The Influence of Home Country Institutions and Monitoring Mechanisms on Reporting Quality in Foreign Initial Public Offerings in the U.S.

Igor Filatotchev
Cass Business School
City University London, and
Vienna University of Economics and Business, Austria
106 Bunhill Row, London EC1Y 8TZ, UK
Tel: +44(0)20 7040 5278
Fax: +44(0)20 7040 8328
Email: Igor.Filatotchev@city.ac.uk

Jonathan Jona
Cass Business School
City University London, and
106 Bunhill Row, London EC1Y 8TZ, UK
Tel: +44(0)20 7040 8208
Email: jonathan.jona.1@cass.city.ac.uk

Gilad Livne*
Cass Business School
City University London, and
106 Bunhill Row, London EC1Y 8TZ, UK
Tel: +44(0)20 7040 5192
Fax: +44(0)20 7040 8328
Email: g.livne@city.ac.uk

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* Corresponding author. We would like to thank seminar participants at Griffith University and University of Melbourne.

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Abstract

Prior literature has argued that listing in the U.S. commits Initial Public Offerings (IPOs) by foreign firms to stricter corporate governance and reporting standards. This literature implies that as a consequence of this "bonding" to superior legal institutions and stricter regulation in the US (1) earnings management of foreign IPOs should be similar to that of U.S. firms and (2) it is unrelated to the strength of the IPO firm's home legal institutions. In contrast to these predictions, we find evidence indicating higher level of earnings management in foreign IPOs in the U.S than mature U.S firms. We further find evidence of more extreme reporting (large positive or negative abnormal accruals) in IPOs from countries with strong home legal institutions. We expand the analysis to examine whether the role of internal and external monitoring mechanisms is differently related to earnings management depending on the strength of the firm's home legal institutions. We find that board independence (an internal monitoring mechanism) reduces abnormal accruals in IPOs from countries with weak home institutions, but that auditor quality (an external mechanism) is positively related to extreme reporting in IPOs from countries with strong home institutions. Additional findings indicate that the threat of litigation does not constrain earnings management in IPOs from countries with weak home institutions. The results suggest that earnings management and its monitoring are related to the strength of the firm's home legal institutions. More generally, the results indicate that U.S. listing does not render home institutions irrelevant for reporting quality or that the force of SEC regulation over-rides home country effects.

1. Introduction

Corporate governance researchers have long argued that by improving transparency and quality of reporting firms can enforce governance constraints on managerial discretion and opportunism. It has been further argued that requiring high-quality reporting can be harnessed to mitigate agency problems that cannot be done in other ways (Stulz, 2009). Prior research in management and corporate finance fields indicates, however, that the ability to manipulate accounting numbers by managers may be influenced by economic, legal and political institutions. The strength of these institutions varies from country to country and hence the quality of earnings varies around the world (Ball et al., 2008; Leuz et al., 2003; Burgstahler et al., 2006; Ball and Shivakumar, 2005; Bushman and Piotroski, 2006; Boulton et al., 2011). Since some countries offer stronger investor protection, stricter securities laws and reporting requirements, firms may signal to investors their efforts to improve accounting quality and mitigate potential agency problems by committing to a reporting environment that features high-quality accounting standard and strong governance regulation and enforcement mechanisms.

More specifically, extant research argues that by issuing securities in the U.S. foreign firms send strong signals about their commitment to high governance standards. Coffee (2002) has suggested a "bonding hypotheses" according to which this commitment allows foreign companies to detach themselves from the negative effects of weak home country institutions and become isomorphic to the U.S. firms. Coffee (2007) and Stulz (2009) further argue that U.S. cross listing makes it more difficult and costly for insiders to extract private control benefits and to expropriate outside investors compared to their home countries owing to U.S. disclosure rules and the strength of the legal environment. Recent corporate governance literature also indicates that relatively high investor protection in the U.S. reduces the consumption of private benefits of control (Reese and Weisbach, 2002; Doidge, 2004;

Doidge et al., 2004). In other words, "bonding" to a higher national standard of legal institutions may provide a universal solution to firm-level governance problems, especially in firms located in counties with weak corporate governance regimes (Bell, et al. , 2012). However, Lang et al. (2006) provide evidence suggesting that U.S. regulation is not a perfect substitute for home country effects with respect to reporting quality in mature ADR firms. This may be the case if the SEC does not scrutinize foreign registrants, or when the effectiveness of private litigation of foreign firms is constrained (Siegel, 2005).[1] We extend this nascent line of research by studying whether reporting quality is associated with home institutions of foreign initial public offerings (henceforth IPOs) in the U.S.

This is a particularly useful context in which to evaluate the impact of institutional factors in light of the growing number of foreign IPOs- private firms that bypass stock exchanges in their country of origin to 'go public' on a foreign stock exchange - since the late 1990s Foreign IPOs represent firms that approach U.S. capital markets while having been established and developed abroad, often in countries with institutional environments that are very different to the U.S. Indeed, along with facing high governance compliance requirements in the U.S., foreign IPOs are also exposed to home country institutional environments that can affect the effectiveness and efficiency of their governance practices. The accounting literature has suggested two conflicting views of the factors affecting reporting decisions of IPO firms. The first line of arguments is focused on potentially opportunistic insider behavior at the time of IPO. For example, Teoh et al., (1998) suggest that managers of IPO firms may have a strong incentive to inflate earnings. The second, and more recent, research challenges this hypothesis. Specifically, Ball and Shivakumar (2008) argue that private firms that transit to a public status need to meet enhanced demand to resolve information asymmetry problems and comply with tougher regulatory environment.

[1] Siegel (2005) moreover argues that in many cases private litigation in the U.S. of foreign registrants is based on the corporate law of the country of incorporation (i.e., foreign country).

Ndubizu (2007) similarly argues that the SEC requires better reporting from IPO firms than non-IPO firms. There is, however, relatively little research on earnings management in foreign IPOs in the U.S. and to what extent reporting quality is driven by self-serving motives or, alternatively, by the constraints imposed by the U.S. environment. If these constraints are not effective, then it is unlikely that foreign firm's U.S. listing helps to overcome agency problems and constrain opportunistic reporting to the same extent as in mature U.S. firms.

In addition to macro factors, the transition to a public status often involves changes and adjustments in the firm-level corporate governance mechanisms. Furthermore, listing in the U.S. may affect the relation between corporate governance mechanisms and country-specific institutions identified by Doidge et al. (2007). These mechanisms may include both internal and external monitoring mechanisms that meet increasing demand for reporting quality and transparency coming from public market investors and regulators. In addition, home country institutions may also shape these mechanisms. For example, Chahine et al. (2012) argue that firm-level governance factors may be locally embedded. For example, foreign firms often remain headquartered in their home countries and are subject to local laws and regulations. Their "corporate culture" and the nature of agency conflicts are likely to be influenced by the broader set of domestic legal rules, especially bearing in mind that U.S. litigation often refers to corporate law in the country of incorporation of foreign registrants (Siegel, 2005). We extend this research by focusing on how reporting quality is affected by internal and external monitoring and their interactions with home legal institutions. We proxy internal monitoring by using board independence following Fama and Jensen's (1983) emphasis of the supervisory role of independent directors and Klein's (2002) findings of a negative relation between board independence and abnormal accruals. We proxy external monitoring by using auditor quality, consistent with Fan and Wong (2005).

We collect a sample of 290 foreign IPOs from 35 countries from 1990 to 2009. Our measure of the strength of home legal institutions is the product of two country-level indices: the anti-director rights, based on the revised measure of La Porta et al. (1998), and country-specific measure of enforcement based on the International Country Risk Guide (ICRG) Law and Order index. This is motivated by the need to consider not only formal law, but also how it is enforced in practice (Durnev and Kim, 2005; Bruno and Claessens, 2007). We employ three models to calculate abnormal accruals whereby normal accruals are measured with respect to non-IPO U.S. firms, controlling for time and industry effects. Abnormal accruals are thus expected to be related to factors associated with new listings from foreign countries, but which are not present in mature U.S. firms. If earnings management is constrained by bonding, we should not find that our measures of abnormal accruals are related to the strength of home institutions. Furthermore, if the presumed higher level of regulatory scrutiny and the demand for high-quality information during the transition to a public status in the U.S. are important, foreign IPOs should have earnings management at a level that does not exceed the level of earnings management in U.S firms.

Specifically, we measure earnings management in two ways. First, to capture the overall degree of misreporting by foreign IPOs we use absolute abnormal accruals. Higher absolute values correspond to more extreme reporting outcomes, and hence lower earnings quality. In addition, to assess whether misreporting is associated with aggressive or conservative reporting we use signed abnormal accruals. We provide evidence of extreme reporting outcomes as well as earnings inflation in foreign IPOs that is not explained by board independence or auditor quality, or any of the other control variables we employ. This heightened base level earnings management is consistent with poorer and more aggressive reporting in foreign IPOs than in U.S.-based mature firms. This evidence is also consistent with the notion of weaker SEC enforcement of foreign registrants than mature U.S. firms. We

further find evidence of more extreme reporting outcomes, at the base level, in IPOs from countries with strong home institutions. We note that the U.S's score for the strength of home institutions falls below the score of many countries that we identify as having strong institutions. We therefore attribute the evidence on higher earnings management in IPOs from countries with strong institutions to "reverse bonding" hypothesis: the level of commitment to higher governance standards of foreign IPOs coming from stronger institutional environment than the U.S. is actually lower that in U.S. firms, and it does not seem to be a constraining factor for earnings management. For these IPOs, a U.S. listing instead of home listing could exacerbate agency problems and reduce earnings quality. Because the listing location may be affected by considerations other than mitigation of agency costs, such as market liquidity (Stulz, 2009), this result suggests that foreign IPOs potentially extract other benefits from U.S. listing that may be more important than bonding.[2] Another, not mutually exclusive, explanation for this finding is related to Siegel's (2005) finding that SEC rarely enforces U.S. securities and disclosure rules on non-U.S. registrants. Therefore, foreign IPOs from countries with strong institutions may engage in more earnings management because they believe the SEC would first scrutinize U.S. IPOs. Moreover, should the SEC pay attention to foreign IPOs, it is more likely to focus on IPOs from countries with weak home institutions rather than IPOs form strong institutional environments.

With respect to monitoring mechanisms, we provide evidence that board independence is negatively associated with signed abnormal accruals in IPOs from countries with weak institutions. We also find that auditor quality is positively related to absolute abnormal accruals in IPOs from countries with strong institutions. These findings suggest that the strength of home institutions interacts with external and internal monitoring mechanisms, adding support for our arguments that home institutions matter.

[2] The arguments raised by Stulz (2009) suggest that in such a case, the benefit of higher liquidity, or any other benefit, outweigh the higher agency cost.

We contribute to the growing literature on the impact of legal and economic incentives on reported outcomes in several ways. First, while it has been recognized in the literature that earnings management is closely related to agency problems, and the latter are influenced by country-specific factors, little is known about the effect of these factors in foreign IPOs. This is important because the perception that, by choosing to list in the U.S., foreign firms may bypass the negative effects of weak home institutions. Even beyond foreign IPOs, there are a relatively few papers that examine the link between home institutions and reporting quality in cross-listed firms, with Lang et al. (2006) and Ndubizu (2007) being an exception. However, both studies do not provide a comprehensive analysis of earnings management in foreign IPOs. More importantly, contrary to Lang et al. (2006), our evidence suggests poorer reporting in firms coming from countries with *strong* home institutions. Second, the literature on the role of legal institutions for reporting quality largely ignores the roles of board independence and auditor quality. Our finding that board independence and auditor quality are differently associated with earnings management in firms coming from different institutional environments suggests home institutions may have an economically significant impact on these monitoring mechanisms. Third, the evidence provided here is relevant for understanding the nature of the "bonding hypothesis" and its power to explain foreign listing in the U.S. (Coffee, 2002, vs. Licht, 2003 and Siegel, 2005). Our empirical findings are consistent with the notion of "reversed bonding" and they indicate that the U.S. stock markets may attract foreign firms not because a U.S listing helps to mitigate agency problems. Rather, foreign firms may list in the U.S. because this allows poorer reporting and lax enforcement of transparency, contrary to previous arguments in finance and accounting literatures.[3]

[3] For example, Doidge at al. (2009, p. 426) state: "…foreign firms listed in the United States face more constraints and potential enforcement actions than similar home-country firms that are not listed in the United States."

