While they do not address why this is the case, our expectation is that foreign shareholders from weak institutional quality countries will negotiate with non-domestic firms in a similar way as they do with domestic firms, and therefore may not trigger corporate governance changes. Also, as highlighted in Desender et al. (2016), foreigners may be especially keen on introducing governance practices when local shareholders have an interest in the firm beyond their equity investment, such as maintaining existing business relationships and when local governance practices are typically unavailable or do not address the agency conflict that foreign owners face. Consequently, the arguments in Ferreira and Matos (2008) about foreign shareholders improving monitoring because of fewer business ties may apply especially – even only – in the case of foreign ownership from strong investor protection countries. This reasoning leads to our second hypothesis:

> *H2: The effect of foreign shareholder ownership on earnings quality is more pronounced for foreign owners domiciled in strong institutional quality countries.*

Our hypotheses rely on the evidence that firm-level corporate governance provisions improve via the monitoring and activism of foreign investors (Ferreira and Matos, 2008; Aggarwal et al., 2011). However, an alternative explanation for a positive association between foreign shareholdings and improved corporate governance and/or

financial reporting quality is that foreign investors might initially only select firms where they already observe good corporate governance mechanisms or, as in the specific case of our study, high quality accounting numbers. Leuz et al. (2009) show that foreign investors avoid investing in firms domiciled in weak enforcement countries if these are subject to potential governance problems. In a similar vein, Giannetti and Simonov (2006) and Chung and Zhang (2011) show that, on average, different categories of non-connected investors (individual and institutional investors; domestic and foreign investors) have a preference for well-governed firms. Given this evidence, in our empirical tests we investigate whether it is foreign investments that drive improvements in financial reporting quality, or whether it is the other way around.

Finally, we also consider whether the improvement in earnings quality driven by an increase in foreign shareholdings from firms domiciled in countries with strong enforcement (as in H2) is most pronounced when these increases in foreign ownership come from shareholdings owned by institutional investors. Prior literature (Chung et al., 2002; Ramalingegowda and Yu, 2012, among others) argues that institutional investors have the motivation and the skills to monitor the financial reporting process in the firms in which they participate and finds that the presence of institutional investors is associated with lower earnings management and increased conservatism. Given these enhanced monitoring abilities of institutional investors, we expect that especially foreign institutional ownership will contribute to larger improvements in financial reporting quality in firms domiciled in weak-enforcement countries.[2] This leads to our third hypothesis:

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[2] Critics might argue that one should only expect an effect of foreign shareholders on accounting quality in the case of *institutional* foreign investors, as retail investors have fewer incentives and do not have the ability to monitor the financial reporting process. While this might be true in some firms, it is likely that most non-

H3: Foreign institutional investor ownership from strong enforcement countries contributes more to earnings quality improvements for firms domiciled in de facto poor institutional quality countries compared to foreign, non-institutional investor ownership.

3. RESEARCH DESIGN

3.1. Empirical specifications

To explore whether the presence of foreign shareholders, domiciled in either strong or non-strong investor protection countries, affects the quality of the earnings of the firms in which they hold equity stakes in Greece, Italy, Portugal and Spain, we estimate a model of changes in earnings quality on changes in the percentage of foreign ownership and controls. The model that we use is as follows:

$$
\begin{aligned}
\Delta EQ_{j,t} = \alpha &+ \beta_1\, \Delta ForeignAll_{j,t} \\
&+ \beta_3\, \Delta CLSHD_{j,t} + \beta_4\, BS\_Bloat_{j,t} + \beta_5\, Conservatism_{j,t} \\
&+ \beta_6\, \Delta Size_{j,t} + \beta_7\, \Delta Lev_{j,t} + \beta_8\, \Delta Profitability_{j,t} + \beta_9\, \Delta NumAnal_{j,t} \\
&+ \beta_{10}\, NegEPS_{j,t} + \beta_{11}\, Xlist_{j,t} + \beta_{12}\, MAD_{j,t} + \beta_{13}\, TPD_{j,t} + \qquad (1a)\\
&+ \Sigma_y\, \beta_y\, Yeardummy_{y,j,t} + \Sigma_i\, \beta_i\, Industrydummy_{i,j,t} + \\
&+ \Sigma_c\, \beta_c\, Countrydummy_{c,j,t} + \varepsilon_{j,t}
\end{aligned}
$$

Also, to further distinguish between foreign ownership from strong versus less strong institutional quality countries we use the following extended model:

$$
\begin{aligned}
\Delta EQ_{j,t} = \alpha &+ \beta_1\, \Delta ForeignStrong_{j,t} + \beta_2\, \Delta ForeignOthers_{j,t} + \\
&+ \beta_3\, \Delta CLSHD_{j,t} + \beta_4\, BS\_Bloat_{j,t} + \beta_5\, Conservatism_{j,t} \\
&+ \beta_6\, \Delta Size_{j,t} + \beta_7\, \Delta Lev_{j,t} + \beta_8\, \Delta Profitability_{j,t} + \beta_9\, \Delta NumAnal_{j,t}
\end{aligned}
$$

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institutional foreign investors in the countries under study are not retail investors, but investors who own by themselves a large equity stake, and that thereby have the incentives and the capabilities to monitor. An example of the presence of individual non-institutional investors in these countries is the purchase of a 6% of Spanish construction company FCC (*Fomento de Construcciones y Contratas*) by US magnate Bill Gates in October 2013, which made him the second largest shareholder in the firm (Financial Times. October 22, 2013).

$$+ \beta_{10}\,NegEPS_{j,t}\ + \beta_{11}\,Xlist_{j,t} + \beta_{12}\,MAD_{j,t} + \beta_{13}\,TPD_{j,t} +$$
$$+ \Sigma_y\,\beta_y\,Yeardummy_{y,j,t} + \Sigma_i\,\beta_i\,Industrydummy_{i,j,t} +$$
$$+ \Sigma_c\,\beta_c\,Countrydummy_{c,j,t} + \varepsilon_{j,t}$$

(1b)

In Equations (1a) and (1b) *EQ* is a proxy for earnings quality. We describe the different proxies used for measuring earnings quality in Section 3.2 below. *ForeignAll* is the proportion of ownership held by foreign investors, regardless of their country of origin. *ForeignStrong* is the proportion of ownership held by foreign investors from countries with strong institutional quality. *ForeignOthers* refers to the proportion of ownership from investors from all other countries. In Section 3.3 we describe how we assign countries to the strong versus other institutional quality groups. The main coefficients of interest are β_1 in Equation (1a), and β_1 and β_2 in Equation (1b). With regards to the coefficients, we predict β_1 to be positive in Equation (1a) and (1b). However, if the arguments in Aggarwal et al. (2011) hold, the presence of foreign shareholders from weak investor protection countries might decrease the significance of the coefficient in (1a) vis-à-vis (1b). Regarding β_2 in Equation (1b), which captures the effect of shareholders from weaker enforcement countries, we expect to observe a positive and significant coefficient, but smaller than β_1, implying that foreign shareholders from weaker enforcement countries do contribute to improving the financial reporting quality, albeit to a lower extent than foreign shareholders from strong investor protection countries. If the arguments in Aggarwal et al. (2011) hold that the improvement in governance is driven exclusively by foreign shareholders from strong investor protection countries, then β_2 would be insignificantly different from zero.

In line with prior literature (for example, Ferguson et al., 2004; Francis and Wang, 2008) we control for other firm-specific factors that affect accounting quality. Controls include the proportion of closely held shares (*CLSHD*), balance sheet bloat (*BS_Bloat*),

conservatism, size, leverage, profitability, the number of analysts following the firm (*NumAnal*), whether the firm is making losses (*NegEPS*), whether the firm is cross-listing (*XList*), and the year of implementation of the Market Abuse (MAD) and Transparency (TPD) European Union Directives.

Regarding the proportion of closely held firms, Leuz et al. (2009) argue that closely held firms have less possibilities or incentives to attract foreign capital. Also, the presence of large blockholders has an impact on earnings management (Peasnell et al., 2005). Regarding balance sheet bloat, which captures the accumulation of prior upwards earnings management, Barton and Simko (2002) argue that firms with bloated balance sheets are constrained in their opportunities to manage current and future earnings upwards. As a proxy for balance sheet bloat we use an indicator variable that equals one if the net operating assets (i.e., shareholders' equity less cash and marketable securities and plus total debt) at the beginning of the year divided by lagged sales is above the median of the corresponding two-digit SIC industry-year, and zero otherwise.

Conservatism is another important control variable. Conservatism varies across countries (e.g., Ball et al., 2000; García Lara et al., 2005), and also influences the incentives and opportunities to engage in earnings management. Prior analytical (Chen et al., 2007) and empirical (García Lara et al., 2016) research shows that more conservative firms engage less in earnings management. This control is additionally relevant as the mandatory implementation of IFRS in the countries under study could have led to changes in conservatism (Ahmed et al., 2013; André et al., 2015) and at the same time also to changes in foreign ownership (Florou and Pope, 2012). We measure conditional conservatism at the country-year level using the model based on accruals and cash flows proposed by Ball

and Shivakumar (2005). The intuition in this model is that the documented negative relation between accruals as cash flows (e.g., Dechow, 1994) is expected to be less pronounced in bad news periods. Therefore, the difference in the association between accruals and cash flows across good and bad news periods is their measure of conservatism. This measure, therefore, captures the asymmetric timeliness of earnings to good and bad news.

Regarding the remaining control variables, we include firm size (*Size*), measured through the natural logarithm of total assets, because prior studies document that large firms face higher political and regulatory costs and manage earnings less. Leverage (*Lev*) is measured as the ratio of long term debt to total assets. Leverage controls for debt contracting pressures and it is expected that a higher leverage ratio indicates a higher probability of debt covenant violation which in itself creates an incentive for more earnings management. *Profitability*, measured as the fractional rank of return on assets, controls for performance effects on abnormal accruals. A dummy variable (*NegEPS*) takes the value of 1 if the firm reported negative earnings in the previous year and serves as a proxy for financial distress and bankruptcy risk and therefore is an incentive to increase reported earnings in the subsequent year (Francis and Wang, 2008).

Further, we include the number of analysts following the firm (*NumAnal*), and a dummy variable (*Xlist*) taking value 1 if the firm is cross-listed in the U.S., and 0 otherwise. These variables control for a firm's information environment. While the findings from Dechow et al. (2000) and Matsumoto (2002) suggest that analyst following results into increased benchmark beating pressures and, thus, increases the likelihood of earnings management, Yu (2008) shows that analyst coverage refrains earnings management

behavior. We therefore do not predict a particular direction for the coefficient on analyst following. In line with the arguments in Leuz and Verrecchia (2000), we expect cross listed firms to have higher financial reporting quality, since they are subject to the stricter U.S. litigation environment and are required to provide US GAAP reconciliations under the form of 20-F filings.[3] In addition to the firm-specific controls above, we also control for the introduction of two European Union Directives (EU regulations) that might directly impact the incentives and probabilities of engaging in earnings management: the Market Abuse Directive (*MAD*) and the Transparency Directive (*TPD*). These two directives were implemented in each EU country at a different date. Christensen et al. (2017) find that the implementation of both directives increased liquidity and reduced cost of capital. Both effects are consistent with an improvement in the information environment that is likely to be unrelated to changes in foreign shareholdings. To control for this country-specific time effect that may materialize into earnings quality, we create two additional dummy variables, *MAD* and *TPD*. They take the value 1 if in a given year the directive was enforced in the country under analysis and 0 otherwise. Finally, we also include year, industry and country dummies. All continuous variables enter the regression in changes specifications and the dummy variables in levels.