The remainder of the paper is organized as follows. In Section 2 we review related literature and how we extend it. In Section 3 we outline the research design, the sample is described in Section 4. The main findings are reported in Section 5. Section 6 concludes.

2. Related Literature

The accounting literature has only recently started to investigate the role of institutions on reporting outcomes. For example, Lang et al. (2006) compare reporting quality in mature cross-listed firms (ADR firms) to U.S. firms and find evidence suggesting poorer reporting quality in foreign firms from weak investor protection environment. However, because Lang et al. (2006) examine mature ADR firms, their evidence is silent with regard to the effects of U.S. institutions at the transition to a public status stage. This event is likely characterized by different levels of information asymmetry, regulatory scrutiny and the nature of agency problems (Ball and Shivakumar, 2008). Ndubizu (2007) investigates whether foreign IPOs and first-time ADRs manage their earnings upward or, alternatively, select to list in the U.S. when their performance peaks. While Ndubizu (2007) is unable to distinguish between the two explanations, he finds that first time ADRs (which do not involve equity raising) manage earnings more than control sample based on U.S. firms. Again, this study is silent on earnings management in foreign IPOs. Furthermore, it does not consider home country effects.

It has long been recognized that reporting quality is influenced by both the characteristics of the accounting standards the reporting entity has to follow and by reporting incentives associated with contracting arrangements. This relatively new strand of the literature has investigated the link between reporting incentives and country-level legal, political and economic institutions. In addition it has attempted to assess the relative strength of accounting rules versus institutional-based incentives in explaining variations in cross-country reporting outcomes. For example, Ball et al. (2000) and Ball et al. (2003) provide evidence that reporting quality varies between code and common law countries and that

incentives related to regulation, taxation and litigation may cause variation in the quality of reported numbers. Leuz et al. (2003) highlight the impact of both legal and enforcement institutions on the quality of accounting earnings. Using a sample drawn from 31 countries they find that variations in earnings management are related to variations in institutions. Bushman et al. (2004) and Bushman and Piotroski (2006) examine how accounting conservatism varies across countries. They find that reporting conservatism varies with judicial systems, securities laws, political economy and tax regimes.

As legal, political and economic institutions differ across countries, firm-level ownership structures vary too (La Porta et al, 1999). Firms' ownership structures, in turn, shape insiders' reporting incentives and hence reporting quality (Fan and Wong, 2002; Haw et al., 2004; Ball and Shivakumar, 2005; Burgstahler et al., 2006). Consistent with this framework, Fan and Wong (2005) show that hiring high-quality auditors can help to mitigate agency problems associated with high ownership concentration. In addition, Ball and Shivakumar (2008) show that reporting conservatism increases when private firms transit to a publicly listed status. They attribute it to the greater demand for conservatism in public companies as a response to regulatory oversight.

An important conclusion reached by this literature is that the requirement to comply with similar accounting rules (e.g., IFRS or U.S. GAAP) in different countries may still provide an ample opportunity for variations in reporting numbers. However, a less explored question is what is the effect of home institutions on reporting quality when the reporting firm bonds itself to another country's institutional setting? This is an important question bearing in mind that foreign listings represent a large population of firms in the U.S., UK and elsewhere. The aforementioned study by Lang et al. (2006) examines properties of reported numbers by firms from 34 countries that have been cross-listed for some time in the U.S. and report under the U.S. GAAP using 20-F reconciliations. To the extent that cross-listing

creates strong commitment (bonding) to the U.S. institutional environment and high disclosure standards (Coffee, 2002; Stulz, 2009), variations in the properties of reported numbers are not expected to be related to variations in the home institutions of these firms. Yet, Lang et al. (2006) find that this is not the case.

In the light of the bonding hypothesis, this result is also surprising because cross listed firms self-select to commit to the U.S. environment. A number of studies have suggested that this decision may be triggered by the attempts by cross-listed firms to "escape" the effect of their home institutions (Lang et al., 2003; Doidge et al., 2004; Bailey et al., 2006, Hail and Leuz 2006) and/or overcome agency problems related to ownership structure (Doidge et al., 2009).

One possible explanation for findings by Lang et al. (2006) is that cross-listed firms' corporate governance environment is not entirely isolated from home institutions. Many legal matters may still have to be resolved in the home country, especially when the interests of domestic shareholders are affected. Even U.S. shareholders of cross-listed firms may need to rely on home securities laws (Siegel, 2005). More broadly, foreign firms may be conducting their business in a way that reflects underlying cultural and societal behaviors because their management and workforce are largely drawn from their home countries. This local embeddedness, in turn, may give rise to various agency problems that cannot be simply eliminated by a U.S. listing.

Another possible explanation to the Lang et al.'s (2006) result is related to the very foundations of the bonding hypothesis. Licht (2000 and 2003) points out that, unlike the assumption underlying bonding framework, legal remedies available to shareholders of foreign firms listed in the U.S. are markedly weaker than those available to shareholders of U.S. firms. He further posits that the motivation for U.S. listing is somewhat different to what proponents of "bonding" claim: firms may seek an overseas listing because it provides access

to cheap finance and enhancing issuers' visibility, not because they want to commit to higher corporate governance standards. Similar views are also expressed by Fanto (1996) and Siegel (2005).

We develop this literature in a number of ways. First, we look at foreign firms that list for the first time, and do so in the U.S. These firms are therefore characterized by a high level of information asymmetry in the U.S. market. Prior research typically looks at cross-listed firms which have been providing financial information and followed by analysts for some time. Ball and Shivakumar (2008) argue that market demand for high-quality information is stronger for IPO firms because of regulatory oversight and the high level of information asymmetry. Similarly, Ndubizu (2007) further argues the SEC pays more attention to IPOs. Therefore, one may expect that the incentives of foreign IPOs to comply with U.S. rules and ignore home institutions should be stronger than those of mature cross-listed firms. This is particularly relevant when the foreign IPO lists only in the U.S as they do not need to satisfy more than one set of investors and regulators.[4] In other words, bonding effects are expected to be more pronounced in our sample, and, therefore, the detection of any influence of home institutions is likely to be more significant. Second, as we point out in the Introduction, prior literature on foreign listing in the U.S. largely ignores the role of firm-specific corporate governance mechanisms in supplying high-quality accounting information (e.g., Lang et al. 2003; Lang et al. 2006; Ndubizu, 2007; Boulton et al., 2011). In contrast, we control for two specific corporate governance mechanisms: board independence (Klein, 2002) and auditor quality (Fan and Wong, 2005). This allows us to assess whether home institutions interact with firm-level governance mechanisms. It also helps alleviate concerns with regard to lack of control for possible other explanations for earnings management in foreign IPOs in the U.S. (Leuz, 2006). Third, we use financial data taken from the prospectuses, not from

[4] The majority of our sample firms are listed only in the U.S. However, in Section 5.2 we conduct some additional tests to see if single listing IPOs differ from multi listing IPOs.

regulatory filing following the IPO. As Ball and Shivakumar (2008, p. 326) stress, using post-IPO financial statements (as in Teoh et al, 1998 and Ndubizu, 2007) is problematic because the use of the IPO proceeds for growth-oriented investment may bias the measures of abnormal accruals.

3. Research Design

3.1 Measuring Abnormal Accruals

We evaluate the level of earnings management using three widely used models of abnormal accruals. Across all models we measure normal accruals by estimating model parameters from a cross-section of all non-foreign listed U.S. firms with the same 2-digit SIC code using data available for the IPO year. That is, we control for industry membership and year-of-IPO effects. We consider only U.S. firms with at least 10 industry-year observations. We remove 1% on both extremes of each continuous variable (Ball and Shivakumar, 2008).

The first model of abnormal accruals, or discretionary accruals, is based on the Jones (1991) model, as modified by Dechow et al. (1995). We first calculate non-discretionary accruals using the following model:

$$ACC_t = \beta_1(1/TA_{t-1}) + \beta_2(\Delta Rev_t - \Delta Rec_t) + \beta_3 PPE_t + \varepsilon_t \quad (1)$$

where accruals (ACC_t) is net income before extraordinary items (Compustat data item #123) plus depreciation and amortization (Compustat data item #124) minus operating cash flows (Compustat data item #308). TA_{t-1} is the lagged total asset (Compustat data item #6). ΔRev_t and ΔRec_t are changes between year t and year t-1 in net sales and net receivables (Compustat items #12 and 2 respectively) scaled by total assets at the beginning of the year (TA_{t-1}). PPE_t is gross property plant and equipment (Compustat item #7) scaled by TA_{t-1}.

This model differs from the original Jones (1991) model in that it adjusts for growth in credit sales. As credit sales are more susceptible to managerial discretion, this model yields

residuals that are uncorrelated with expected revenue accruals to improve the detection of revenue manipulation (Dechow et al. 2010). We calculate the first abnormal accrual variable (*EM1*) for new foreign issuer firm in year t as the regression residual as follows:

$$EM1_t = ACC_t - \left[\hat{\beta}_1(1/TA_{t-1}) + \hat{\beta}_2(\Delta Rev_t - \Delta Rec_t) + \hat{\beta}_3(PPE_t) \right]. \quad (2)$$

The second measure of discretionary accruals is based on the method used by Ashbaugh et al. (2003). This measure controls for firm performance by including a lagged return on assets (ROA_{t-1}) variable in the accrual regression to eliminate possible mechanical relation between performance metric and current period's discretionary accrual estimate (Kothari et al., 2005). As in the first measure we begin with estimating the annual cross-section accrual regression based on two-digit SIC code partition:

$$ACC_t = \beta_1(1/TA_{t-1}) + \beta_2\Delta Rev_t + \beta_3 ROA_{t-1} + \varepsilon_t. \quad (3)$$

We calculate the second abnormal accrual variable (*EM2*) for new a foreign issuer firm in year t as the regression residual as follows:

$$EM2_t = ACC_t - \left[\hat{\beta}_1(1/TA_{t-1}) + \hat{\beta}_2(\Delta Rev_t - \Delta Rec_t) + \hat{\beta}_3(ROA_{t-1}) \right]. \quad (4)$$

The third and last measure of discretionary accruals follows Ball and Shivakumar (2008), which investigates the magnitude of earnings management around initial public offerings in the U.K. This measure modifies the Jones (1991) model by incorporating conservative asymmetric accruals. Specifically, this model adds to the Jones (1991) model piecewise linear variant:

$$ACC_t = \beta_1 + \beta_2\Delta Rev_t + \beta_3 FASSET_t + \beta_4 CFO_t + \beta_5 DCFO_t + \beta_6 DCFO_t * CFO_t + \varepsilon_t \quad (5)$$

Note that this model employs the net book value of property, plants and equipment, *FASSET* (Compustat data item #8) and CFO_t is operating cash flow, both scaled by total assets at the beginning of the year and refer to last financial year reported prior the IPO. $DCFO_t$ takes the value 1 if $CFO_t < 0$ and 0 otherwise. We calculate the third abnormal

accrual variable (*EM3*) for new foreign issuer firm in year t as the regression residual as follows:

$$EM3_t = ACC_t - \left[\hat{\beta}_1 + \hat{\beta}_2 \Delta Rev_t + \hat{\beta}_3 FASSET_t + \hat{\beta}_4 CFO_t + \hat{\beta}_5 DCFO_t + \hat{\beta}_6 DCFO_t * CFO_t \right]. \quad (6)$$

In our analyses we use both the raw (or, signed) measures of abnormal accruals *EM1 toEM3*, as well as their absolute value |*EM1*| to |*EM3*|. The raw measures capture the sign of the abnormal accrual, whereby a positive (negative) measure corresponds to high level of aggressive (conservative), earnings. This measure is particularly suitable for assessing whether reporting incentives of foreign IPOs motivate earnings inflation. Using absolute measures reflects the view that positive accruals and negative abnormal accruals equally capture earnings quality. This is because a larger absolute value represents more extreme reporting outcome, or greater extent of misreporting.[5]

3.2 Regression Models

We are interested in (1) earnings quality in foreign IPOs in the U.S. and (2) assessing how differences between institutional environments in the country of firm origin may affect the extent of earnings management in these firms. In addition, we are interested in the incremental effect of board independence and auditor quality on earnings quality. In the first regression model |*EM1*| to |*EM3*| are used as the dependent variables. The independent variables include the strength of home legal institutions, board independence, auditor quality and a number of control variables, as follows:

$$\begin{aligned} |EMJ_i| = {} & \alpha + \beta_1 INST_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\ & + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H - TECH_i + \varepsilon_t \end{aligned} \quad (7)$$

where $J = \{1, 2, 3\}$.

The second regression model uses raw abnormal accruals, *EM1* to *EM3* as the dependent variables:

[5] Using absolute value of abnormal accruals is consistent with the view of accounting regulators, such as the IASB and more recently of the FASB, that earnings should not be biased in either direction.

$$EMJ_i = \alpha + \beta_1 INST_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i + \varepsilon_t \quad (8)$$

The first variable of interest is *INST*, which is designed to assess the strength of the IPO's home country legal institutions. To calculate it we use the product of two institutional measures. The first one is the La Porta et al.'s (1998) index of anti-director rights, as adjusted by Djankov et al. (2008). The second measure is the International Country Risk Guide (ICRG) Law and Order index. We use the product of these two measures because the anti-director rights index covers only aspects of *de-jure* regulation by capturing six sub-indices indicating the letter of the law, not its enforcement in practice (Durnev and Kim, 2005; Bruno and Claessens, 2007). On the other hand, the Law and Order index assesses the *de-facto* law and order traditions, such as enforcement, of a country as well as the legal system. To each foreign IPO we assign the specific country-year score according to the year of the IPO and home country to capture both *de-jure* and *de-facto* aspects of investors protections for the IPO year (Durnev and Kim, 2005; and Bruno and Claessens, 2007). Consistent with earlier studies (Leuz et al. 2009; Pinkowitz et al. 2006), we next divide the sample into strong (weak) home institutions according to whether the country's score falls above (below) the sample median. The indicator $INST_i$ is set equal to one if the country's score is above the sample median, and zero otherwise.[6]

The second variable of interest is board independence, B_INDP_i, which accounts for the percentage of independent directors to total directors, as reported in the IPO's prospectus (Klein, 2002). The third variable of interest is auditor quality, AUD_i, an indicator variable that is set equal to 1 if the auditing firm is a Big-6, Big-5 or Big-4 in 1990-1997, 1998-2001 and 2002 onwards, respectively; 0 otherwise.

[6] An alternative approach is to calculate the median score for each year and so $INST_i$ is set to one if the country's score in a particular year is above that year's median. However, country scores are very stable and so there is not much difference in the value assigned to $INST_i$ under the alternative way.

The regression models also include a number of control variables. First, IPO_i is an indicator variable that distinguishes between direct share issue in the U.S., (IPO_i = 1), and American Depository Receipts (IPO_i = 0). This is to control for the fact that SEC filing is possibly different as ADRs typically involve 20-Fs with reconciliations, whereby direct U.S. listings involve filing 10-Ks. The findings of Lang et al. (2006) suggest that 20-Fs are more prone to manipulations. Though we use the prospectuses to glean the accounting information, owing to the nature of accruals that may reverse, it is possible that these numbers already anticipate the type of subsequent filings and so the amount of discretion available to the managers varies at the time of the IPO. Second, UW_i ranks the offering's leading underwriter's prestige, as per Jay Ritter's website. Underwriter prestige has been documented to have a positive impact on reducing information asymmetry in IPOs (Balvers et al. 1988, and Carter and Manaster, 1990). In addition, Jo et al. (2007) find that high quality underwriters restrict earnings management for seasoned equity offerings. Third, $FSIZE_i$, a measure of firm size calculated as the log of sales at the end of the fiscal year preceding the issuing. It is commonly used as a measure of risk compositing (Loughran and Ritter, 2004) as well as serving as a proxy for SEC attention owing to large size. Fourth, $PROFIT_i$ is the net income before extraordinary items over sales at the end of the fiscal year preceding the IPO. We include this variable because earnings management may be a function of performance and also since Ndubizu (2007) raises the alternative possibility that IPOs take place when performance peaks. Fifth, $TENURE_i$ is the number of years the incumbent CEO has held this position as of the time of the IPO. Longer tenure is likely associated with the CEO ability and reputation and firms with more able CEOs may need to rely less on earnings management to attract investors. On the other hand, entrenched managers may have more power and firm-specific knowledge that is required for earnings manipulations to the personal benefit of the CEO (Francis et al, 2008). Sixth, we control for the threat of litigation, LIT_i using industry

membership, consistent with Frankel et al. (2002) and Ashbaugh et al. (2003).[7] Certain industries in the U.S. are more prone to legal disputes, which may act as constraining factor on earnings management. Finally, we include $H\text{-}TECH_i$, which is an indicator for a high-tech industry membership. This is because this industry is characterized by high information asymmetry (Barth et al., 2001) and may also be particularly exposed to litigations risk (Johnson et al., 2001). We control for possible time-series correlation of the residuals within year clusters using Rogers standard errors (Petersen, 2009) and consistent with Gow et al. (2010).[8]

In regression model 7, a negative (positive) intercept is consistent with less (more) extreme baseline earnings (that is, the level of absolute abnormal accruals not explained by various independent variables) of foreign IPOs than U.S. mature firms. Finding that the intercept in model 8 is negative (positive) is consistent with conservative (aggressive) baseline earnings relative to mature U.S. firms. In particular, a negative intercept is consistent with conservative reporting that helps IPO firms to meet the demand for high-quality reporting, stronger regulatory oversight of IPOs (Ball and Shivakumar, 2008) or self-serving earnings deflation. A positive sign is consistent with incentives to inflate earnings (Teoh et al, 1998).[9] The coefficient on *INST* captures the incremental effect of the strength of home institutions on the intercept. For example, a negative sign suggests that IPO firms from countries with strong institutions provide less extreme reporting outcomes than IPO firms from countries with weak institutions. However, if a U.S. listing helps IPO firms to circumvent the influence of their home institutions regardless of their strength, then we would expect the coefficient on *INST* to be statistically insignificant. In addition, in model 7 finding a negative (positive) coefficient on *B_INDEP* or *AUD* is consistent with independent board

[7] The industries that are more prone to U.S. litigation are identified in Francis et al. (1994)
[8] Since *LIT* and *H-TECH* are essentially industry membership indicators we do not include further industry dummies.
[9] Self-serving earnings deflation can occur if managers can use hidden reserves to enjoy personal perks, or getting stock options at a lower exercise price.

and higher auditor quality, respectively, increasing (decreasing) extreme reporting. A negative (positive) sign of these coefficients in model 8 is consistent with boards or auditors promoting conservative (aggressive) reporting. Finding that the coefficients on board independence and auditor quality are insignificant need not necessarily imply that these mechanisms are not effective per se. Rather, in the light of the Klein (2002) and Fan and Wong (2005) papers, a more plausible interpretation is that the restrictions on earnings management caused by the transit to a public status in the U.S. are very powerful (Ball and Shivakumar, 2008). Hence, the incremental influences of board independence and audit quality are relatively weak and so insignificance implies it is difficult to detect these in our analysis, not their absence.

One limitation of models 7 and 8 is that they assume that all coefficients (apart from *INST*) are the same for foreign IPOs from both strong and weak home legal institutional environments. However, these IPOs can differ according to their country of incorporation, and this restriction may not be economically justified. We therefore also run models 7 and 8 separately for the two subsamples and report the difference in the coefficients using interactions of *INST* with other independent variables.[10] To the extent that listing in the U.S. renders home environments irrelevant in terms of earnings management, the results for the two subsamples should not differ.

4. The Sample

The sample selection process starts by identifying companies that were first time issuers to the US markets between 1991 and 2009. Only firms with no prior listing in any market within or outside of the U.S. are included in this sample. According to the Security Data Corporation (SDC) New Issues database classification, foreign firms are firms that were incorporated and whose primary executive offices are located outside of the U.S. (Bell, 2008,

[10] The interaction models are described in detail in Section 5.

Bruner et al. 2006). We exclude equity listing originated from spin-offs of publically-listed companies or from mergers and acquisitions, following Bell (2008) and Bruner et al. (2006). Further eliminated are warrants, units and rights offerings, as well as utility firms. Firms that are based in the Bahamas, Cayman Islands, and Bermuda were also removed from the selected sample. This is due to the fact that those are typically U.S. or European firms within the financial services industry that are registered in these geographical locations for tax reasons and although they comply with the definition of foreign companies, they do not fit the specific context of this research. We also exclude all firms with insufficient financial information data.

As reported in Panel A of Table 1, the final IPO sample is comprised of 290. Panel B of Table 1 presents the industry composition of the sample according to the Fama-French (FF) 12-industry classification. This Panel shows that the largest group of IPOs in the sample is in the Business Equipment industry (FF6), followed by the Telephone and Television Transmission (FF7), and Manufacturing (FF3). Panel C of Table 1 reports the distributions of IPOs according the country of origin in a four year window from 1990-2009. Consistent with other studies on foreign issuers in the U.S., the largest number of IPOs is from China (51), followed by Israel (48) and UK (29). Most of the IPOs come from the years before 2001, reflecting the burst of internet and dot.com bubble of 2001 and its effect on the high-tech sector which generates many IPOs (about 55% in our sample).

We obtain a copy of each firm's prospectus to manually extract some of the variables needed for the empirical investigation. This is done through the Edgar database provided by the SEC and the Perfect Filing database. Foreign currency figures are translated into U.S. dollar figures based on the exchange rates disclosed in the prospectuses. Thereafter we index the U.S. figures to 2005 U.S. value based on the Consumer Price Index (CPI) as reported by

the International Monetary Fund[11]. Panel D of Table 1 reports summary statistics for each of the variables in the pooled sample. In addition, the sample is further divided into two subsamples: strong and weak home legal institutions with 134 and 156 firms respectively in each subsample. Note that the mean for *EM1* and *EM3* is positive, but for *EM2* it is negative. However, the latter is consistent with Ashbaugh et al. (2003). The number of independent board members is roughly 30% in the sample, but IPOs from weak home legal institutions feature greater board independence, on average. IPOs from weak home institutions tend to issue shares whereas IPOs from strong home institutions use ADRs to a larger extent. Finally, IPOs from countries with weak institutions are more profitable than IPOs from strong home institutions.

[Insert Table 1 about here]

Table 2 reports the correlation coefficients for the various variables. The correlations among the three abnormal accrual measures are high, but below unity. This indicates they are not identical. There is no significant correlation between *EM1*-*EM3* and *INST*, suggesting no effect of home institutions on abnormal accruals in the univariate analysis. In contrast, board independence and auditor quality are negatively correlated with earnings management in this table. Finally, profitability is positively correlated with higher abnormal accruals.

[Insert Table 2 about here]

5. Findings

5.1 Main Findings

Table 3 presents the results of estimating model 7, where the dependent variables are the absolute values of the three abnormal accrual measures. Across the three models the intercept is positive and significant in two. Because our abnormal accrual variables are benchmarked against mature U.S. firms, this result suggests that foreign IPOs exhibit a higher

[11] Retrieved from http://www.imf.org/external/data.htm#data on April 2011

level of extreme reporting than mature U.S. firms, excluding the effects of the other explanatory variables. The coefficient on *INST* is positive but insignificant. This result indicates that the strength of home legal institutions is not an influencing factor on the average level of earnings management in the entire sample. We do not find that the coefficients on *B_INDEP* are statistically significant, except in one case (for |*EM2*|) suggesting little role for board independence. However, high quality auditors are positively associated with absolute abnormal accruals, suggesting Big auditors permit more extreme reporting outcomes.