Acknowledging the fact that foreign investors may have a preference for firms with better governance mechanisms (e.g., Leuz et al., 2009), and for firms that use high quality accounting standards like US GAAP or IFRS (Bradshaw et al., 2004; Covrig et al., 2007),

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[3] Note that the 20-F reconciliation requirement is no longer obligatory for IFRS filers post-2007. More precisely, In December 2007, the SEC ruled that it would begin accepting foreign private issuers' financial statements prepared under International Financial Reporting Standards (IFRS) as adopted by the IASB without requiring reconciliation to US GAAP *starting* fiscal years ending after November 15, 2007. During the period of investigation, however, foreign firms with ADRs listed on US stock exchanges were required to provide 20-F reconciliations.

we analyze whether the flow of causality goes from foreign shareholders to financial reporting quality, as we hypothesize, and not vice-versa. We therefore perform causality tests, in the spirit of Granger (1969), of the following form:

$$\Delta EQ_{j,t} = \alpha + \beta_1 \Delta ForeignStrong_{j,t-1} + \beta_2 \Delta ForeignStrong_{j,t-2} + \beta_3 \Delta EQ_{j,t-1} + \beta_4 \Delta EQ_{j,t-2} + \Phi Controls + \varepsilon_{j,t} \qquad (2a)$$

$$\Delta ForeignStrong_{j,t} = \alpha + \beta_1 \Delta ForeignStrong_{j,t-1} + \beta_2 \Delta ForeignStrong_{j,t-2} + \beta_3 \Delta EQ_{j,t-1} + \beta_4 \Delta EQ_{j,t-2} + \Phi \ Controls + \varepsilon_{j,t} \qquad (2b)$$

where all variables, including the vector of control variables, are defined as in Equations (1a) and (1b). These leads-lags tests are in line with those in Aggarwal et al. (2011).

If increases in foreign ownership lead to improvements in earnings quality (consistent with the arguments about corporate governance in Aggarwal et al., 2011), then we should observe an association between current changes in earnings quality and past changes in foreign ownership. That is, coefficients β_1 and β_2 in model (2a) should be significantly positive. On the other hand, if increases in accounting quality lead to increases in foreign ownership (as suggested by the corporate governance results in Leuz et al., 2009), then we should observe a positive association between current changes in foreign ownership and past changes in earnings quality, leading to positive and significant β_3 and β_4 coefficients in model (2b). If we observe that β_1 and β_2 are significant and positive in model (2a) and, at the same time, β_3 and β_4 are insignificant in model (2b), this indicates that the causality flows from increases in foreign ownership to earnings quality and not the other way around.

Finally, to test hypothesis H3 and to explore whether foreign institutional ownership from strong enforcement countries contributes more to earnings quality improvements in weak institutional quality countries compared to similar origin yet non-

institutional ownership, we re-run a variant of Equation (1b) and additionally distinguish between institutional and non-institutional foreign shareholders. Also here, we perform Granger-type causality tests as specified in Equations (2a) and (2b).

3.2. Earnings quality measures

Given the size of the four countries under study, our main proxy for earnings quality is based on the work of DeFond and Park (2001) and Francis and Wang (2008), who develop a measure of abnormal accruals that is especially suited for small samples. In addition, we also use three other proxies based on extensions from the Jones (1991) model, estimated at the industry-year level. Although Jones-type models are more widely used in studies on earnings management, industry-year estimations can be problematic given our reduced sample sizes, and that is why we consider the abnormal accruals measure from Francis and Wang (2008) as the primary earnings quality proxy for our tests. We report Jones-type results for robustness reasons.

Regarding the proxy for earnings quality for small samples, it is based on the linear expectation model employed in DeFond and Park (2001) and Francis and Wang (2008). In spirit, it is in line with the model proposed by DeAngelo (1986). It uses a firm's own prior year current and long-term accruals in calculating the expectation benchmark. As such, it is not based on comparisons with the behavior of (industry) peers and uses a firm as its own control. Following Francis and Wang (2008), we calculate predicted accruals as follows:

$$
\textit{Predicted accruals} = \{[\textit{Sales in year t} \times (\textit{current accruals in year t-1/sales in year t-1})] - [\textit{gross PPE in year t} \times \\ \times (\textit{depreciation in year t-1/gross PPE in year t-1})]\} / \\ / \textit{total assets in year t-1.}
\tag{3}
$$

Abnormal accruals are the difference between firm's total accruals in year t, and the predicted total accruals for year t. To adjust for potential performance effects, we additionally regress the obtained values on individual profitability (ROA) and interpret the residuals as performance-adjusted abnormal accruals. Orthogonalizing abnormal accruals with respect to profitability is important in our setting, as it could be argued that foreign investors invest in better performing firms, and better performing firms probably have larger accruals. Finally, because our tests care about the magnitude of earnings management rather than its direction, we use the absolute values of these performance-adjusted abnormal accruals as the variable of interest. To ease the interpretation we multiply the absolute values by minus one so that larger values (i.e., less negative) correspond to better earnings quality. We refer to this proxy as EQ_{FW}.[4] When we use this proxy, we control, throughout all models, for balance sheet bloat and conditional conservatism.

Apart from this measure based on Francis and Wang (2008), we use three other abnormal accruals proxies based on different extensions from the Jones (1991) model. In particular, we use a) performance adjusted abnormal accruals as in Kothari et al. (2005); b) forward looking abnormal accruals, to control for prior managerial decisions regarding accruals, as in Dechow et al. (2003); and c) abnormal accruals estimated with a non-linear specification that captures the differential timeliness in the incorporation of good and bad news in earnings (conditional conservatism), as in Ball and Shivakumar (2006).

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[4] Note that the results are very similar if we do not orthogonalize abnormal accruals with respect to ROA. Results with abnormal accruals not adjusted by profitability are available upon request.

Regarding performance adjusted abnormal accruals, we use the residuals from the Jones (1991) accruals model, as modified by Dechow et al. (1995). We directly control for performance in the model, in line with the arguments in Kothari et al. (2005). The model is estimated at the country-industry-year level as follows:[5]

$$\frac{TA_{j,t}}{Assets_{j,t-1}} = \alpha_{i,j}\left[\frac{1}{Assets_{j,t-1}}\right] + \beta_{i,j}\left[\frac{\Delta REV_{j,t} - \Delta REC_{j,t}}{Assets_{j,t-1}}\right] + \\ + \gamma_{i,j}\left[\frac{PPE_{j,t}}{Assets_{j,t-1}}\right] + \delta_{i,j}ROA_{j,t} + \varepsilon_{j,t} \tag{4}$$

where: $TA_{j,t}$ is firm j's total accruals in year t; $Assets_{j,t}$ is firm j's total assets in year t; $\Delta REV_{j,t}$ is firm j's change in revenues between year t-1 and t; $\Delta REC_{j,t}$ is firm j's change in receivables between year t-1 and t; $PPE_{j,t}$ is firm j's gross Property, Plant and Equipment in year t; and ROA equals return on assets, a proxy for firm j's performance.[6]

We estimate equation (4) separately for each country-industry by year, and take the Fama and French 12 industry classifications to construct our groups.[7] We require a minimum of 7 observations for estimations at the country-industry-year level. Then, for each firm j, we calculate the abnormal accruals as:

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[5] We introduce ROA as an additional explanatory variable in the model, instead of using performance matched portfolios as in Kothari et al. (2005) given that we work with a small sample, which may make estimations with ROA portfolios noisy.
[6] With total accruals calculated as $\Delta CA_{j,t} - \Delta CL_{j,t} - \Delta Cash_{j,t} + \Delta STDEBT_{j,t} - \Delta DEPN_{j,t}$; $\Delta CA_{j,t}$ is firm j's change in current assets between year t-1 and year t; $\Delta CL_{j,t}$ is firm j's change in current liabilities between year t-1 and year t; $\Delta Cash_{j,t}$ is firm j's change in cash between year t-1 and year t; $\Delta STDEBT_{j,t}$ is firm j's change in debt in current liabilities between year t-1 and year t; $\Delta DEPN_{j,t}$ is firm j's depreciation and amortization expense in year t.
[7] http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_12_ind_port.html

$$DACC_t = \frac{TA_{j,t}}{Assets_{j,t-1}} -$$

$$- \left(\hat{\alpha}_{i,j} \left[\frac{1}{Assets_{j,t-1}} \right] + \hat{\beta}_{i,j} \left[\frac{\Delta REV_{j,t} - \Delta REC_{j,t}}{Assets_{j,t-1}} \right] + \hat{\gamma}_{i,j} \left[\frac{PPE_{j,t}}{Assets_{j,t-1}} \right] + \hat{\delta}_{i,j} ROA_{j,t} \right) \quad (5)$$

where $\hat{\alpha}_{i,j}$, $\hat{\beta}_{i,j}$, $\hat{\gamma}_{i,j}$, $\hat{\delta}_{i,j}$ are the fitted coefficients from model (4). We use the absolute values of *DACC,* again multiplied by -1 so that larger values correspond to better earnings quality, as our second proxy for earnings quality. We refer to this second proxy as *EQ_JONES*.

Regarding the forward looking abnormal accruals as per Dechow et al. (2003), we replicate the two-step process described in Equations (4) and (5), but including one additional explanatory variable in the model, namely one-year lagged accruals. We refer to this proxy as *EQ_FLOOKING*. Finally, we use the non-linear specification that captures the differential timeliness in the incorporation of good and bad news in earnings, as in Ball and Shivakumar (2006). We also start from Equations (4) and (5), but include, as additional explanatory variables CFO_t (Cash flow from operations), a dummy variable (D_t) taking value one if CFO_t is negative, and zero otherwise, and the interaction between both (CFO_t*D_t). We refer to this proxy as *EQ_BS*.