Among the control variables, we find that larger IPO firms are associated with less extreme reporting outcomes, as can be seen from the negative and significant coefficient on *FSIZE* in all regression models. This is consistent with larger IPO firms either relying less on earnings management or fearing greater SEC scrutiny. Higher reported profit in the prospectus is associated with more extreme reporting outcomes in all models. This suggests that IPO firms may use large accruals, positive or negative, in the determination of their last reported profit as a private firm. More experienced CEOs are associated with less extreme reporting, consistent with the view that earnings management is a substitute for experience. Finally, we do not find evidence that is consistent with effects of litigation threat or high-tech industry membership.

[Insert Table 3 about here]

In table 4 we repeat the analysis of model 7 this time separately for the two subsamples according to the strength of home legal institutions. Specifically, we examine this model:

$$\begin{aligned} |EMJ_i| = {} & \alpha + \beta_1 INST_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\ & + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\ & + \gamma_1 INST_i * B\_INDP_i + \gamma_2 INST_i * AUD_i + \gamma_3 INST_i * IPO_i + \gamma_4 INST_i * UW_i \\ & + \gamma_5 INST_i * FSIZE_i + \gamma_6 INST_i * PROFIT_i + \gamma_7 INST_i * TENURE_i \\ & + \gamma_8 INST_i * LIT_i + \gamma_9 INST_i * H-TECH_i + \varepsilon_t \end{aligned} \quad (9)$$

where $J = \{1, 2, 3\}$. Under this specification β_2 through β_{10} are the coefficients capturing the relations between the various independent variables and the dependent variable for IPOs from weak home legal institutions. β_1 captures the difference in absolute abnormal accruals in IPOs between strong and weak home legal institutions that is not explained by the other explanatory variables (that is, the difference in the base level of earnings management). Since β_1 is also an intercept it is absorbed in the ordinary intercept α when we report the results for the subsample of strong home institutions. The association between the various independent variables and |*EMJ*| for IPOs from strong home legal institutions is captured by the sum of the $\beta_k + \gamma_{k-1}$ coefficients, where k = 1 through 10. For example, the association between a dependent variable and board independence in IPOs from strong home institutions is given by $\beta_2 + \gamma_1$. The difference between the two subsamples is captured in the $\gamma_{k\text{-}1}$ coefficients for the slope coefficients as well β_1 are reported in the "Difference" column.

Across all three models in Table 4 the intercept is positive and significant. This is consistent with a higher degree of base level of misreporting in foreign IPOs than mature U.S. firms. Moreover, the coefficient on *INST*, reflecting the difference between the intercepts of the two subsamples (that is, β_1), is positive and significant at 10% or better across all models. This indicates more extreme reporting on average in IPOs from strong home institutions than weak home institutions. The evidence on board independence suggests that it is not associated with earnings management in foreign IPOs regardless of the strength of their home institutions. But high auditor quality is positively associated with absolute abnormal accruals in IPOs from strong home institutions. That is, Big auditors seem to allow more misreporting than smaller auditors. Moreover, that the coefficient on *AUD* differs between the two subsamples suggests markedly different incentives for auditors depending on the strength of home institutions.

As for the control variables, direct listing in the U.S. (i.e., without the use of ADRs) constrains earnings management only for strong home institutions, as is the case for the effect of underwriter prestige. The negative association between absolute abnormal accruals and firm size holds for IPOs from both weak and strong home institutions. The positive association between profitability and absolute abnormal accruals detected in Table 3 for the pooled sample seems to be driven particularly by IPOs from strong home institutions, though in the |*EM3*| model this is only true for the subsample of weak home institutions. Long tenure and absolute abnormal accruals are negatively and significantly related in both subsamples in the |*EM1*| and |*EM2*| models. There is no evidence that litigation constrains earnings management in either subsample.

Collectively, the findings of Tables 3 and 4 suggest that there are differences between the two subsamples. On a very broad level, these differences are not supportive of the view that U.S. listing commits foreign IPOs to same reporting standards as U.S. firms. Moreover, U.S. listing does not render home institutions irrelevant. Specifically, the positive and significant coefficient on *INST* in Table 4 suggests that IPOs from countries characterized by strong home legal institutions use more extreme reporting than IPOs from weak home institutions. To appreciate this finding we note that the score for the U.S. places it as a country with weak legal institutions. While this may seem surprising at first glance, we note that Frost et al. (2006) provide (corroborating) evidence suggesting that disclosures requirements on U.S. based stock exchanges trail many of their international counterparts.[12] Thus, this evidence is in the spirit of Licht (2003) whereby the U.S. offers opportunities for many foreign firms to escape home institutions with the objective to have more reporting flexibility. In other words, IPOs from strong home institutions seem to trade down their reporting quality. This view is further aided by the findings for auditor quality that suggest

[12] In Section 5.2 we define the *INST* indicator relative to the U.S. score, rather than sample median, and repeat the analysis to provide more direct evidence on the role of home institutions relative to U.S. institutions.

that large auditors permit more extreme reporting in IPOs from strong home institutions, but do not do so in IPOs from weak home institutions. Nevertheless, we find that reputable underwriters, and to some extent CEO experience, reduce earnings management in IPOs from strong home institutions. The lack of findings for IPOs from weak home institutions, on the other hand, suggests they better bond themselves to the U.S. environment.

[Insert Table 4 here]

We next turn to use abnormal accruals, or signed accruals, as the dependent variable. Table 5 presents the results of estimating model 8 for the entire sample. The positive sign and significant (in two models) of the intercept suggests that foreign IPOs inflate earnings more than mature U.S. firms. Nevertheless, the pooled analysis identifies no incremental effect of home institutions. The findings here suggest that independent boards are conservative, consistent with the findings of Klein (2002) and Xie et al. (2003). Auditor quality does not have any incremental effect on abnormal accruals. Issuing shares directly in the U.S. is associated with lower accruals. Profitability is positively to abnormal accruals, as may be expected.

[Insert Table 5 here]

In Table 6 we repeat the analysis of model 8, this time separately for the two subsamples according to the strength of home legal institutions. Specifically, we examine this model:

$$\begin{aligned} EMJ_i = {} & \alpha + \beta_1 INST_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\ & + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\ & + \gamma_1 INST_i * B\_INDP_i + \gamma_2 INST_i * AUD_i + \gamma_3 INST_i * IPO_i + \gamma_4 INST_i * UW_i \\ & + \gamma_5 INST_i * FSIZE_i + \gamma_6 INST_i * PROFIT_i + \gamma_7 INST_i * TENURE_i \\ & + \gamma_8 INST_i * LIT_i + \gamma_9 INST_i * H-TECH_i + \varepsilon_t \end{aligned} \quad (10)$$

The calculation of the coefficient signs across the two subsamples is similar to that discussed for Table 4, though now a positive (negative) coefficient implies higher (lower) abnormal earnings. That is, a positive (negative) coefficient indicates more aggressive (more conservative) reporting. The intercepts for the strong home institutions subsample are all positive, and significant or marginally significant in two models. The intercepts for the weak home institutions are positive but insignificant. The differences in the intercepts between the two subsamples are also insignificant. Nevertheless, this evidence is consistent with greater earnings inflation by foreign IPOs from strong home institutions than U.S. mature firms. Table 6 indicates that the negative coefficient observed for board independence in the pooled sample (Table 5) emanates from the weak home institutions subsample. That is, independent boards are conservative in IPOs from countries characterized by weak anti-director rights and law enforcement.

Examining the control variables, the findings suggest that the positive association between profitability and aggressive reporting is likely a strong home institutions phenomenon. We find that the effect of litigation is to enhance conservative reporting in IPOs from strong home institutions. No such effect is observed for IPOs from weak home institutions. All IPO firms are equally exposed to U.S. litigation, and so if the IPO's home legal setup is irrelevant, we should find that in both subsamples the threat of litigation equally constrains earnings inflation. Alternatively, if IPOs from weak home institutions "rent" the U.S. legal system, they should be more responsive to the threat of U.S. litigation. But we find that the difference in the *LIT* coefficient is negative and significant, which is consistent with Licht's (2003) argument that domestic law is important for U.S. courts and that, as a result, shareholders in foreign registrants from weak home institutions are less protected. It is therefore not surprising that we find that earnings inflation is more constrained in IPOs from strong legal systems.

The overall findings for the abnormal accruals measures is broadly consistent with reverse bonding, as earnings inflation (relative to U.S firms) is observed in IPOs from strong home institutions, but not in the weak home institutions subsample. Further, board independence seems to constrain earnings management only in IPOs from weak home institutions. A partial explanation for this is that there are more independent board members in these IPOs (see Table 2), on average. But perhaps the more surprising result is that we find that the threat of U.S. litigation does not constrain earnings management where it is supposed to be most potent according to the bonding hypothesis (that is, for IPOs from weak home institutions).

[Insert Table 6 here]

5.2 Additional Analyses

We conduct two additional analyses to address several potential limitations of the findings so far. First, in Tables 3-6 we do not include debt as an explanatory variable. It is possible that debt effects differ in a systematic way between IPOs from strong home institutions and IPOs from weak home institutions. More broadly, debt levels may affect earnings management owing to debt-covenants considerations and not including a measure of debt may cause an omitted variable problem. Therefore, to assess the robustness of the results we repeat Tables 3-6 to include the variable *LEV*, which is defined as total liabilities divided by total assets. Second, we redefine the variable *INST* to capture whether an IPO is from a country whose score of its legal institutions is above or below the score of the U.S, rather than the median of the entire IPO sample. The purpose of this is to provide evidence that speaks (more) directly as to how the difference between the home country's and U.S's legal institutions influences earnings management. We call this new variable *INST_US.* Third the results may be sensitive to whether the IPO is made exclusively in the U.S. or simultaneously

in other countries (e.g., home country) as well. This is because bonding may be stronger in foreign IPOs that are subject to only one legal jurisdiction – the U.S.

When we repeat Table 3 with these two modifications we find similar results to Table 3, with *LEV* being positively and significantly related to |*EM1*|-|*EM3*| in the pooled sample (results are not tabulated). Repeating Table 5 (for *EM1-EM3* in the pooled sample) reveals no qualitative difference (results are not tabulated). The additional variable *LEV* is unrelated to signed abnormal accruals. We therefore conclude that the pooled regressions are robust to the inclusion of debt and the re-measurement of the *INST* indicator.

Next we discuss Table 7 which features two panels. Panel A modifies Table 4 (for |*EM1*|-|*EM3*|) whereas Panel B modifies Table 6 (for *EM1-EM3*). In Panel A the intercept is positive and significant in both subsamples across all models. This reinforces the findings reported in Table 4 whereby foreign IPOs engage in a higher degree of extreme reporting than mature U.S firms, excluding the effect of the explanatory variables. In addition, the magnitude and significance level of the intercepts for the strong home institutions subsample are higher than the corresponding values of the weak home institutions subsamples. However, the difference is not statistically significant. Interestingly, the association of *LEV* with the dependent variables differs across the subsample. Specifically, it is not related to extreme reporting in IPOs from weak home institutions, but is positively and significantly related to absolute abnormal accruals in IPOs from strong home institutions. The other results are qualitatively similar to Table 4.

In Panel B the intercepts are positive and significant at conventional levels in one model for IPOs from strong home institutions and two models for IPOs from weak home institutions. This suggests that IPOs from weak home institutions are more likely to inflate earnings than IPOs from the other group. The findings for board independence are somewhat weaker than Table 6 as the coefficient in the weak column in the *EM3* model is now

insignificant. There is no evidence that the level of debt influences the sign of abnormal accruals.

Taken together, the findings reported in Table 7, as those reported in Tables 4 and 6, do not support the bonding narrative. The evidence broadly suggests that the standing of home legal institutions relative to that of the U.S. matters for boards, auditors, the roles of litigation threat and leverage. In particular, the findings for leverage are inconsistent with demand for greater conservatism (Ahmed et al., 2002; Watts, 2003) and, moreover, are indicative of a *positive* effect on extreme reporting in IPOs from home legal institutions that are stronger than their U.S. counterparts.

[Insert Table 7 here]

In Table 8 we split the sample according to whether the IPO involves exclusive issuance of shares in the U.S., as opposed to issuing in multiple countries. Many of the firms that exclusively issue shares in the U.S. use the ADR mechanism (69%) whereas those that list in multiple locations use only ADRs.[13] Recall that ADR-issuing firms need to file 20-F reports involving reconciliations whereas direct share issue requires full disclosure under U.S. GAAP. Prior literature (Amir et al., 1993 and Lang et al., 2006) suggests that earnings quality varies between these two modes of reporting. In particular, reconciliations may be more susceptible to earnings manipulation, possibly because the SEC does not scrutinize 20-Fs as much as 10-Ks (and their quarterly counterparts). In addition, listing in another country outside the U.S. implies that U.S. institutions may not have an exclusive effect. For both reasons we expect bonding to be weaker for multi listing IPOs.

In Panel A the intercept is positive and significant in both subsamples across all models, and higher in multi listing firms than single listing firms. Though the difference is insignificant, this is consistent with lack of bonding and that bonding is not a strong force in

[13] This is called Level III ADRs (Miller, 1999, Table 1)

particular in multi locations IPOs. The effect of strong home institutions is positive in IPOs that exclusively list in the U.S. and larger than the effect in multi location IPOs. This is a further indication that (exclusive) exposure to the U.S. environment may in fact attract firms from strong home institutions that employ more lax reporting. The association between auditor quality and extreme reporting is significantly positive in all models for U.S. only listing, suggesting auditor quality is positively associated when auditors are seemingly accountable only to U.S. authorities. This result seems to contradict the presumed stronger bond in this subsample. The coefficients on *AUD* are negative and significant for multi listing IPOs in two models indicating large auditors constrain extreme reporting in this subsample. Furthermore, the corresponding coefficients are statistically different indicating auditor quality works in opposing ways in single listing IPOs and multi listing IPOs. In addition, *LEV* is significantly positive across subsamples, except one case, suggesting debt-related reporting incentives are similar regardless of the number of IPO locations and legal jurisdictions.

The intercepts in Panel B are positive and significant at 10% level in two models for single issuers, but no intercept is significant in the multi-listing subsample. There is also no evidence for a difference in the intercepts between the subsamples. There is no evidence that the strength of home legal institutions affect the base level of earnings inflation. The findings for difference between the coefficients on board independence across the two subsamples – the difference is negative and significant in two models - provide some evidence that it greater board independence affects earnings inflation in opposite ways. In particular they suggest that exclusive listing in the U.S. may motivate independent boards to monitor more effectively the IPO firm's CEO preventing earnings inflation than in IPO firms that list in multiple jurisdictions. Perhaps this is explained, at least in part, by the additional finding that earnings inflation and profitability are positively associated in single listing IPOs, and so independent boards attempt to curtail this reporting bias. Specifically, the coefficient on

PROFIT is positive and significant in single listing IPOs, and positive and significant in multi listing only in the *EM1* model. Moreover, the difference in the values of this coefficient across the two subsamples is significant or marginally significant in two models. Finally, high debt levels seem to reduce earnings inflation only in multi listing IPOs.

[Insert Table 8 here]

Summary and Conclusions

Prior literature (e.g., Coffee, 2002) has argued that listing in the U.S. commits foreign registrants to stricter reporting standards and superior legal institutions. This has been termed as the bonding hypothesis. This literature implies that as a consequence of the bonding to the U.S. reporting and legal environments (1) earnings management of foreign registrants should be similar to that of U.S. firms and (2) it is unrelated to the strength of home legal institutions. We provide evidence that is largely inconsistent with this prediction. Specifically, we find evidence indicating higher level of earnings management in foreign IPOs in than mature U.S firms. We further find evidence of more extreme reporting (large positive or negative abnormal accruals), and to a lesser extent of earnings inflation, in IPOs from *strong* home legal institutions. This "reversed bonding" fits Licht's (2003) argument that bonding is not the overriding motivating factor in the decision to list in the U.S. We expand the analysis to examine whether the role of internal and external monitoring mechanisms is differently related to earnings management depending on the strength of home legal institutions. We find that board independence (an internal monitoring mechanism) reduces abnormal accruals in IPOs from weak home institutions, but that auditor quality (an external mechanism) is positively related to extreme reporting in IPOs from strong home

institutions. Additional findings indicate that the threat of litigation does not constrain earnings management in IPOs from weak home institutions.

Collectively, the results suggest that earnings management and its monitoring are related to the strength of home legal institutions in foreign IPOs. We also find that whether the IPO is carried out exclusively in the U.S or in multiple locations may also affect the level of earnings management and how it, in turn, is affected by board independence and auditor quality. At a very broad level, the findings of this paper indicate that U.S. listing does not render home institutions irrelevant for reporting quality or that the force of SEC regulation overwhelms home effects.

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Table 1: Summary Statistics

Panel A: Sample Development

	Number of Firms
All SDC Platinum new US Foreign listings in years 1990-2009	677
Excluding observations:	
For which prospectus not available	196
With offering other than common/ordinary stock	117
For financial services firms and utilities	10
With insufficient financial data necessary for our analyses	39
With less than 10 observations for year and industry matching	1
Final Sample	290

Panel B: Sample Selection by Fama-French 12 Industry Classification

FF1	Consumer Non-Durables	9
FF2	Consumer Durables	7
FF3	Manufacturing	22
FF4	Oil, Gas, and Coal Extraction and Products	3
FF5	Chemicals and Allied Products	7
FF6	Business Equipment	118
FF7	Telephone and Television Transmission	45
FF8	Utilities	-
FF9	Wholesale, Retail, and Some Services	7
FF10	Healthcare, Medical Equipment, and Drugs	27
FF11	Finance	-
FF12	Other	45
Total		**290**

Panel C: Country of Origin by Period

Country	1990-1993	1994-1997	1998-2001	2002-2005	2006-2009	Total
Argentina	0	0	1	0	1	**2**
Austria	0	0	1	0	0	**1**
Australia	0	1	0	0	0	**1**
Belgium	0	1	0	0	0	**1**
Brazil	0	1	0	0	0	**1**
Canada	0	8	14	2	4	**28**
Chile	1	2	0	0	0	**3**
China	0	0	5	13	33	**51**
Denmark	1	0	0	0	0	**1**
Finland	0	1	0	0	0	**1**
France	1	6	6	0	0	**13**
Germany	0	2	3	0	0	**5**
Greece	0	0	3	2	2	**7**
Hong-Kong	1	9	3	3	0	**16**
Indonesia	0	1	0	0	0	**1**
India	0	0	2	0	0	**2**
Ireland	0	3	4	0	2	**9**
Israel	3	17	16	5	7	**48**
Italy	2	3	1	1	0	**7**
Japan	0	0	2	0	0	**2**
Jordan	0	1	0	0	0	**1**
Luxemburg	1	0	1	0	0	**2**
Mexico	2	0	0	1	0	**3**
Netherlands	1	13	6	0	1	**21**
New-Zealand	1	3	0	0	0	**4**
Norway	0	0	1	0	0	**1**
Poland	0	1	0	0	0	**1**
Singapore	0	2	2	0	2	**6**
South-Africa	0	0	0	1	0	**1**
South-Korea	0	1	3	3	1	**8**
Spain	0	0	1	0	0	**1**
Sweden	0	3	0	0	0	**3**
Switzerland	0	3	3	1	0	**7**
Taiwan	0	0	0	1	1	**2**
UK	0	18	9	2	0	**29**
Total	**14**	**100**	**87**	**35**	**54**	**290**

Panel D: Summary Statistics for Strong and Weak Home Legal Institutions Subsamples

	Full Sample: N=290					Strong Home Legal Institutions: N=134					Weak Home Legal: N=156				
	Mean	**STD**	**Q1**	**Median**	**Q3**	**Mean**	**STD**	**Q1**	**Median**	**Q3**	**Mean**	**STD**	**Q1**	**Median**	**Q3**
EM1	0.063	0.734	-0.083	0.160	0.017	0.087	0.833	-0.083	0.117	0.015	0.043	0.640	-0.084	0.196	0.025
EM2	-0.128	0.899	-0.272	0.063	-0.101	-0.120	0.980	-0.308	0.028	-0.114	-0.135	0.827	-0.253	0.072	-0.098
EM3	0.141	0.808	-0.056	0.256	0.055	0.154	0.910	-0.065	0.175	0.030	0.130	0.712	-0.035	0.289*	0.090
INST	0.457	0.499	0.000	1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000
B_INDP	0.292	0.227	0.100	0.444	0.286	0.265	0.220	0.000	0.429	0.250	0.315**	0.230	0.111	0.500	0.333
AUD	0.856	0.352	1.000	1.000	1.000	0.888	0.316	1.000	1.000	1.000	0.829	0.378	1.000	1.000	1.000
IPO	0.461	0.499	0.000	1.000	0.000	0.410	0.494	0.000	1.000	0.000	0.503*	0.502	0.000	1.000	1.000
UW	7.977	1.980	8.000	9.000	9.000	8.024	1.962	8.000	9.000	9.000	7.938	2.001	8.000	9.000	9.000
FSIZE	17.743	3.021	16.625	19.029	17.709	17.847	3.165	16.738	19.227	17.799	17.654	2.901	16.469	18.809	17.477
PROFIT	-0.265	1.758	-0.118	0.137	0.051	-0.489	2.179	-0.168	0.089	0.032	-0.077**	1.280	-0.084	0.200***	0.065
TENURE	5.587	5.193	2.000	7.000	4.000	5.112	4.872	1.000	7.000	4.000	5.988*	5.433	2.000	8.000*	4.667
LIT	0.181	0.386	0.000	0.000	0.000	0.157	0.365	0.000	0.000	0.000	0.201	0.402	0.000	0.000	0.000
H-Tech	0.548	0.499	0.000	1.000	1.000	0.560	0.498	0.000	1.000	1.000	0.538	0.500	0.000	1.000	1.000

Note: The table presents the sample selection process (Panel A), composition by industry (Panel B), composition by country and period industry (Panel C) and descriptive statistics for the full sample as well as for distinguishing between strong home legal institutions (*INST* = 1) and weak home legal institutions (*INST* = 0). Panel D also reports the results of tests for the differences in the means and medians (the latter using Wilcoxon rank-test) under the Weak Home Institutions block. *, **, *** denote differences that are significant at the 0.10, 0.05 and 0.01 level, respectively. See the Appendix for variable definitions.