3.3. Classifying foreign investors in ForeignStrong and ForeignOthers

The classification of the proportion of foreign ownership among foreign investors from countries with strong enforcement (*ForeignStrong*), and foreign investors from other countries (*ForeignOthers*) is performed as follows. We use the Worldwide Governance Indicators (WGIs) of Kaufmann, Kraay and Mastruzzi (2009) to create a country-level institutional quality index. The governance indicators contain six dimensions that reflect a

country's institutional quality: (1) Voice and Accountability, (2) Political Stability and Absence of Violence/Terrorism, (3) Government Effectiveness, (4) Regulatory Quality, (5) Rule of Law, and (6) Control of Corruption. The use of the Kaufmann et al. (2009) index is becoming common in international accounting research. Examples include Daske et al. (2008) and Landsman, Maydew and Thornock (2012).[8]

We rank the 200 countries available in the Kaufmann et al. (2009) study for each of the six dimensions, and calculate the mean of the six rankings for each country. We then rank all countries according to this mean, and we label the top 10% of countries with the highest average rankings as countries with strong institutional quality. We, thus, focus on investments coming from countries with a very high institutional quality and in any case substantially higher than the one in Greece, Italy, Portugal and Spain. We denote as *ForeignStrong* the equity stake (%) owned by investors from countries classified as countries within the top 10% institutional quality worldwide. For the countries classified as strong, the ones that hold equity stakes in the four countries under study are (in alphabetical order): Australia, Austria, Belgium, Canada, Denmark, Germany, Ireland, Luxembourg, the Netherlands, Norway, Sweden, Switzerland, United Kingdom and United States of America. We recode the equity stakes owned by foreign investors from all other countries as *ForeignOthers*.[9]

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[8] When we alternatively employ an index recently developed by Brown et al. (2014), which is designed to capture differences between countries in relation to the auditing of financial statements and the enforcement of compliance with each country's accounting standards to classify countries in Strong and Other categories, we obtain qualitatively identical results. The correlation between the Brown et al. (2014) index and the Kaufmann et al. (2009) index is 73 %, significant at conventional levels.

[9] One could argue that the 10% cutoff may seem rather *ad hoc* in nature and that the strong institutions cluster excludes specific countries with higher-ranked institutions than in Portugal, Italy, Greece and Spain (which rank on places 35, 62, 57 and 39, respectively, out of 200). The only two countries with significant stakes of ownership in the four countries under study and that might generate doubts as to whether their institutions are stronger than in those four, are France and Japan. We conduct sensitivity tests where we re-classify these

We also distinguish between institutional and non-institutional investors. We label shareholdings by pension funds, insurance companies and mutual funds as institutional holdings. We denote as *InstForeignStrong* the equity stake (%) owned by institutional investors from countries classified as countries with high institutional quality (classified as described above). We denote as *InstForeignOthers* the equity stake (%) owned by foreign institutional investors from all other countries.

3.4. Sample Selection

For the purpose of our analyses, we focus on listed firms from four EU countries: Portugal, Italy, Greece and Spain. We extract financial statement data from all listed firms from those four countries available in the Amadeus database (© Bureau Van Dijk) for the period 2002 to 2007, with the necessary data to calculate the earnings quality measures and all variables needed for our tests. For each year in our sample period, we additionally gather ownership data for all listed firms included in the yearly tapes (December issues) of the Amadeus ownership database of Bureau van Dijk. This compilation procedure is necessary because the ownership variable is treated as a static variable and overwritten in web-based platform Amadeus updates.

Ownership data is based on voting shares and comes from official country bodies; from Bureau Van Dijk associated information providers; or is obtained directly from annual reports. For each firm that we observe at least once in the database, we identify all shareholders for each available year. Consistent with Denis and Huizinga (2004), we

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two countries from non-strong to strong institutional quality countries and the results do not change qualitatively.

calculate ownership measures based on direct shareholdings, i.e. ownership that investors

hold directly rather than through related parties. We classify as institutional investors all

shareholdings belonging to the categories (1) Pension fund/Trust; (2) Financial company

and (3) Insurance company. Information on closely held shares is obtained from the time

series in the Thomson Worldscope database. We further merge our database with I/B/E/S

to obtain data on the number of analysts following the firm.

We use the Worldwide Governance Indicators (WGI) of Kaufmann, Kraay and

Mastruzzi (2009) to classify countries among strong versus weak shareholder protection.

Finally, we require a constant sample for reasons of comparability. All of these data

requirements lead to a final sample consisting of 1,590 firm-year (265 firms) observations,

corresponding to 198 Portuguese (12.5%), 612 Italian (38.5%), 372 Greek (23.4%) and

408 (26.6%) Spanish firm-years.[10]

INSERT TABLE 1 HERE

Table 1 reports detailed WGI scores for 2007 for the four countries under study and

compares them with the United States, the United Kingdom, the OECD average, the EU15

(EU countries before the enlargement to Eastern Europe) average and the BRIC (Brazil,

Russia, India and China) cluster average. These statistics confirm the claim that, on

average, Portugal, Italy, Greece and Spain score low on all dimensions compared to all

other groups of countries, except compared to the BRIC countries. Within the cluster of

PIGS, Italy ranks lowest on 4 out of 6 categories. The average values of the BRIC countries

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[10] Note that although this number – in absolute terms – may look rather low, it is similar to the number of firms used for these countries in Barth et al. (2012, page 78): 244. Moreover, when we calculate the proportion of total market capitalization of the firms in our sample in the last observation year, we find that they represent more than 75% of market capitalization in Greece, 89% in Spain, 91% in Italy and 93% in Portugal. These numbers are in all cases higher than the ones reported in Aggarwal et al. (2011) for the respective countries.

are substantially worse than the values of any of the PIGS, for all of the individual attributes.

4. RESULTS

4.1. Descriptive Statistics

Table 2, Panel A reports the evolution of the average foreign ownership for all firms in each country over the sample period, and Panel B presents the evolution of institutional ownership, broken down according to whether institutional investors are either domestic, foreign from a high institutional quality country, or foreign from other countries. Panel A further splits the proportion of foreign ownership across each category (*ForeignStrong* and *ForeignOther*) by the respective country of origin.

For the four countries studied, we find that the top 10% of institutional quality countries account for about 30 percent of the foreign investments (=7.32% compared to 24.07%). Further, we observe that the UK (1.97%), the Netherlands (1.73%) and the U.S. (0.92%) are among the top-3 foreign high institutional quality investor countries. However, on average, these ownership proportions are smaller than those from the top-3 countries in the *ForeignOther* countries: France (3.42%), Italy (3.18%) and Spain (3.00%). Finally, it is noteworthy that foreign investments are coming from both other European countries as well as overseas countries.[11]

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[11] These detailed country ownership statistics also indicate that a specific proportion of foreign investments come from so-called tax havens (i.e., [in order of importance] Luxembourg and Switzerland for the *ForeignStrong* sample and Cyprus, Monaco, Bermuda, Cayman Islands, British Virgin Islands, Andorra, Gibraltar, Singapore and Mauritius for the *ForeignOther* sample). Results are consistent when we exclude investments from tax-haven countries from our analyses.

The proportion of foreign shareholders (Panel A) is increasing over the 6 years considered (2002-2007), from 18.66% of ownership in 2002 (5.94 corresponding to countries with strong institutional quality countries; 12.72 to all other countries) to 27.09% in 2007 (8.83% for strong institutional quality countries; 18.26% for all other countries). We observe in Panel B that foreign institutional shareholdings account for less than 10 percent of total foreign ownership for our sample firms, representing close to 2 percent of total ownership in all years. Also, the proportion of domestic institutional shareholdings fluctuates between fairly modest levels of 2.9 and 4.3 percent.

INSERT TABLE 2 HERE

In Table 3 we present the descriptive statistics of the variables of interest and control variables of our regressions. Foreign ownership at the firm level varies substantially, between 0 percent and close to 100 percent. Less than half of the sample firms have foreign shareholders from strong enforcement countries, and also less than half have institutional investors. Also with respect to the ownership composition, we find that a small minority of sample firms are widely held and that for more than half of the sample firms, a majority-block of over 55 percent of all shares are closely held. With respect to the earnings quality proxies, the mean ranges between -0.03 and -0.11 depending on the specific proxy.[12] Both mean and median log-transformed total assets equal 19.4, which corresponds to about a quarter billion Euro. Mean (median) leverage equals 16% (13%), indicating that our sample firms have fairly modest leverage ratios. Median profitability, measured as net income scaled by total assets, equals 0.05. An average value of 12.10

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[12] As previously described, these values are negative because we multiply the absolute value of abnormal accruals by minus one so that larger values (i.e. less negative) indicate higher earnings quality.

suggests the variable is substantially influenced by positive outliers and calls for the use of a normalized variable in our multivariate tests. Further, 14 percent of sample firms report a negative EPS. On average, 5.8 analysts follow the firms under analysis (median=2) and the maximum analyst following is 40. Finally, we observe that 20 percent of all firms are cross-listed on a U.S. stock exchange.

In Panel B, we present country means of the variables of interest. Greek firms have the highest level of foreign shareholdings (37.11 percent), followed by Italian (24.34 percent), Spanish (16.68 percent) and Portuguese firms (13.52 percent). These numbers are roughly in line with Denis and Huizinga (2004) who report country averages for a larger EU sample for 1996 to 2000. Further, Spain ranks highest on the proportion of foreign shareholdings from strong institutional quality countries (9.2 percent). With respect to investor type, we observe that Greek firms have the lowest levels of institutional holdings (2.5 percent), while Portuguese firms have the highest levels (almost 8 percent). However, almost all institutional shareholdings of Portuguese firms are domestic. Further, Spain has the highest level of foreign institutional shareholders domiciled in countries with strong institutions (3.05 percent). Finally, the proportion of closely held shares is on average highest in Portugal (61.72 percent) and lowest in Spain (45.11 percent).

Further, for all four earnings quality proxies, Greece shows the lowest levels of earnings quality. The largest firms are located in Spain (mean of 20.9 or about 1.2 billion Euro) and Portuguese sample firms have the highest leverage levels (22.2 percent). Italian and Portuguese firms have more negative EPS years (slightly more than 20 percent of the observations). Portuguese sample firms are cross-listed in more than one quarter of the observations. In line with the findings that Spanish firms are on average larger, we observe

the highest analyst following for Spanish firms (mean=10.4). Finally, MAD and TPD are indicator variables that capture for a given year and a given country, when the Market Abuse and Transparency European Union Directives were enforced. Italy did not enforce the transparency directive over our period of observation (mean=0) and Portugal was the last enforcing the market abuse directive (mean=0.36 versus 0.50 for Greece and Spain).

<div align="center">***INSERT TABLE 3 and 4 HERE***</div>

We present correlations between our variables of interest in Table 4. The correlation of the earnings quality proxies with foreign investments from strong institutional quality countries is positive and significant, while it is insignificant in the case of foreign investments from other countries. Foreign investor ownership from strong institutional quality countries is also positively correlated with size, accounting performance and analyst following. Interestingly, the correlation between earnings quality and foreign institutional investments from strong enforcement countries is only significant in the case of the Francis and Wang (2008) proxy. For institutional holdings from firms domiciled in other countries, the correlation is significant regardless of the earnings quality proxy specification.