Table 2: Selected Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	***EM1***		0.76	0.81	-0.03	-0.03	-0.14	-0.01	-0.10	-0.03	0.34	0.08	0.03	-0.08
2	***EM2***	0.87		0.65	-0.04	-0.01	-0.03	-0.07	-0.03	0.03	0.29	0.11	0.11	-0.12
3	***EM3***	0.90	0.86		-0.10	-0.03	-0.11	0.02	-0.06	-0.14	0.24	0.07	0.01	-0.05
4	***INST***	0.03	0.01	0.01		-0.10	0.08	-0.09	0.03	0.06	-0.17	-0.09	-0.05	0.02
5	***B_INDP***	-0.08	-0.09	-0.09	-0.10		-0.08	0.00	-0.02	0.02	0.06	0.09	0.06	-0.06
6	***AUD***	-0.10	-0.02	-0.06	0.08	-0.09		-0.36	0.38	0.21	0.00	-0.08	0.09	-0.03
7	***IPO***	0.01	-0.02	0.00	-0.09	0.02	-0.36		-0.32	-0.23	-0.12	0.04	-0.03	0.00
8	***UW***	-0.16	-0.10	-0.13	0.02	-0.09	0.47	-0.32		0.23	0.09	-0.10	0.01	0.09
9	***FSIZE***	-0.12	-0.10	-0.18	0.03	-0.01	0.11	-0.24	0.17		0.23	-0.11	-0.04	-0.12
10	***PROFIT***	0.27	0.21	0.11	-0.12	0.01	-0.06	-0.01	0.01	0.24		0.11	-0.06	-0.22
11	***TENURE***	0.00	0.03	-0.02	-0.08	0.03	-0.06	0.05	-0.14	-0.02	0.05		0.06	-0.10
12	***LIT***	0.02	0.08	0.02	-0.05	0.05	0.09	-0.03	0.00	-0.12	-0.01	0.02		0.03
13	***H-TECH***	-0.04	0.00	0.02	0.02	-0.06	-0.03	0.00	0.12	-0.03	-0.11	-0.13	0.03	

Note: The table presents pair-wise correlations for selected variables. Spearman (Pearson) correlations are presented above (below) the diagonal. Correlations above 0.11 and below -0.11 are significant at the 0.05 level. See the Appendix for variable definitions.

Table 3: Pooled Regressions of Absolute Abnormal Accruals

	|*EM1*|	|*EM2*|	|*EM3*|
INTERCEPT	**2.526**	**2.709**	**2.774**
	(0.000)	**(0.001)**	**(0.001)**
INST	0.079	0.070	0.071
	(0.248)	(0.417)	(0.297)
B_INDP	0.092	**0.263**	0.035
	(0.417)	**(0.089)**	(0.828)
AUD	**0.174**	**0.223**	**0.153**
	(0.001)	**(0.097)**	**(0.046)**
IPO	-0.118	-0.103	-0.149
	(0.203)	(0.359)	(0.138)
UW	-0.042	-0.040	-0.045
	(0.191)	(0.313)	(0.252)
FSIZE	**-0.107**	**-0.113**	**-0.115**
	(0.000)	**(0.000)**	**(0.000)**
PROFIT	**0.069**	**0.083**	**0.077**
	(0.039)	**(0.013)**	**(0.068)**
TENURE	**-0.017**	**-0.025**	**-0.017**
	(0.002)	**(0.001)**	**(0.011)**
LIT	-0.065	-0.101	-0.069
	(0.504)	(0.325)	(0.547)
H-TECH	0.064	0.008	0.088
	(0.287)	(0.905)	(0.240)
N	290	290	290
Adj R^2	0.237	0.186	0.216

Notes:

1. The table presents results of three pooled regression models of absolute abnormal accruals. In the |*EM1*|-|*EM3*| columns the dependent variable is the absolute value of the abnormal accrual models (1)-(3) below. We report *p*-values below the estimated coefficients. Coefficients for which the *p*-value is 10% or better appear in bold face. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). See the Appendix for variable definitions.
2. The regression model is:

$$|EMJ_i| = \alpha + \beta_1 INST_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i + \varepsilon_t$$

   where |*EMJ*|, $J=\{1, 2, 3\}$ is the absolute value of the specific abnormal accrual measure as explained next.
3. Abnormal accruals are measured for these models:

   Model 1:

|*EM1*| is the absolute value of *EM1* which is measured according to Dechow et al. (1995)

$$ACC_t = \beta_1(1/TA_{t-1}) + \beta_2(\Delta Rev_t - \Delta Rec_t) + \beta_3 PPE_t + \varepsilon_t \quad (1a)$$

$$EM1_t = ACC_t - \left[\hat{\beta}_1(1/TA_{t-1}) + \hat{\beta}_2(\Delta Rev_t - \Delta Rec_t) + \hat{\beta}_3(PPE_t)\right]. \quad (1b)$$

Model 2:

|*EM2*| is the absolute value of *EM2* that is obtained from the system of equations used by Ashbaugh et al. (2003):

$$ACC_t = \beta_1(1/TA_{t-1}) + \beta_2\Delta Rev_t + \beta_3 ROA_{t-1} + \varepsilon_t. \quad (2a)$$

$$EM2_t = ACC_t - \left[\hat{\beta}_1(1/TA_{t-1}) + \hat{\beta}_2(\Delta Rev_t - \Delta Rec_t) + \hat{\beta}_3(ROA_{t-1})\right]. \quad (2b)$$

|*EM3*| is the absolute value of *EM3* that is measured using the Ball and Shivakumar (2008) model:

$$ACC_t = \beta_1 + \beta_2\Delta Rev_t + \beta_3 FASSET_t + \beta_4 CFO_t + \beta_5 DCFO_t + \beta_6 DCFO_t * CFO_t + \varepsilon_t \quad (3a)$$

$$EM3_t = ACC_t - \left[\hat{\beta}_1 + \hat{\beta}_2\Delta Rev_t + \hat{\beta}_3 FASSET_t + \hat{\beta}_4 CFO_t + \hat{\beta}_5 DCFO_t + \hat{\beta}_6 DCFO_t * CFO_t\right]. \quad (3b)$$

Table 4: Absolute Abnormal Accruals Analyzed between Strong and Weak Legal Institutions Countries

	|*EM1*|		|*EM2*|		|*EM3*|	
	Strong	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**
INTERCEPT	**3.413**	**1.547**		**3.650**	**1.540**		**3.610**	**1.744**	
	(0.000)	**(0.073)**		**(0.000)**	**(0.090)**		**(0.000)**	**(0.048)**	
INST			**1.866**			**2.110**			**1.866**
			(0.062)			**(0.073)**			**(0.061)**
B_INDP	0.207	0.155	0.052	0.380	0.362	0.019	0.068	0.211	-0.143
	(0.437)	(0.462)	(0.894)	(0.177)	(0.189)	(0.966)	(0.822)	(0.340)	(0.713)
AUD	**0.445**	0.082	**0.363**	**0.718**	0.001	**0.717**	**0.449**	0.053	**0.395**
	(0.004)	(0.322)	**(0.065)**	**(0.002)**	(0.995)	**(0.006)**	**(0.014)**	(0.527)	**(0.056)**
IPO	**-0.292**	0.047	**-0.338**	-0.313	0.125	**-0.439**	**-0.320**	0.050	**-0.371**
	(0.061)	(0.623)	**(0.061)**	(0.146)	(0.165)	**(0.066)**	**(0.035)**	(0.646)	**(0.043)**
UW	**-0.112**	0.010	**-0.121**	**-0.125**	0.021	**-0.146**	**-0.114**	0.010	**-0.124**
	(0.001)	(0.798)	**(0.008)**	**(0.003)**	(0.648)	**(0.025)**	**(0.014)**	(0.810)	**(0.027)**
FSIZE	**-0.128**	**-0.081**	-0.047	**-0.142**	**-0.075**	-0.067	**-0.135**	**-0.089**	-0.045
	(0.000)	**(0.048)**	(0.287)	**(0.000)**	**(0.065)**	(0.162)	**(0.000)**	**(0.016)**	(0.266)
PROFIT	**0.069**	0.088	-0.019	**0.093**	0.087	0.006	0.064	**0.133**	-0.069
	(0.042)	(0.118)	(0.752)	**(0.012)**	(0.141)	(0.930)	(0.111)	**(0.041)**	(0.302)
TENURE	**-0.018**	**-0.011**	-0.006	**-0.025**	**-0.019**	-0.006	-0.018	-0.012	-0.006
	(0.086)	**(0.096)**	(0.594)	**(0.068)**	**(0.023)**	(0.673)	(0.118)	(0.153)	(0.600)
LIT	-0.162	0.013	-0.176	-0.280	0.046	-0.325	-0.206	0.045	-0.251
	(0.349)	(0.909)	(0.401)	(0.154)	(0.745)	(0.191)	(0.281)	(0.737)	(0.252)
H-TECH	-0.047	0.124	-0.171	-0.040	-0.024	-0.016	0.005	0.112	-0.107
	(0.511)	(0.287)	(0.295)	(0.707)	(0.813)	(0.916)	(0.951)	(0.351)	(0.488)
N	134	156	290	134	156	290	134	156	290
Adj R^2	0.330	0.172	0.267	0.329	0.090	0.219	0.286	0.181	0.243

Note:

1. The table presents results of the regression models of absolute abnormal accruals reported in Table 3 separately for the strong home institutions subsample (the Strong column) and the weak home institutions subsample (the Weak column). The Difference column reports the difference between the two subsample coefficients using the interactions model described below. In the |*EM1*|-|*EM3*| columns the

dependent variable is the absolute value of the abnormal accrual models (1)-(3), as explained in Table 3. We report *p*-values below the estimated coefficients. Coefficients for which the *p*-value is 10% or better appear in bold face. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). See the Appendix for variable definitions.

2. The interactions model:

$$
\begin{aligned}
|EMJ_i| = {} & \alpha + \beta_1 INST_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\
& + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\
& + \gamma_1 INST_i * B\_INDP_i + \gamma_2 INST_i * AUD_i + \gamma_3 INST_i * IPO_i + \gamma_4 INST_i * UW_i \\
& + \gamma_5 INST_i * FSIZE_i + \gamma_6 INST_i * PROFIT_i + \gamma_7 INST_i * TENURE_i \\
& + \gamma_8 INST_i * LIT_i + \gamma_9 INST_i * H-TECH_i + \varepsilon_t
\end{aligned}
$$

The "Difference" column reports the value of the γ_i, i = {1-9} coefficients, their p-values, as well as the adjusted R^2 for this regression.

Table 5: Pooled Regressions of Abnormal Accruals

	EM1	*EM2*	*EM3*
INTERCEPT	**1.584**	1.232	**1.863**
	(0.066)	(0.203)	**(0.053)**
INST	0.087	0.053	0.034
	(0.286)	(0.646)	(0.673)
B_INDP	-0.298	**-0.382**	**-0.366**
	(0.170)	**(0.095)**	**(0.079)**
AUD	-0.063	0.060	-0.012
	(0.397)	(0.495)	(0.857)
IPO	**-0.125**	**-0.151**	**-0.152**
	(0.055)	**(0.032)**	**(0.028)**
UW	-0.059	-0.055	-0.058
	(0.145)	(0.225)	(0.211)
FSIZE	-0.047	-0.048	-0.060
	(0.208)	(0.226)	(0.121)
PROFIT	**0.135**	**0.133**	0.080
	(0.005)	**(0.023)**	(0.203)
TENURE	-0.005	0.002	-0.006
	(0.346)	(0.819)	(0.297)
LIT	0.017	0.141	-0.014
	(0.901)	(0.405)	(0.922)
H-TECH	-0.005	0.064	0.063
	(0.947)	(0.621)	(0.360)
N	290	290	290
Adj R^2	0.118	0.066	0.058

Notes:

1. The table presents results of three pooled regression models of abnormal accruals. In the *EM1-EM3* columns the dependent variable is the signed value of the abnormal accrual models (1)-(3) as explained in Table 3. We report *p*-values below the estimated coefficients. Coefficients for which the *p*-value is 10% or better appear in bold face. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). See the Appendix for variable definitions.

2. The regression model is:

$$EMJ_i = \alpha + \beta_1 INST_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i + \varepsilon_t$$

where *EMJ*, *J*={1, 2, 3} is the absolute value of the specific abnormal accrual measure as explained in Table 3.