4.2 Regression results

<div align="center">***INSERT TABLE 5 HERE***</div>

In Table 5, we show the results of the estimation of model (1), where we regress the change in earnings quality (EQ_{FW}, in our main tests, Columns 1 and 2, or the three variants of the Jones (1991) model in Columns 3, 4 and 5) on changes in foreign ownership. In Column 1, we focus on the effects of all foreign shareholders (*ForeignAll*) regardless of their

country of origin. The coefficient on Δ*ForeignAll* is positive, 0.0937, with *p*=0.120. This weak result is therefore not supporting hypothesis H1 (that any increase in foreign shareholdings – without conditioning on the foreign country enforcement quality – would lead to improvements in financial reporting quality). Also, the results in Columns 2 to 5 support the expectations in Aggarwal et al. (2011) that only foreign shareholders from strong enforcement countries are expected to have an impact on the firms where they hold equity stakes. The coefficient of Δ*ForeignStrong* is positive and significant in all four columns (0.1179; p=0.030 in Column 2, where we consider the Francis and Wang (2008) proxy for earnings management; 0.1626; p<0.01, in Column 3, where we use the performance-adjusted Jones-type abnormal accruals; 0.1307, p=0.011 in Column 4, where we use forward looking abnormal accruals, and 0.1198, p=0.015 in Column 5, where we use the Ball and Shivakumar model that controls for conservatism). Also consistent with the claim in Aggarwal et al. (2011), about the different impact of foreign shareholders depending on their origin, the coefficient on the change in the percentage of ownership held by the remaining foreign investors (Δ*ForeignOther*) is not significant at conventional levels regardless of the earnings management proxy that we use. Combined, this evidence supports hypothesis H2. Regarding the control variables, it is noteworthy (and consistent with prior research by Chen et al., 2007 and García Lara et al., 2016) that conservatism is associated with better financial reporting quality.

<div align="center">***INSERT TABLE 6 HERE***</div>

In Table 6 we analyze the causality flows that lead to the positive relation between changes in foreign ownership from strong institutional quality countries and changes in earnings quality documented in Table 5. To do so, we estimate models (2a) and (2b), where

we formally analyze whether it is the change in earnings quality that causes changes in foreign investments; or whether it is the change in foreign investments that leads to changes in earnings quality, as we hypothesize. To perform these tests, we first estimate regression (2a) and assess the joint significance of β_1 and β_2. For the Francis and Wang (2008) measure of earnings quality (columns 1 and 2), we find that the p-value of $\beta_1=0$, $\beta_2=0$ equals 0.0000, and the p-value of $\beta_1+\beta_2=0$ equals 0.0002. As both tests are highly significant, this provides comforting evidence that it is an increase in ownership from investors from countries with strong institutional quality countries that causes an increase in earnings quality in a Granger (1969) sense. Then, we estimate regression (2b) and test the joint significance of β_3 and β_4 to observe whether our results suffer from reverse causality. The p-value of $\beta_3=0$, $\beta_4=0$ equals 0.5908, and the p-value of $\beta_3+\beta_4=0$ equals 0.9870. This evidence indicates that changes in earnings quality do *not* lead to (i.e., do not cause in a Granger sense) increases in ownership from investors domiciled in high institutional quality countries.[13] Combined, our results show that the causality flows from changes in ownership from investors from high institutional quality countries to earnings quality changes, and not vice versa. Results with the variants of the Jones (1991) model are also in line with our expectations, but weaker. This is not surprising given the shortcomings of the Jones (1991) model when applied to small samples, which make abnormal accruals noisy.

INSERT TABLE 7 HERE

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[13] We do not think that this result is at odds with prior evidence (for example, DeFond et al., 2011 or Florou and Pope, 2012) that a mandatory change to a better set of accounting standards leads to increases in foreign ownership. We focus on countries where the aforementioned studies find a lower effect of the change to IFRSs, precisely because of low enforcement.

In Table 7 we test for H3; i.e., whether the results documented in Tables 5 and 6 are stronger in the case of institutional investors. To do so, we split the main explanatory variable in those two tables (Δ*ForeignStrong*), into Δ*InstForeignStrong* and Δ*NonInstForeignStrong*. In the first column of Panel A, where we consider the Francis and Wang (2008) proxy for earnings quality, the coefficient for Δ*InstForeignStrong* is 0.2539 (p<0.01), which is more than double the size of the coefficient for Δ*NonInstForeignStrong* (0.1198; p=0.023). A z-test indicates that the difference between these two coefficients is significant at conventional levels (p=0.000). Results using the Jones model (Column 2), the forward looking discretionary accruals model (Column 3), and the piece-wise discretionary accruals model of Ball and Shivakumar (Column 4) offer identical inferences. In all three cases the coefficient of Δ*InstForeignStrong* is larger than the coefficient of Δ*NonInstForeignStrong*, and the difference is significant at conventional levels. Overall, these results support our conjecture that especially institutional ownership from strong enforcement countries helps inducing better financial reporting quality. At the same time, these results also indicate that the presence of foreign investors from high institutional quality countries also positively impact earnings quality in the case of non-institutional investors.

In Panel B of Table 7 we replicate the causality tests in Table 6 taking into account the differential effect of institutional ownership. When we use the Francis and Wang (2008) earnings management proxy, we find that, in Model (2a), Column 1, the p-value of β_1=0, β_2=0 is smaller than 0.0001, and the p-value of β_1+ β_2=0 equals 0.0110. However, β_3 and β_4 are not significant at conventional levels in model 2b (Column 2). These results confirm that the causality flows from changes in ownership to changes in earnings quality, and not

vice-versa. Also, the values of the coefficient of ownership changes in model 2a (Column 1) are always larger for institutional investors as compared to non-institutional investors. While the results hold for the Francis and Wang (2008) proxy for earnings quality, they become insignificant for the Jones (1991) type abnormal accruals (see Columns 3 and 4). As in Table 6, we only report the results with the Ball and Shivakumar (2006) proxy. Results are qualitatively identical when we use the other two Jones-based earnings management proxies. Given that we have a low number of observations per country-year estimation, Jones-based proxies are noisier than the ones based on the firm as its own benchmark, as in Francis and Wang (2008). Therefore, it is not surprising that results are weaker when using the Jones-based proxies.[14]

4.3 IFRS-related effects

As an additional analysis, we investigate whether the mandatory adoption of International Financial Reporting Standards (IFRS), which took place in 2005 in the four countries under study, affects the relations described in H1 to H3. Prior research suggests that the adoption of IFRS by European firms contributed to increase the quality of accounting numbers (Barth, Landsman and Lang, 2008). Recent studies by Garcia Osma and Pope (2010) and Landsman, Maydew and Thornock (2012), however, document that the increased quality in financial reporting is not homogenous across all adopting countries and is negatively related to the quality of a country's institutional setting. These studies conclude that the

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[14] Finally, in unreported tests, we also replicate the tests in Table 7 Panels A and B considering only the equity stakes of foreign *institutional* investors. That is, we drop foreign non-institutional investors from the set of explanatory variables. We do so because the stakes of foreign institutional and foreign non-institutional investors are positively correlated. The results are similar to those reported in Table 7.

institutional and market forces that shape preparers incentives continue to dominate the reporting habits, leading to unequal IFRS earnings quality effects. Consistent with this result, Daske et al. (2008) show that only firms from strong enforcement countries benefit from a reduction in cost of capital and a lower bid-ask spread upon the adoption of IFRS. This is consistent with the idea that the institutional framework and proper enforcement mechanisms are more important than the standards in shaping the financial reporting quality in a given country (Ball et al., 2003). Provided this evidence and the fact that for our sample firms reporting quality may be hit by this mandatory accounting switch in 2005, we investigate the IFRS effect in more detail.

In particular, we study whether our prior results hold before and after the adoption of IFRS in 2005. This additional test serves two goals. First, it is a robustness test to eliminate the possibility that our results would be affected by uncontrolled market-wide events that may impact the overall earnings quality. Second, prior research by Covrig et al. (2007), DeFond et al. (2011) and Florou and Pope (2012) shows that IFRS adoption, either voluntary or compulsory, leads to increases in foreign ownership. This analysis would help to appease concerns that our results can be an artifact from a contemporaneous increase in foreign ownership and accounting quality triggered, both, by IFRS adoption.

To study these issues, we split the sample into two subsamples: pre-adoption of IFRS (2002-2004) and post-adoption of IFRS (2006-2007), and re-estimate model (1b). We do not include 2005 in any of the sub-periods because 2005 is a transition year. Firms had to present information according both to IFRS and, for comparative purposes, with

local GAAP. This makes 2005 very particular, as managerial behaviour might be different than if reporting under local GAAP or IFRS alone.[15]

<div align="center">***INSERT TABLE 8 HERE***</div>

Table 8, Panel A, contains the results of estimating the model for the two sub-periods. Results when we use the Francis and Wang (2008) proxy (columns 1 and 2) show that the coefficient on the main variable of interest, (Δ*ForeignStrong*), is significantly positive and relatively stable in both the pre- and post-IFRS period. Pre-IFRS it is 0.1484 (p=0.068). Post-IFRS it is 0.1682 (p=0.017). The difference in the coefficients in the pre- and post-IFRS period is not significant at conventional levels (p=0.29).[16] The results are similar (columns 3 and 4) if we use a Jones-type abnormal accruals proxy for earnings quality. In Panel B we focus on institutional foreign shareholdings, and compare the effects of these foreign shareholders depending on their country of origin. When we use the Francis and Wang model (Columns 1 and 2), results show that foreign institutional investors from strong enforcement countries have an effect over financial reporting quality both before and after the implementation of IFRS (Δ*InstForeignStrong* is significant at conventional levels both before and after IFRS adoption). The difference of the effect of these foreign shareholders before and after IFRS adoption is not significant at conventional levels. We obtain qualitatively similar results when we use a Jones-type abnormal accruals proxy (Columns 3 and 4), although in this case the effect of Δ*InstForeignStrong* is not significant at conventional levels in the pre-IFRS period (p-value=0.123; see Column 3)

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[15] We obtain qualitatively identical results if we include 2005 in any of the sub-periods that we consider.

[16] We calculate the statistical significance of the difference in the coefficient before and after IFRS implementation as the difference between the estimated coefficient, divided by the squared root of the sum of the squared of the standard errors of the two coefficients. This approach has been used to compare whether the results of two samples differ in studies like Giner and Rees (2001) or García Lara et al. (2005), among others.

and only marginally significant at the 10% level in the post-IFRS period (*p*-value=0.096; see Column 4). Also here, the effect before and after IFRS is not different, as the coefficient on Δ*InstForeignStrong* is not significantly different before and after IFRS adoption. In the case of foreign institutional investors from other (i.e., less strong enforcement origin) countries, we find that their impact on financial reporting quality is insignificant, regardless of the earnings quality proxy that we use, and also in both periods, before and after the implementation of IFRSs. Finally, in Panel C, we compare whether the effect differ for institutional and non-institutional foreign investors conditional on their strong enforcement origin. The results show that the effect is more pronounced for institutional investors, regardless of the earnings management proxy used, and for the periods before and after IFRS implementation. Overall, these results are consistent with foreign shareholders from strong-enforcement countries (and especially institutional investors) playing a pivotal role in improving accounting quality both before and after IFRS adoption.

4.4. Additional Tests

4.4.1 Further Endogeneity Checks

Since the observed relations and the interpretations of our results greatly hinge upon a correct interpretation of the causality flows from foreign ownership compositions on ex post realized earnings quality, we pay further attention to the endogeneity issue that potentially affects our results. To further comfort the interpretation on causality flows from foreign ownership to improvements in earnings quality, we employ a two-stage Heckman (1979) selection model. In the first stage, we use a probit model to explain the likelihood of increases in strong enforcement origin foreign shareholdings (Δ*ForeignStrong*). The

explanatory variables include changes in closely-held ownership structure (*CLSHD*); firm size (Size); accounting performance (*Profitability*); Analyst Following (*NumAnal*); cross-listing status (*XList*); and difference in accounting standards (*Distance*). The motivation for these first-stage variables is warranted by findings in prior literature on the determinants of foreign shareholdings (e.g. Covrig et al., 2007; Bae et al., 2008; Leuz et al., 2009). We then obtain the fitted values from the probit regression and calculate the inverse Mills ratio (Heckman 1979). The inverse Mills ratio (IMR) is used as an additional explanatory variable in the regression of interest (stage 2) to correct for any remaining endogenous associations between foreign ownership changes and financial reporting quality.

INSERT TABLE 9 HERE

The first column of Table 9 reports coefficients and goodness of fit statistics on the first stage probit regression, while columns 2 and 3 report the results for the equation of interest, including the inverse of the Mills ratio as an additional explanatory variable. First, we find that the first-stage model explains close to 37 percent of the variability in *ForeignStrong* increases. Further, firm profitability ($p<0.05$) and especially analyst following ($p<0.01$) are associated with increases in foreign shareholdings. When interpreting the results of the second stage, we find very similar results as compared to the main analyses: Foreign shareholdings from strong institutional countries positively impact earnings quality while foreign shareholdings from other countries do not have such an effect. Results are significant (0.139; $p<0.01$), both for the Francis and Wang (2008)

performance-adjusted abnormal accruals proxy and for the Jones-type abnormal accruals proxy (0.127; $p<0.02$).[17]

Ideally, we should include in the first stage at least one explanatory variable that does not affect the dependent variable in the second stage. The only variable from the ones that we include that could fulfil this role is the distance between the accounting standards of the country of the foreign investors, and those of the country where they invest (*Distance*). *Distance* affects foreign investment (the lower the distance, the higher the foreign investments), but its effect over financial reporting quality is not clear, as Ball et al. (2003) and many others argue that the institutional environment is more important in determining the quality of accounting information, than the accounting standards themselves. However, we cannot completely rule out that *Distance* affects financial reporting quality. To avoid this shortcoming, we run an additional test and include two explanatory variables in the first stage for which we expect no effect on financial reporting quality but that are potentially related to foreign investments. Following the arguments in Grinblatt and Keloharju (2001) that foreign shareholdings are more likely if countries are culturally closer, we use two variables that capture how familiar foreign shareholders are with the culture of each of the four countries under study. These two variables are the number of nominations and the number of awards won by films of each country at the annual awards presented by the Academy of Motion Picture Arts and Sciences, popularly known as "Oscars". In particular, we focus on the best foreign language (non-English)

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[17] In an alternative test to tackle potentially remaining endogeneity concerns, we use an instrumental variable (IV) approach to estimate the impact of foreign shareholdings in a simultaneous-equation 2SLS.To create this instrumental variable, we take the residuals from a negative binomial model of *ForeignStrong$_t$* on all explanatory variables in the first-stage model as described above. Results (available upon request from the authors) are very similar to those reported in the paper.

movie award. The idea is that these proxies for how culturally close foreign investors are to a given country should be associated with their investments in these countries, following the arguments in Grinblatt and Keloharju (2001). At the same time, we do not have reasons to believe that financial reporting quality should be affected by the number of times a given country has been awarded with an Oscar (nomination) for the best foreign language firm. Therefore, these two variables fulfil the exclusion restriction requirements of the Heckman (1979) model. Results when we include those two additional explanatory variables in the first stage are qualitatively identical to the ones obtained in our main tests.

4.4.2. Alternative Country Rankings

An additional sensitivity analysis relates to the ranking of countries according to their institutional quality. In the tests that are reported in the paper, we use the 2007 ranking of countries based upon the 6 WGI indicators. Country scores on institutional quality however change over time (Kaufmann et al., 2009). We therefore rank the countries according to their 2002 institutional quality and results remain unaltered.

4.4.3. Other Robustness Tests

We replicate all our main tests dropping the year 2005 from the sample. We do so as firms implemented accounting changes in 2005 due to the shift from local standards to IFRS and these accounting reconciliations might unduly affect the measures of earnings quality for 2005. This might be problematic in the case of the proxies based in Francis and Wang (2008), as they use the firm in the prior year as benchmark. After dropping the 2005 observations from our sample, all results in the analyses as reported above hold and

inferences do not change, suggesting that our results do not suffer from the impact of an accounting regime switch.[18]

Finally, we analyze whether results also hold if we consider only US foreign investors. We do so since Aggarwal et al. (2011) suggest that U.S. investors are the ones that are better prepared to monitor foreign firms. For our sample, however, we do not find a significant result for foreign U.S. investors in isolation. Potential reasons for this are that the number of firms with U.S. investors is small (as shown in Table 3, more than half of the observations do not have U.S. shareholders and U.S. investors only hold relatively small proportions for the studied sample (on average <1 percent over the period under study), and their shareholdings are relatively stable over time.

5. CONCLUSIONS

We investigate whether foreign shareholders positively impact financial reporting quality in the firms in which they hold equity stakes and that are domiciled in countries with poor legal enforcement and hence a *de facto* weak institutional quality. To test our hypotheses, we trace domestic and foreign ownership evolutions for 265 public firms from 4 Southern European countries (Greece, Italy, Portugal and Spain) over 7 years. We expect that differences in the country of origin of the foreign shareholders will lead to differences in the quality of financial reporting, caused by differences in the monitoring that foreign shareholders may be able to perform.

We find that foreign shareholdings only impact financial reporting quality if the foreign shareholders are domiciled in high institutional quality countries. Moreover, the

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[18] Still, our main tests include year dummies that should capture this effect.

causal inferences suggesting an impact of foreign shareholders from countries with high quality institutions on the quality of the financial reports of the firms in which they participate are manifested in Granger (1969) causality tests and are robust to additional sensitivity checks. At the same time, we also find a stronger effect for institutional investors, consistent with the conjecture that institutional investors have superior monitoring abilities. Because we obtain similar results for the periods before and after the mandatory implementation of IFRS, we interpret this result as being consistent with the institutional environment and the presence of foreign ownership having a higher impact on ex post earnings quality than a country-wide mandatory switch to enhanced reporting standards.

Our study is one of the first that advances the understanding on how the origin of corporate ownership structures and evolutions affect the quality of accounting numbers in an international setting. Our results are important for various market participants and suggest that foreign investments from high to low institutional quality countries may result in higher financial reporting quality, which could eventually help firms to raise capital more easily or at better terms. A potential caveat of our research design is that we cannot directly observe the mechanisms through which foreign investors help in achieving this higher reporting quality. We leave this question open for future research.

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Table 1
Enforcement Quality Indicators

Country (Rank)	Voice and accountability	Political stability and absence of violence	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Greece (57)	0.96	0.49	0.64	0.87	0.80	0.26
Italy (62)	1.09	0.46	0.30	0.87	0.37	0.22
Portugal (35)	1.24	0.77	0.85	1.10	1.01	0.96
Spain (39)	1.10	-0.15	0.95	1.21	1.10	1.00
PIGS Average	**1.10**	**0.39**	**0.69**	**1.01**	**0.82**	**0.61**
EU 15	1.35	0.90	1.53	1.50	1.54	1.63
UK (15)	1.33	0.52	1.67	1.85	1.70	1.72
US (17)	1.09	0.23	1.58	1.50	1.60	1.29
OECD	1.30	0.96	1.59	1.49	1.50	1.65
BRICs Average	-0.44	-0.72	-0.04	-0.20	-0.45	-0.52

Table 1 presents the Worldwide Governance Indicators (WGI) for six broad dimensions of governance in 2007 as reported in Kaufman et al. (2009): (1) Voice and Accountability, (2) Political Stability and Absence of Violence, (3) Government Effectiveness, (4) Regulatory Quality, (5) Rule of Law, and (6) Control of Corruption, in Greece, Italy, Portugal and Spain. US, UK, OECD, EU 15 and BRICs (Brazil, Russia, India and China) are presented for comparative purpose. Between brackets we report the weighted institutional quality rank for individual countries (not for country groups). Ranks are to be interpreted as follows: a rank of 1 suggests the country ranks highest on the weighted WGI institutional quality score. There are 200 countries that enter the ranking procedure (Kaufman et al. 2009). The six dimensions of governance in the WGI are defined as followed (data definitions from Kaufman et al., 2009: (1) Voice and Accountability – measuring the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. (2) Political Stability and Absence of Violence – measuring perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism. (3) Government Effectiveness – measuring the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. (4) Regulatory Quality – measuring the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. (5) Rule of Law – measuring the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. (6) Control of Corruption – measuring the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The units in which governance is measured are standardized and lie between -2.5 and 2.5, with higher scores corresponding to better outcomes (Kaufman et al., 2009).