Table 6: Abnormal Accruals Analyzed between Strong and Weak Legal Institutions Countries

	EM1			*EM2*			*EM3*		
	Strong	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**
INTERCEPT	1.753	1.450		1.255	1.295		**2.179**	1.524	
	(0.102)	(0.162)		(0.315)	(0.236)		**(0.051)**	(0.194)	
INST			0.303			-0.041			0.655
			(0.803)			(0.974)			(0.622)
B_INDP	0.166	**-0.589**	0.755	0.186	**-0.769**	0.955	0.037	**-0.615**	0.653
	(0.627)	**(0.022)**	(0.114)	(0.653)	**(0.011)**	(0.114)	(0.926)	**(0.045)**	(0.292)
AUD	0.147	**-0.156**	0.303	0.187	-0.013	0.200	0.223	-0.130	0.353
	(0.591)	**(0.082)**	(0.362)	(0.454)	(0.935)	(0.571)	(0.335)	(0.294)	(0.283)
IPO	-0.157	-0.104	-0.053	-0.116	-0.200	0.084	-0.140	-0.160	0.021
	(0.183)	(0.362)	(0.775)	(0.348)	(0.166)	(0.713)	(0.233)	(0.186)	(0.919)
UW	-0.085	-0.051	-0.034	-0.074	-0.051	-0.023	-0.082	-0.049	-0.033
	(0.127)	(0.251)	(0.471)	(0.283)	(0.312)	(0.713)	(0.201)	(0.327)	(0.549)
FSIZE	-0.057	-0.033	-0.024	-0.055	-0.042	-0.013	-0.082	-0.036	-0.046
	(0.316)	(0.502)	(0.744)	(0.401)	(0.390)	(0.864)	(0.154)	(0.509)	(0.557)
PROFIT	**0.129**	0.145	-0.016	**0.117**	0.157	-0.040	0.069	0.106	-0.037
	(0.021)	(0.110)	(0.884)	**(0.058)**	(0.132)	(0.733)	(0.305)	(0.258)	(0.749)
TENURE	0.003	-0.009	0.012	0.006	-0.000	0.006	-0.002	-0.008	0.006
	(0.795)	(0.309)	(0.460)	(0.720)	(0.981)	(0.776)	(0.893)	(0.395)	(0.764)
LIT	**-0.292**	0.209	**-0.501**	-0.149	0.317	**-0.466**	**-0.316**	0.176	**-0.491**
	(0.085)	(0.177)	**(0.001)**	(0.397)	(0.131)	**(0.007)**	**(0.052)**	(0.340)	**(0.003)**
H-TECH	0.040	-0.057	0.096	0.144	0.012	0.132	0.068	0.059	0.009
	(0.724)	(0.564)	(0.498)	(0.578)	(0.922)	(0.641)	(0.656)	(0.557)	(0.963)
N	134	156	290	134	156	290	134	156	290
Adj R^2	0.103	0.152	0.122	0.027	0.108	0.062	0.053	0.071	0.059

Notes:

1. The table presents results of the regression models of abnormal accruals reported in Table 5 separately for the strong home institutions subsample (the Strong column) and the weak home institutions subsample (the Weak column). The Difference column reports the difference between the two subsample coefficients using the interactions model described below. In the *EM1-EM3* columns the dependent

variable is the signed value of the abnormal accrual models (1)-(3), as explained in Table 3. We report *p*-values below the estimated coefficients. Coefficients for which the *p*-value is 10% or better appear in bold face. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). See Appendix A for variable definitions.

2. The interactions model:

$$\begin{aligned} EMJ_i = {} & \alpha + \beta_1 INST_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\ & + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\ & + \gamma_1 INST_i * B\_INDP_i + \gamma_2 INST_i * AUD_i + \gamma_3 INST_i * IPO_i + \gamma_4 INST_i * UW_i \\ & + \gamma_5 INST_i * FSIZE_i + \gamma_6 INST_i * PROFIT_i + \gamma_7 INST_i * TENURE_i \\ & + \gamma_8 INST_i * LIT_i + \gamma_9 INST_i * H-TECH_i + \varepsilon_t \end{aligned}$$

The "Difference" column reports the value of the γ_i, i = {1-9} coefficients, their p-values, as well as the adjusted R^2 for this regression.

Table 7: Including Debt and Analyzed between Stronger/Weaker than U.S. Legal Institutions

Panel A: Absolute Abnormal Accruals

	|*EM1*|		|*EM2*|		|*EM3*|	
	Strong	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**
INTERCEPT	**2.652**	**1.967**		**2.769**	**1.936**		**2.942**	**1.918**	
	(0.000)	**(0.046)**		**(0.000)**	**(0.055)**		**(0.000)**	**(0.065)**	
INST_US			0.686			0.833			1.024
			(0.461)			(0.375)			(0.280)
B_INDP	0.202	0.206	-0.005	**0.357**	0.466	-0.108	0.102	0.261	-0.159
	(0.178)	(0.364)	(0.987)	**(0.038)**	(0.204)	(0.778)	(0.545)	(0.343)	(0.601)
AUD	**0.286**	**0.163**	0.123	**0.488**	0.080	**0.408**	**0.301**	0.122	0.179
	(0.041)	**(0.010)**	(0.435)	**(0.004)**	(0.472)	**(0.027)**	**(0.063)**	(0.101)	(0.252)
IPO	**-0.284**	0.109	**-0.393**	**-0.315**	0.219	**-0.534**	**-0.322**	0.149	**-0.471**
	(0.031)	(0.424)	**(0.044)**	**(0.084)**	(0.110)	**(0.026)**	**(0.010)**	(0.312)	**(0.014)**
UW	**-0.080**	0.005	**-0.085**	**-0.083**	0.019	-0.102	-0.084	0.009	-0.093
	(0.018)	(0.916)	**(0.079)**	**(0.022)**	(0.746)	(0.118)	(0.039)	(0.855)	(0.101)
FSIZE	**-0.107**	**-0.104**	-0.003	**-0.120**	**-0.098**	-0.022	**-0.122**	**-0.101**	-0.021
	(0.000)	**(0.014)**	(0.936)	**(0.000)**	**(0.012)**	(0.588)	**(0.000)**	**(0.017)**	(0.589)
PROFIT	**0.081**	0.098	-0.018	**0.108**	0.099	0.009	**0.083**	**0.142**	-0.059
	(0.023)	(0.118)	(0.792)	**(0.006)**	(0.129)	(0.897)	**(0.052)**	**(0.057)**	(0.445)
TENURE	**-0.015**	-0.014	-0.001	**-0.023**	**-0.023**	-0.000	**-0.016**	-0.013	-0.003
	(0.028)	(0.121)	(0.911)	**(0.023)**	**(0.044)**	(0.994)	**(0.028)**	(0.176)	(0.789)
LIT	-0.095	0.043	-0.138	-0.165	0.086	-0.251	-0.109	0.074	-0.182
	(0.530)	(0.737)	(0.434)	(0.270)	(0.584)	(0.168)	(0.489)	(0.641)	(0.323)
H-TECH	-0.024	0.106	-0.130	-0.024	-0.047	0.023	0.017	0.115	-0.098
	(0.595)	(0.365)	(0.354)	(0.759)	(0.617)	(0.837)	(0.802)	(0.392)	(0.532)
LEV	**0.302**	-0.056	**0.358**	**0.397**	-0.077	**0.474**	**0.371**	-0.073	**0.444**
	(0.028)	(0.464)	**(0.029)**	**(0.024)**	(0.356)	**(0.023)**	**(0.016)**	(0.123)	**(0.010)**
N	151	139	290	151	139	290	151	139	290
Adj R^2	0.309	0.218	0.272	0.324	0.117	0.231	0.322	0.187	0.267

Panel B: Abnormal Accruals

	EM1			*EM2*			*EM3*		
	Strong	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**	**Strong**	**Weak**	**Difference**
INTERCEPT	**1.532**	**1.958**		1.045	1.964		1.590	**2.220**	
	(0.095)	**(0.092)**		(0.314)	(0.120)		(0.118)	**(0.059)**	
INST_US			-0.426			-0.919			-0.630
			(0.694)			(0.424)			(0.540)
B_INDP	-0.071	**-0.506**	0.436	-0.022	**-0.780**	0.758	-0.171	-0.486	0.314
	(0.811)	**(0.068)**	(0.309)	(0.949)	**(0.018)**	(0.146)	(0.556)	(0.134)	(0.526)
AUD	-0.006	-0.080	0.074	0.060	0.047	0.013	0.053	-0.016	0.069
	(0.975)	(0.399)	(0.779)	(0.741)	(0.798)	(0.967)	(0.783)	(0.910)	(0.815)
IPO	-0.178	-0.070	-0.108	-0.123	-0.216	0.093	-0.164	-0.113	-0.051
	(0.116)	(0.667)	(0.616)	(0.267)	(0.228)	(0.697)	(0.136)	(0.538)	(0.842)
UW	-0.066	-0.057	-0.010	-0.060	-0.058	-0.002	-0.060	-0.055	-0.004
	(0.153)	(0.258)	(0.813)	(0.313)	(0.307)	(0.975)	(0.294)	(0.330)	(0.931)
FSIZE	-0.038	-0.059	0.022	-0.034	-0.073	0.039	-0.054	-0.074	0.021
	(0.401)	(0.265)	(0.751)	(0.505)	(0.166)	(0.570)	(0.258)	(0.134)	(0.744)
PROFIT	**0.115**	0.149	-0.034	**0.103**	0.156	-0.052	0.067	0.115	-0.048
	(0.035)	(0.127)	(0.767)	**(0.087)**	(0.160)	(0.677)	(0.257)	(0.249)	(0.680)
TENURE	0.003	-0.016	0.018	0.005	-0.006	0.010	-0.000	-0.014	0.014
	(0.736)	(0.142)	(0.176)	(0.705)	(0.704)	(0.603)	(0.995)	(0.222)	(0.393)
LIT	**-0.272**	0.247	**-0.520**	-0.142	0.341	**-0.483**	**-0.274**	0.223	**-0.497**
	(0.054)	(0.175)	**(0.001)**	(0.362)	(0.151)	**(0.022)**	**(0.079)**	(0.306)	**(0.025)**
H-TECH	0.024	-0.100	0.124	0.139	-0.046	0.185	0.064	0.016	0.048
	(0.810)	(0.354)	(0.327)	(0.523)	(0.749)	(0.448)	(0.592)	(0.867)	(0.740)
LEV	-0.118	-0.055	-0.062	-0.152	-0.063	-0.089	0.106	-0.072	0.178
	(0.296)	(0.312)	(0.630)	(0.111)	(0.228)	(0.465)	(0.506)	(0.310)	(0.388)
N	151	139	290	151	139	290	151	139	290
Adj R2	0.088	0.165	0.114	0.022	0.115	0.060	0.018	0.100	0.047

Notes:

1. The table presents results of re-estimating the regression models of absolute abnormal accruals reported in Table 4 (Panel A) and abnormal accruals reported in Table 6 (Panel B) after adding *LEV* (=total liabilities/total assets) as an independent variable and replacing *INST* with *INST_US* (=1 if the score of the IPO home country's legal institutions is above that of the U.S., zero otherwise). The table reports the various coefficients separately for the strong home institutions subsample (the Strong column) and the weak home institutions subsample (the Weak column). The Difference column reports the difference between the two subsample coefficients using the models described below. In the |*EM1*|-|*EM3*| columns the dependent variable is the absolute value of the abnormal accrual models (1)-(3), as explained in Table 3. *EM1*-*EM3* are the signed abnormal accruals, as explained in Table 3. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). We report *p*-values below the estimated coefficients. Coefficients for which the *p*-value is 10% or better appear in bold face. See the Appendix for variable definitions.

2. The regression models are:

Panel A:

$$|EMJ_i| = \alpha + \beta_1 INST\_US_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i + \beta_{11} LEV_i + \varepsilon_t$$

Panel B:

$$EMJ_i = \alpha + \beta_1 INST\_US_i + \beta_2 B\_INDP_{ii} + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i + \beta_{11} LEV_i + \varepsilon_t$$

where |*EMJ*| (*EMJ*), $J = \{1, 2, 3\}$ is the absolute (signed) value of the specific abnormal accrual measure, as explained in Table 3.