Table 2

Ownership by shareholder type (annual means)

Panel A: By country of origin (mean)							
Variable	ALL	2002	2003	2004	2005	2006	2007
ForeignStrong	**7.32**	**5.94**	**6.44**	**7.10**	**7.04**	**8.55**	**8.83**
UK	*1.97*	*1.72*	*1.74*	*1.79*	*1.75*	*2.25*	*2.56*
Netherlands	*1.73*	*1.56*	*1.56*	*1.72*	*1.72*	*1.98*	*1.84*
U.S.	*0.92*	*0.68*	*0.80*	*0.92*	*0.89*	*1.16*	*1.04*
Luxembourg	*0.74*	*0.54*	*0.64*	*0.72*	*0.72*	*0.86*	*0.98*
Switzerland	*0.69*	*0.54*	*0.60*	*0.73*	*0.73*	*0.80*	*0.75*
Germany	*0.48*	*0.35*	*0.39*	*0.43*	*0.43*	*0.58*	*0.72*
Belgium	*0.28*	*0.20*	*0.25*	*0.29*	*0.30*	*0.31*	*0.32*
Ireland	*0.20*	*0.13*	*0.19*	*0.19*	*0.19*	*0.24*	*0.24*
Denmark	*0.13*	*0.08*	*0.09*	*0.12*	*0.12*	*0.17*	*0.18*
Sweden	*0.07*	*0.07*	*0.10*	*0.09*	*0.09*	*0.04*	*0.04*
Norway	*0.05*	*0.03*	*0.03*	*0.04*	*0.04*	*0.07*	*0.07*
Canada	*0.04*	*0.02*	*0.03*	*0.04*	*0.04*	*0.04*	*0.04*
Australia	*0.02*	*0.01*	*0.01*	*0.01*	*0.01*	*0.03*	*0.02*
Austria	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.02*	*0.02*
ForeignOthers	**16.75**	**12.72**	**14.98**	**18.50**	**18.45**	**17.58**	**18.26**
France	*3.42*	*2.74*	*3.28*	*3.66*	*3.66*	*3.54*	*3.65*
Italy	*3.18*	*2.26*	*2.72*	*3.43*	*3.46*	*3.58*	*3.65*
Spain	*3.00*	*1.98*	*2.43*	*3.42*	*3.42*	*3.31*	*3.42*
Portugal	*1.56*	*1.48*	*1.51*	*1.57*	*1.65*	*1.49*	*1.64*
Cyprus	*1.01*	*0.25*	*0.88*	*1.23*	*1.23*	*1.25*	*1.24*
Japan	*0.97*	*0.75*	*0.75*	*1.32*	*1.34*	*0.82*	*0.82*
Mexico	*0.92*	*0.88*	*0.88*	*0.89*	*0.92*	*0.99*	*0.98*
Greece	*0.91*	*0.87*	*0.88*	*0.89*	*0.93*	*0.93*	*0.93*
Brazil	*0.84*	*0.61*	*0.63*	*0.96*	*0.96*	*0.92*	*0.95*
Libya	*0.17*	*0.21*	*0.22*	*0.22*	*0.06*	*0.06*	*0.22*
Peru	*0.11*	*0.21*	*0.21*	*0.21*	*0*	*0*	*0*
Romania	*0.10*	*0.13*	*0.11*	*0.18*	*0.18*	*0*	*0*
Monaco	*0.09*	*0.08*	*0.12*	*0.12*	*0.08*	*0.07*	*0.05*
Bermuda	*0.05*	*0*	*0*	*0.01*	*0.08*	*0.09*	*0.09*
United Arab Emirates	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Cayman Islands	*0.04*	*0.03*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
South Africa	*0.04*	*0*	*0.03*	*0.05*	*0.05*	*0.05*	*0.05*
British Virgin Islands	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0*	*0.02*
Togo	*0.02*	*0*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*
Andorra	*0.02*	*0*	*0*	*0*	*0.03*	*0.03*	*0.03*
Thailand	*0.02*	*0*	*0*	*0*	*0.03*	*0.03*	*0.03*
Kuwait	*0.01*	*0*	*0.01*	*0.01*	*0.01*	*0.02*	*0.02*
Gibraltar	*0.01*	*0*	*0*	*0*	*0*	*0.03*	*0.03*
Singapore	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0*
Hungary	*0.01*	*0*	*0*	*0*	*0*	*0.02*	*0.03*
China	*0.01*	*0*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Hong Kong	*0.01*	*0.01*	*0.01*	*0.01*	*0*	*0*	*0.01*
Mauritius	*0.01*	*0.01*	*0.01*	*0.01*	*0*	*0*	*0.01*
Argentina	*0.01*	*0*	*0*	*0*	*0.03*	*0*	*0*
Israel	*0.01*	*0*	*0*	*0*	*0.01*	*0.01*	*0.01*
Others	*0.19*	*0.15*	*0.16*	*0.17*	*0.18*	*0.22*	*0.27*
ForeignAll	**24.07**	**18.66**	**21.42**	**25.60**	**25.49**	**26.13**	**27.09**

Panel B: Institutional investors by country of origin (mean)							
Variable	ALL	2002	2003	2004	2005	2006	2007
InstForeignStrong	**1.73**	**1.61**	**1.73**	**1.59**	**1.39**	**2.02**	**2.00**
UK	*0.64*	*0.59*	*0.64*	*0.59*	*0.51*	*0.69*	*0.71*
Netherlands	*0.56*	*0.53*	*0.56*	*0.53*	*0.50*	*0.61*	*0.63*
U.S.	*0.19*	*0.18*	*0.19*	*0.16*	*0.10*	*0.28*	*0.28*
Luxembourg	*0.12*	*0.11*	*0.12*	*0.11*	*0.09*	*0.15*	*0.15*
Switzerland	*0.09*	*0.08*	*0.09*	*0.08*	*0.08*	*0.10*	*0.10*
Germany	*0.06*	*0.05*	*0.06*	*0.05*	*0.04*	*0.08*	*0.08*
Belgium	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.04*	*0.04*
Ireland	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.02*	*0.02*
Denmark	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.02*	*0.02*
Sweden	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Norway	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Canada	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Australia	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Austria	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
InstForeignOthers	**0.14**	**0.07**	**0.02**	**0.02**	**0.23**	**0.17**	**0.34**
InstForeingAll	**1.87**	**1.68**	**1.75**	**1.61**	**1.62**	**2.19**	**2.34**
InstDomestic	**3.51**	**3.59**	**3.76**	**4.29**	**3.54**	**3.15**	**2.94**

Table 2 presents the mean ownership proportion by different shareholder groups during 2002-2007. Panel A presents the evolution of mean ownership, in percentages in the total sample. Panel B presents the development of mean institutional ownership in the total sample. *ForeignStrong* is the equity stake (%) owned by investors from countries classified as high institutional quality countries. *ForeignOthers* is the equity stake (%) owned by investors from countries not classified as high institutional quality countries. *InstForeignStrong* is the equity stake (%) owned by institutional investors from high institutional quality countries. *InstForeignOthers* is the equity stake (%) owned by institutional investors from countries not classified as high institutional quality countries. *InstDomestic* is the equity stake (%) owned by domestic institutional investors. *ForeignAll* is the equity stake (%) owned by investors from all countries. *InstForeignAll* is the equity stake (%) owned by institutional investors from all countries.

Table 3

Descriptive statistics

Panel A: Full Sample

Variable	Mean	Std Dev	Min	25%	Median	75%	Max
ForeignStrong	7.32	14.04	0	0	0	7.48	97.00
UK	*1.97*	*18.08*	*0*	*0*	*0*	*4.64*	*79.17*
Netherlands	*1.73*	*35.31*	*0*	*0*	*0*	*0*	*97.00*
U.S.	*0.92*	*6.09*	*0*	*0*	*0*	*2.3*	*49.90*
Luxembourg	*0.74*	*17.10*	*0*	*0*	*0*	*9.4*	*95.68*
Switzerland	*0.69*	*2.064*	*0*	*0*	*0*	*3.09*	*72.00*
ForeignOthers	16.75	23.86	0	0	4.87	24.70	96.90
ForeignAll	24.07	25.45	0	2.00	14.30	41.18	97.00
InstForeignStrong	1.73	5.42	0	0	0	0	53.59
InstForeignOthers	0.14	1.54	0	0	0	0	33.34
InstDomestic	3.51	10.56	0	0	0	0.20	82.79
CLSHD	51.48	23.33	0	36.68	55.39	67.74	100
EQ_{FW}	-0.03	0.03	-1.80	-0.12	-0.04	-0.01	0
EQ_{JONES}	-0.03	0.08	-1.40	-0.04	-0.01	-0.01	0
$EQ_{FLOOKING}$	-0.11	0.05	-2.01	-0.19	-0.07	-0.01	0
EQ_{BS}	-0.09	0.06	-1.98	-0.16	-0.05	-0.01	0
Size	19.37	2.15	10.62	18.39	19.36	20.45	25.41
Lev	0.16	0.14	0.00	0.03	0.13	0.25	0.71
Profitability(raw)	12.10	25.72	-0.11	-0.03	0.05	16.52	85.5
NegEPS	0.14	0.35	0	0	0	0	1
Xlist	0.20	0.40	0	0	0	0	1
NumAnal	5.80	7.78	0	0	2	8	40
MAD	0.48	0.50	0	0	0	1	1
TDP	0.11	0.31	0	0	0	0	1

Panel B: By country of origin (means)

Variable	Greece	Italy	Portugal	Spain
Number of firms	62	102	33	68
ForeignStrong	5.34	8.25	4.44	9.16
ForeignOthers	31.77	16.09	9.08	7.52
ForeignAll	37.11	24.34	13.52	16.68
InstForeignStrong	2.00	1.09	0.42	3.05
InstForeignOthers	0.28	0.09	0.29	0.03
InstDomestic	0.22	4.36	6.93	3.67
CLSHD	54.94	50.32	61.72	45.11
EQ_{FW}	-0.05	-0.03	-0.02	-0.03
EQ_{JONES}	-0.06	-0.03	-0.02	-0.01
$EQ_{FLOOKING}$	-0.16	-0.12	-0.08	-0.08
EQ_{BS}	-0.13	-0.09	-0.06	-0.07
Size	18.26	19.63	17.64	20.83
Lev	0.17	0.12	0.22	0.19
Profitability(frank)	51.72	50.39	51.23	50.37
NegEPS	0.07	0.24	0.20	0.06
Xlist	0.14	0.23	0.27	0.18
NumAnal	3.54	4.46	4.60	10.44
MAD	0.5	0.5	0.36	0.5
TDP	0.17	0	0.18	0.16

Table 3 presents the descriptive statistics of the dependent and independent variables. Panel A reports detailed statistics for the full sample and Panel B reports means by country. *ForeignStrong* is the equity stake (%) owned by investors from countries classified as countries with high institutional quality. *ForeignOthers* is the equity stake (%) owned by investors from countries not classified as countries with high institutional quality. *ForeignAll* is the equity stake (%) owned by investors from all countries. *InstForeignStrong* is the equity stake (%) owned by institutional investors from countries classified as high institutional quality countries. *InstForeignOthers* is the equity stake (%) owned by institutional investors from countries not classified as high institutional quality countries. *InstDomestic* is the equity stake (%) owned by domestic institutional investors. *CLSHD* is the proportion of closely held shares and in the inverse of a firm's free float and proxies for the proportion on non-investable shares (Leuz et al., 2008). EQ_{FW} is calculated as the absolute value of the residuals from a regression of abnormal accruals as in Francis and Wang (2008) on firm-level profitability, multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{JONES} is calculated as the absolute value of the residuals of the performance-adjusted Modified Jones accruals model, as proposed by Kothari et al. (2005) and applied to total accruals and further multiplied by minus one so that larger values correspond to higher earnings quality. $EQ_{FLOOKING}$ is the forward looking measure of abnormal accruals as in Dechow et al. (2003), multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{BS} is the measure of abnormal accruals in Ball and Shivakumar (2006), which controls for conditional conservatism. It is multiplied by minus one so that larger values correspond to higher earnings quality. *Size* is the natural logarithm of total assets. *Lev* is measured as the ratio of long term debt to total assets. *Profitability(raw)* is the raw value of return on assets (panel A) and *Profitability(frank)* is the fractional rank of the return on assets variable (Panel B). *NegEPS* is a dummy variable taking the value of 1 if the firm experienced negative earnings in the previous year, and 0 otherwise. *Xlist* is a dummy variable taking the value of 1 if the firm has ADRs listed in the U.S., and 0 otherwise. *NumAnal* is the number of analyst following of the firm. *MAD*: Market Abuse Directive (Christensen, Hail and Leuz, 2017). *TPD*: Transparency Directive (Christensen, Hail and Leuz, 2017).

Table 4
Pairwise correlations

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) EQ_{FW}	1																
(2) EQ_{JONES}	**0.35**	1															
(3) $EQ_{FLOOKING}$	**0.30**	**0.79**	1														
(4) EQ_{BS}	**0.24**	**0.75**	**0.92**	1													
(5) ForeignAll	-0.03	-0.02	-0.02	-0.03	1												
(6) ForeignStrong	**0.04**	**0.04**	**0.03**	**0.03**	**0.38**	1											
(7) ForeignOthers	-0.03	-0.04	-0.03	-0.03	**0.84**	**-0.17**	1										
(8) InstForeignStrong	**0.04**	0.00	0.01	0.01	**0.11**	**0.28**	**-0.05**	1									
(9) InstForeignOthers	**0.03**	**0.05**	**0.04**	**0.04**	**0.06**	**-0.06**	**-0.12**	**-0.10**	1								
(10) InstDomestic	0.00	-0.00	-0.00	-0.00	-0.00	0.00	**0.06**	-0.03	**-0.04**	1							
(11) CLSHD	0.03	0.02	0.02	0.02	0.02	**-0.05**	**0.04**	**-0.04**	0.03	0.03	1						
(12) Size	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**-0.16**	**0.08**	**0.07**	-0.02	**-0.10**	1					
(13) Lev	0.04	**0.05**	**0.05**	**0.05**	**0.05**	-0.03	**-0.06**	0.00	0.03	-0.02	**0.05**	**0.15**	1				
(14) Profitability	0.00	0.03	0.02	0.02	0.00	**0.05**	-0.02	**0.08**	0.04	-0.00	**0.10**	**0.24**	0.03	1			
(15) NegEPS	**-0.03**	-0.04	-0.03	-0.03	-0.02	**-0.08**	0.02	-0.04	0.01	0.00	**-0.10**	**-0.14**	**-0.11**	**-0.54**	1		
(16) Xlist	-0.01	-0.02	-0.02	-0.02	-0.03	0.00	**-0.05**	-0.03	0.00	**0.09**	-0.05	**0.13**	**0.11**	0.03	0.01	1	
(17) NumAnal	**0.04**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**-0.12**	**0.08**	**0.07**	-0.00	**-0.23**	**0.46**	**0.25**	**0.47**	**-0.21**	**0.15**	1

Correlations in bold are significant at the 5% level or less. EQ_{FW} is calculated as the absolute value of the residuals from a regression of abnormal accruals as in Francis and Wang (2008) on firm-level profitability, multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{JONES} is calculated as the absolute value of the residuals of the performance-adjusted Modified Jones accruals model, as proposed by Kothari et al. (2005) and applied to total accruals and further multiplied by minus one so that larger values correspond to higher earnings quality. $EQ_{FLOOKING}$ is the forward looking measure of abnormal accruals as in Dechow et al. (2003), multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{BS} is the measure of abnormal accruals in Ball and Shivakumar (2006), which controls for conditional conservatism. It is multiplied by minus one so that larger values correspond to higher earnings quality. *ForeignAll* is the equity stake (%) owned by investors from all countries. *ForeignStrong* is the equity stake (%) owned by investors from countries classified as countries with high institutional quality. *ForeignOthers* is the equity stake (%) owned by investors from countries not classified as high institutional quality countries. *InstForeignStrong* is the equity stake (%) owned by institutional investors from countries classified as high institutional quality countries. *InstForeignOthers* is the equity stake (%) owned by institutional investors from countries not classified as high institutional quality countries. *InstDomestic* is the equity stake (%) owned by domestic institutional investors. *CLSHD* is the proportion of closely held shares and in the inverse of a firm's free float and proxies for the proportion on non-investable shares (Leuz et al., 2008). *Size* is the natural logarithm of total assets. *Lev* is measured as the ratio of long term debt to total assets. *Profitability* is the return on assets fractional rank. *NegEPS* is a dummy variable taking the value of 1 if the firm experienced negative earnings in the previous year, and 0 otherwise. *Xlist* is a dummy variable taking the value of 1 if the firm has ADRs listed in the U.S., and 0 otherwise. *NumAnal* is the number of analyst following of the firm.

Table 5

Regression of Changes in Earnings Quality on Changes in Foreign Ownership

Variable	Expected sign	Column 1 $\Delta(EQ_{FW})$ Coef. (p-value)	Column 2 $\Delta(EQ_{FW})$ Coef. (p-value)	Column 3 $\Delta(EQ_{JONES})$ Coef. (p-value)	Column 4 $\Delta(EQ_{FLOOKING})$ Coef. (p-value)	Column 5 $\Delta(EQ_{BS})$ Coef. (p-value)
ΔForeignAll	+	0.0937 (0.120)				
ΔForeignStrong	+		0.1179 (0.030)	0.1626 (0.007)	0.1307 (0.011)	0.1198 (0.015)
ΔForeignOther	0		-0.0013 (0.689)	0.0001 (0.641)	0.0006 (0.893)	0.0005 (0.903)
ΔCLSHD		0.0327 (0.395)	0.0371 (0.412)	0.1766 (0.150)	0.1031 (0.301)	0.1029 (0.303)
BS Bloat		0.0629 (0.490)	0.0644 (0.483)	0.1458 (0.027)		
CONS		0.1402 (0.081)	0.1356 (0.077)	0.2084 (0.035)		
ΔSize		0.1732 (0.000)	0.1751 (0.000)	0.0566 (0.364)	0.0392 (0.434)	0.0403 (0.489)
ΔLev		0.0073 (0.763)	0.0077 (0.771)	0.0210 (0.412)	0.0311 (0.131)	0.0315 (0.138)
ΔProfitability		-0.0138 (0.821)	-0.0134 (0.834)	-0.0513 (0.167)	-0.0452 (0.202)	-0.0449 (0.201)
ΔNumAnal		0.0012 (0.793)	0.0010 (0.875)	0.0039 (0.217)	0.0021 (0.400)	0.0021 (0.399)
Xlist		0.0698 (0.378)	0.0729 (0.400)	0.0781 (0.290)	0.0913 (0.124)	0.0927 (0.147)
NegEPS		-0.2104 (0.053)	-0.1974 (0.061)	-0.1626 (0.093)	-0.1443 (0.018)	-0.1456 (0.021)
MAD		0.5345 (0.043)	0.5609 (0.038)	0.2830 (0.431)	0.2799 (0.129)	0.2834 (0.113)
TPD		0.0858 (0.598)	0.0835 (0.619)	0.1612 (0.637)	0.1820 (0.192)	0.1821 (0.189)
Control year, country & industry		Yes	Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes	Yes
Cons		0.5834 (0.038)	0.6747 (0.026)	0.3144 (0.327)	0.1620 (0.423)	0.1927 (0.524)
Adj-R^2		0.0583	0.0600	0.0504	0.0287	0.0284

EQ_{FW} is calculated as the absolute value of the residuals from a regression of abnormal accruals as in Francis and Wang (2008) on firm-level profitability, multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{JONES} is calculated as the absolute value of the residuals of the performance-adjusted Modified Jones accruals model, as proposed by Kothari et al. (2005) and applied to total accruals and further multiplied by minus one so that larger values correspond to higher earnings quality. $EQ_{FLOOKING}$ is the forward looking measure of abnormal accruals as in Dechow et al. (2003), multiplied by minus one so that larger values correspond to higher earnings quality. EQ_{BS} is the measure of abnormal accruals in Ball and Shivakumar (2006), which controls for conditional conservatism. It is multiplied by minus one so that larger values correspond to higher earnings quality. ForeignAll is the equity stake (%) owned by investors

from all countries. *ForeignStrong* is the equity stake (%) owned by investors from countries classified as countries with high institutional quality. *ForeignOthers* is the equity stake (%) owned by investors from countries not classified as high institutional quality countries. *CLSHD* is the proportion of closely held shares and in the inverse of a firm's free float and proxies for the proportion on non-investable shares (Leuz et al., 2008). *BS Bloat* is a dummy variable that equals one if the net operating assets (i.e., shareholders' equity less cash and marketable securities and plus total debt) at the beginning of the year divided by lagged sales is above the industry-year median, and zero otherwise. *CONS* is a country-year measure of conditional conservatism estimated using the model based on accruals and cash flows proposed by Ball and Shivakumar (2005). *Size* is the natural logarithm of total assets. *Lev* is measured as the ratio of long term debt to total assets. *Profitability* is the return on assets fractional rank. *NumAnal* is the number of analyst following of the firm. *Xlist* is a dummy variable taking the value of 1 if the firm has ADRs listed in the U.S., and 0 otherwise. *NegEPS* is a dummy variable taking the value of 1 if the firm experienced negative earnings in the previous year, and 0 otherwise. *MAD*: Market Abuse Directive (Christensen, Hail and Leuz, 2017). *TPD*: Transparency Directive (Christensen, Hail and Leuz, 2017).

Table 6
Granger causality test

Variable		Column 1 $\Delta(EQ_{FW})$ Coef. (p-value)	Column 2 $\Delta ForeignStrong$ Coef. (p-value)	Column 3 $\Delta(EQ_{BS})$ Coef. (p-value)	Column 4 $\Delta ForeignStrong$ Coef. (p-value)
$\Delta ForeignStrong_{t-1}$	β_1	0.2400 (0.000)	-0.1958 (0.013)	0.0482 (0.398)	-0.1945 (0.013)
$\Delta ForeignStrong_{t-2}$	β_2	0.0784 (0.108)	-0.1498 (0.003)	0.1237 (0.005)	-0.1625 (0.000)
ΔEQ_{t-1}	β_3	0.1693 (0.000)	-0.0173 (0.512)	0.2156 (0.000)	0.0004 (0.852)
ΔEQ_{t-2}	β_4	0.0309 (0.252)	0.0166 (0.594)	0.0238 (0.089)	0.0093 (0.683)
$\Delta ForeignOthers$		0.0049 (0.280)	-0.0224 (0.001)	0.0046 (0.523)	-0.0128 (0.026)
Controls		Yes	Yes	Yes	Yes
Control year, country & industry		Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes
Cons		-0.5428 (0.256)	0.8607 (0.109)	-0.5032 (0.084)	0.2316 (0.532)
Adj-R^2		0.2181	0.0871	0.1319	0.0558
p-value β_1=0, β_2=0		0.0000		0.0236	
p-value $\beta_1 + \beta_2$=0		0.0002		0.0474	
p-value β_3=0, β_4=0			0.5908		0.8312
p-value $\beta_3 + \beta_4$=0			0.9870		0.7085

All variables are calculated as in Table 6

Table 7
Institutional vs. Non-Institutional Foreign Shareholders

Panel A: Earnings quality and the role of Institutional and Non-Institutional Foreign Shareholders

Variable	Expected sign	Column 1 $\Delta(EQ_{FW})$ Coef. (p-value)	Column 2 $\Delta(EQ_{JONES})$ Coef. (p-value)	Column 3 $\Delta(EQ_{FLOOKING})$ Coef. (p-value)	Column 4 $\Delta(EQ_{BS})$ Coef. (p-value)
ΔInstForeignStrong	+	0.2539 (0.000)	0.2818 (0.000)	0.2226 (0.000)	0.1829 (0.002)
ΔNonInstForeignStrong	+	0.1198 (0.023)	0.1643 (0.004)	0.1341 (0.007)	0.1222 (0.011)
ΔCLSHD		0.0369 (0.680)	0.1743 (0.138)	0.1001 (0.342)	0.1012 (0.339)
BS Bloat		0.0625 (0.483)	0.1469 (0.023)		
CONS		0.1400 (0.068)	0.2129 (0.027)		
ΔSize	+	0.1701 (0.000)	0.0616 (0.304)	0.0418 (0.438)	0.0418 (0.439)
ΔLev	+	0.0032 (0.898)	0.0243 (0.351)	0.0331 (0.118)	0.0330 (0.119)
ΔProfitability	-	-0.0101 (0.873)	-0.0538 (0.167)	-0.0469 (0.183)	-0.0473 (0.154)
NegEPS	-	-0.1946 (0.064)	-0.1321 (0.674)	-0.1417 (0.021)	-0.1417 (0.021)
Xlist	+	0.0753 (0.370)	0.0801 (0.273)	0.0991 (0.111)	0.0991 (0.111)
ΔNumAnal	+	0.0009 (0.894)	0.0036 (0.211)	0.0025 (0.352)	0.0026 (0.296)
MAD	+	0.5539 (0.035)	0.2729 (0.152)	0.2922 (0.114)	0.2932 (0.114)
TPD	+	0.0963 (0.543)	0.1479 (0.301)	0.1800 (0.191)	0.1763 (0.194)
Control year, country & industry		Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes
Cons		0.6478 (0.023)	0.2846 (0.428)	0.1598 (0.459)	0.1842 (0.498)
Adj-R^2		0.0744	0.0580	0.0328	0.0327
P-value β_1-β_2 >0		0.0000	0.0000	0.0177	0.0343

Panel B: Granger test on the relation of earnings quality and the role of Institutional and Non-Institutional Foreign Shareholders

Variable		Column 1 Δ(EQ_FW) Coef. (p-value)	Column 2 ΔInstForeignStrong Coef. (p-value)	Column 3 Δ(EQ_BS) Coef. (p-value)	Column 4 Δ InstForeignStrong Coef. (p-value)
ΔInstForeignStrong $_{t-1}$	$β_1$	0.3548 (0.000)	-0.6729 (0.000)	-0.0216 (0.814)	-0.6846 (0.000)
ΔInstForeignStrong $_{t-2}$	$β_2$	0.0799 (0.416)	-0.3474 (0.000)	-0.0201 (0.751)	-0.3875 (0.000)
ΔNonInstForeignStrong $_{t-1}$		0.1593 (0.000)	0.0469 (0.013)	0.0699 (0.149)	0.0505 (0.005)
ΔNonInstForeignStrong $_{t-2}$		-0.0462 (0.347)	-0.0320 (0.123)	0.0564 (0.201)	0.0406 (0.006)
ΔEQ $_{t-1}$	$β_3$	0.1773 (0.000)	0.0149 (0.232)	0.1944 (0.000)	0.0210 (0.189)
ΔEQ $_{t-2}$	$β_4$	0.0808 (0.563)	0.0090 (0.610)	0.0581 (0.082)	-0.0093 (0.812)
Controls		Yes	Yes	Yes	Yes
Control year, country & industry		Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes
Cons		0.3900 (0.437)	0.0310 (0.990)	0.6358 (0.212)	0.1021 (0.593)
Adj-R^2		0.1987	0.3698	0.1411	0.3706
p-value $β_1$=0, $β_2$=0		0.0000		0.9585	
p-value $β_1$ + $β_2$=0		0.0110		0.7829	
p-value $β_3$=0, $β_4$=0			0.4518		0.2820
p-value $β_3$ + $β_4$=0			0.3831		0.2599

All variables are defined as in the previous tables. *InstForeignStrong* is the equity stake (%) owned by institutional investors from countries classified as high institutional quality countries. *NonInstForeignStrong* is the equity stake (%) owned by non-institutional investors from countries classified as high institutional quality countries.

Table 8
IFRS Tests

Panel A: Effects of Foreign Shareholders on Earnings Quality before and after IFRS adoption

		Column 1	Column 2	Column 3	Column 4
		$\Delta(EQ_{FW})$		$\Delta(EQ_{BS})$	
		Pre-IFRS	Post-IFRS	Pre-IFRS	Post-IFRS
Variable	Expected sign	Coef. (p-value)	Coef. (p-value)	Coef. (p-value)	Coef. (p-value)
ΔForeignStrong (β_1)	+	0.1484 (0.068)	0.1682 (0.017)	0.1945 (0.023)	0.1167 (0.012)
ΔForeignOthers	0	0.0006 (0.922)	0.0010 (0.840)	0.0064 (0.284)	-0.0032 (0.438)
Controls		Yes	Yes	Yes	Yes
Control country & industry		Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes
Cons		0.1374 (0.433)	0.4852 (0.024)	0.3146 (0.000)	-0.5932 (0.054)
Adj-R^2		0.0393	0.0637	0.0550	0.0170
N		795	530	795	530
p-value $\beta_{1,PRE\text{-}IFRS}$= $\beta_{1,POST\text{-}IFRS}$		0.29		0.73	

Panel B: Effects of Institutional Foreign Shareholders on Earnings Quality before and after IFRS adoption

		Column 1	Column 2	Column 3	Column 4
		$\Delta(EQ_{FW})$		$\Delta(EQ_{BS})$	
		Pre-IFRS	*Post-IFRS*	*Pre-IFRS*	*Post-IFRS*
Variable	Expected sign	Coef. *(p-value)*	Coef. *(p-value)*	Coef. *(p-value)*	Coef. *(p-value)*
ΔInstForeignStrong *(β_1)*	+	0.1490 *(0.000)*	0.1382 *(0.062)*	0.1325 *(0.123)*	0.0903 *(0.096)*
ΔInstForeignOthers	?	-0.1187 *(0.649)*	0.0344 *(0.731)*	-0.0428 *(0.732)*	0.0434 *(0.693)*
Controls		Yes	Yes	Yes	Yes
Control country & industry		Yes	Yes	Yes	Yes
Cluster firm & year		Yes	Yes	Yes	Yes
Cons		0.1878 *(0.274)*	0.4741 *(0.035)*	0.4382 *(0.000)*	-0.3984 *(0.095)*
Adj-R^2		0.0287	0.0528	0.0350	0.0022
N		795	530	795	530
p-value $\beta_{1,PRE-IFRS}= \beta_{1,POST-IFRS}$		0.86		0.48	

Panel C: Effects of Institutional and Non-Institutional Foreign Shareholders on Earning Quality before and after IFRS adoption

Variable	Expected sign	Column 1	Column 2	Column 3	Column 4
		$\Delta(EQ_{FW})$		$\Delta(EQ_{BS})$	
		Pre-IFRS	Post-IFRS	Pre-IFRS	Post-IFRS
		Coef. (p-value)	Coef. (p-value)	Coef. (p-value)	Coef. (p-value)
ΔInstForeignStrong (β_1)	+	0.2897 (0.025)	0.2656 (0.010)	0.3216 (0.000)	0.2972 (0.002)
ΔNonInstForeignStrong	+	0.1795 (0.041)	0.1613 (0.006)	0.1497 (0.037)	0.1580 (0.026)
Controls		Yes	Yes	Yes	Yes
Control country&industry		Yes	Yes	Yes	Yes
Cluster firm&year		Yes	Yes	Yes	Yes
Cons		0.2888 (0.000)	0.0450 (0.554)	0.2159 (0.005)	0.1415 (0.243)
Adj-R^2		0.0565	0.0239	0.0606	0.0595
N		795	530	795	530
p-value $\beta_{1,PRE\text{-}IFRS}= \beta_{1,POST\text{-}IFRS}$		0.30		0.33	
P-value β_1-β_2 >0		0.0000	0.0000	0.0000	0.0000

All variables are defined as in the previous tables. We calculate the statistical significance of the difference in the coefficient before and after IFRS implementation as the difference between the estimated coefficient, divided by the squared root of the sum of the squared of the standard errors of the two coefficients.

Table 9

Two-stage Heckman (1979) Analysis of Changes in Earnings Quality on Changes in Foreign Ownership

	Column 1	Column 2	Column 3
Variable	Stage 1 results	$\Delta(EQ_{FW})$	$\Delta(EQ_{BS})$
Variable		Coef. *(p-value)*	Coef. *(p-value)*
ΔForeignStrong	/	0.1167 *(0.000)*	0.1217 *(0.018)*
ΔForeignOthers	/	0.0001 *(0.970)*	0.0002 *(0.952)*
ΔCLSHD	0.0010 *(0.439)*	0.0359 *(0.474)*	0.1086 *(0.319)*
BS Bloat		-0.0661 *(0.514)*	
CONS		-0.1324 *(0.075)*	
ΔSize	0.0027 *(0.893)*	0.2089 *(0.000)*	0.0374 *(0.523)*
ΔProfitability	0.0050 *(0.014)*	-0.0036 *(0.469)*	-0.0402 *(0.423)*
ΔNumAnal	0.0398 *(0.000)*	0.0199 *(0.175)*	0.0128 *(0.039)*
Xlist	-0.0399 *(0.721)*	0.0417 *(0.657)*	0.0493 *(0.385)*
Distance	-0.0590 *(0.129)*		
ΔLev		0.0114 *(0.721)*	0.0368 *(0.115)*
NegEPS		-0.0592 *(0.436)*	-0.0630 *(0.492)*
MAD		0.4158 *(0.108)*	0.2712 *(0.180)*
TPD		0.0036 *(0.939)*	0.1890 *(0.191)*
Inverse Mills-Ratio		0.4739 *(0.084)*	0.4329 *(0.085)*
Control year, country & industry		Yes/Yes/Yes	Yes/Yes/Yes
Cluster firm & year		Yes	Yes
Cons		0.6659 *(0.324)*	0.6312 *(0.403)*
Pseudo R2/Adj. R^2	0.3665	0.0618	0.0298

Table 9 reports results of a two-stage selection model as per Heckman (1979). In a first stage, the likelihood of having positive ΔForeignStrong is modeled in a probit framework on a number of firm characteristics that potentially affect foreign ownership increases. In a second stage, we re-estimate the initial regressions of interest, but additionally include the inverse Mills ratios as an additional control to correct for the potential endogeneity in the model of interest. All other variables are defined in the main models as in Table 5 and onwards, except for Distance which equals the distance in accounting standards pre-IFRS and is based upon the classification in Bae et al. (2008).