3. The interactions models:

Panel A:

$$
\begin{aligned}
|EMJ_i| = {} & \alpha + \beta_1 INST\_US_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\
& + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\
& + \gamma_1 INST\_US_i * B\_INDP_i + \gamma_2 INST\_US_i * AUD_i + \gamma_3 INST\_US_i * IPO_i + \gamma_4 INST\_US_i * UW_i \\
& + \gamma_5 INST\_US_i * FSIZE_i + \gamma_6 INST_i\_US * PROFIT_i + \gamma_7 INST\_US_i * TENURE_i \\
& + \gamma_8 INST_i\_US * LIT_i + \gamma_9 INST_i\_US * H-TECH_i + \gamma_{10} INST_i\_US * LEV_i + \varepsilon_t
\end{aligned}
$$

Panel B:

$$
\begin{aligned}
EMJ_i = {} & \alpha + \beta_1 INST\_US_i + \beta_2 B\_INDP_i + \beta_3 AUD_i + \beta_4 IPO_i + \beta_5 UW_i + \beta_6 FSIZE_i \\
& + \beta_7 PROFIT + \beta_8 TENURE_i + \beta_9 LIT_i + \beta_{10} H-TECH_i \\
& + \gamma_1 INST\_US_i * B\_INDP_i + \gamma_2 INST\_US_i * AUD_i + \gamma_3 INST\_US_i * IPO_i + \gamma_4 INST\_US_i * UW_i \\
& + \gamma_5 INST\_US_i * FSIZE_i + \gamma_6 INST\_US_i * PROFIT_i + \gamma_7 INST\_US_i * TENURE_i \\
& + \gamma_8 INST\_US_i * LIT_i + \gamma_9 INST\_US_i * H-TECH_i + \gamma_{10} INST\_US_i * LEV_i + \varepsilon_t
\end{aligned}
$$

The "Difference" column reports the value of the γ_i, i = {1-10} coefficients, their p-values, as well as the adjusted R^2 for the regression.

Table 8: Including Debt and Analyzed between listing in multiple geographic locations and a single listing in the U.S

Panel A: Absolute Abnormal Accruals

	|*EM1*|		|*EM2*|		|*EM3*|	
	Multi	**Single**	**Difference**	**Multi**	**Single**	**Difference**	**Multi**	**Single**	**Difference**
INTERCEPT	**2.686**	**2.262**		**2.978**	**2.447**		**2.665**	**2.519**	
	(0.001)	**(0.003)**		**(0.078)**	**(0.004)**		**(0.003)**	**(0.003)**	
MULTI			0.425			0.531			0.146
			(0.562)			(0.714)			(0.887)
INST	-0.100	**0.228**	**-0.328**	-0.045	**0.154**	**-0.199**	-0.146	**0.203**	**-0.349**
	(0.199)	**(0.004)**	**(0.008)**	(0.598)	**(0.082)**	**(0.075)**	(0.112)	**(0.015)**	**(0.013)**
B_INDP	0.212	0.187	0.025	0.211	**0.400**	-0.189	0.199	0.173	0.026
	(0.146)	(0.164)	(0.889)	(0.236)	**(0.077)**	(0.533)	(0.310)	(0.366)	(0.916)
AUD	**-0.236**	**0.226**	**-0.462**	-0.250	**0.272**	**-0.522**	**-0.302**	**0.211**	**-0.514**
	(0.012)	**(0.002)**	**(0.000)**	(0.131)	**(0.069)**	**(0.032)**	**(0.001)**	**(0.023)**	**(0.000)**
IPO		-0.222			-0.198			-0.229	
		(0.110)			(0.214)			(0.146)	
UW	-0.038	-0.035	-0.003	-0.044	-0.033	-0.011	-0.015	-0.039	0.023
	(0.199)	(0.331)	(0.943)	(0.411)	(0.432)	(0.854)	(0.616)	(0.351)	(0.673)
FSIZE	**-0.097**	**-0.109**	0.011	**-0.104**	**-0.116**	0.012	**-0.106**	**-0.118**	0.012
	(0.000)	**(0.001)**	(0.711)	**(0.046)**	**(0.001)**	(0.820)	**(0.000)**	**(0.000)**	(0.715)
PROFIT	-0.011	**0.122**	**-0.133**	0.026	**0.133**	-0.108	-0.037	**0.149**	**-0.186**
	(0.431)	**(0.013)**	**(0.010)**	(0.189)	**(0.006)**	(0.059)	(0.212)	**(0.011)**	**(0.002)**
TENURE	-0.011	**-0.016**	0.005	-0.016	**-0.026**	0.010	-0.005	**-0.018**	0.013
	(0.192)	(0.009)	(0.596)	(0.362)	**(0.002)**	(0.542)	(0.766)	(0.021)	(0.494)
LIT	**-0.161**	-0.021	-0.140	-0.213	-0.046	-0.167	**-0.200**	-0.017	-0.182
	(0.063)	(0.855)	(0.364)	(0.148)	(0.712)	(0.438)	**(0.080)**	(0.897)	(0.309)
H-TECH	-0.089	0.055	-0.144	-0.112	-0.006	-0.106	-0.011	0.066	-0.078
	(0.414)	(0.557)	(0.431)	(0.567)	(0.952)	(0.663)	(0.941)	(0.526)	(0.716)
LEV	**0.137**	**0.190**	-0.053	**0.169**	**0.266**	-0.097	**0.194**	0.197	-0.004
	(0.005)	**(0.082)**	(0.631)	**(0.010)**	**(0.079)**	(0.547)	**(0.007)**	(0.130)	(0.978)
N	64	226	290	64	226	290	64	226	290
Adj R^2	0.299	0.270	0.267	0.125	0.205	0.191	0.271	0.261	0.255

Panel B: Abnormal Accruals

	EM1			*EM2*			*EM3*		
	Multi	**Single**	**Difference**	**Multi**	**Single**	**Difference**	**Multi**	**Single**	**Difference**
INTERCEPT	0.615	**1.653**		-0.735	1.463		0.359	**1.834**	
	(0.389)	**(0.093)**		(0.738)	(0.191)		(0.793)	**(0.090)**	
MULTI			-1.038			-2.199			-1.475
			(0.343)			(0.309)			(0.362)
INST	**0.194**	0.070	0.124	0.039	0.080	-0.041	0.098	0.090	0.008
	(0.074)	(0.545)	(0.332)	(0.622)	(0.575)	(0.807)	(0.568)	(0.512)	(0.512)
B_INDP	0.237	-0.413	**0.650**	0.037	-0.473	0.510	0.215	-0.379	**0.594**
	(0.103)	(0.114)	**(0.040)**	(0.813)	(0.101)	(0.195)	(0.276)	(0.105)	**(0.089)**
AUD	-0.012	-0.043	0.031	0.014	0.084	-0.070	-0.173	0.034	-0.207
	(0.853)	(0.629)	(0.770)	(0.952)	(0.378)	(0.712)	(0.419)	(0.630)	(0.328)
IPO		-0.126			-0.171			-0.170	
		(0.227)			(0.143)			(0.128)	
UW	-0.010	-0.062	0.052	-0.010	-0.052	0.042	0.039	-0.062	**0.101**
	(0.847)	(0.153)	(0.425)	(0.819)	(0.260)	(0.494)	(0.231)	(0.182)	**(0.076)**
FSIZE	-0.016	-0.048	0.032	0.034	-0.059	0.093	-0.028	-0.059	0.031
	(0.438)	(0.274)	(0.510)	(0.604)	(0.210)	(0.209)	(0.581)	(0.198)	(0.636)
PROFIT	**0.072**	**0.140**	-0.067	0.012	**0.155**	-0.143	-0.061	**0.131**	**-0.192**
	(0.077)	**(0.048)**	(0.437)	(0.516)	**(0.066)**	(0.111)	(0.361)	**(0.081)**	**(0.037)**
TENURE	0.003	-0.008	0.011	0.025	-0.002	0.027	0.010	-0.009	0.019
	(0.607)	(0.213)	(0.213)	(0.374)	(0.820)	(0.315)	(0.599)	(0.171)	(0.323)
LIT	0.072	-0.005	0.077	0.260	0.104	0.157	0.064	-0.034	0.098
	(0.464)	(0.978)	(0.712)	(0.310)	(0.642)	(0.645)	(0.784)	(0.855)	(0.739)
H-TECH	**-0.319**	0.048	**-0.367**	-0.104	0.086	-0.190	**-0.337**	0.142	**-0.479**
	(0.011)	(0.686)	**(0.020)**	(0.694)	(0.586)	(0.366)	**(0.034)**	(0.197)	**(0.004)**
LEV	**-0.183**	-0.029	-0.154	**-0.190**	-0.057	-0.133	0.104	-0.027	0.131
	(0.043)	(0.798)	(0.146)	**(0.011)**	(0.660)	(0.247)	(0.519)	(0.830)	(0.500)
N	64	226	290	64	226	290	64	226	290
Adj R^2	0.315	0.104	0.104	0.035	0.072	0.053	0.042	0.086	0.069

Notes:

1. The table presents results of re-estimating the regression models of absolute abnormal accruals reported in Table 4 (Panel A) and abnormal accruals reported in Table 6 (Panel B) after adding *LEV* (=total liabilities/total assets) as an independent variable and *MULTI* (=1 if the initial public offerings include equity issuance in at least one additional market other than the U.S, zero otherwise). The table reports the various coefficients separately for the multi issuing (*MULTI=1*) and single issuing (*MULTI=0*). The Difference column reports the difference between the two subsample coefficients. In the |*EM1*|-|*EM3*| columns the dependent variable is the absolute value of the abnormal accrual models (1)-(3), as explained in Table 3. *EM1-EM3* are the signed abnormal accruals, as explained in Table 3. We report *p*-values below the estimated coefficients. All regressions control for possible correlation of the residuals within time clusters using Rogers standard errors (Petersen, 2009). Coefficients for which the *p*-value is 10% or better appear in bold face. See the Appendix for variable definitions.

2. The regression models are:

   Panel A:

$$|EMJ_i| = \alpha + \beta_1 MULTI_i + \beta_2 INST_i + \beta_3 B\_INDP_i + \beta_4 AUD_i + \beta_5 IPO_i + \beta_6 UW_i + \beta_7 FSIZE_i + \beta_8 PROFIT_i + \beta_9 TENURE_i + \beta_{10} LIT_i + \beta_{11} H-TECH_i + \beta_{12} LEV_i + \varepsilon_t$$

   Panel B:

$$EMJ_i = \alpha + \beta_1 MULTI_i + \beta_2 INST_i + \beta_3 B\_INDP_i + \beta_4 AUD_i + \beta_5 IPO_i + \beta_6 UW_i + \beta_7 FSIZE_i + \beta_8 PROFIT_i + \beta_9 TENURE_i + \beta_{10} LIT_i + \beta_{11} H-TECH_i + \beta_{12} LEV_i + \varepsilon_t$$

   where |*EMJ*| (*EMJ*), *J*={1, 2, 3} is the absolute (signed) value of the specific abnormal accrual measure, as explained in Table 3.

3. The interactions models:

Panel A:

$$
\begin{aligned}
|EMJ_i| = {} & \alpha + \beta_1 MULTI_i + \beta_2 INST_i + \beta_3 B\_INDP_i + \beta_4 AUD_i + \beta_5 IPO_i + \beta_6 UW_i + \beta_7 FSIZE_i \\
& + \beta_8 PROFIT + \beta_9 TENURE_i + \beta_{10} LIT_i + \beta_{11} H-TECH_i + \beta_{12} LEV_i \\
& + \gamma_1 MULTI_i * INST_i + \gamma_2 MULTI_i * B\_INDP_i + \gamma_3 MULTI_i * AUD_i + \gamma_4 MULTI_i * IPO_i + \gamma_5 MULTI_i * UW_i \\
& + \gamma_6 MULTI_i * FSIZE_i + \gamma_7 MULTI_i * PROFIT_i + \gamma_8 MULTI_i * TENURE_i \\
& + \gamma_9 MULTI_i * LIT_i + \gamma_{10} MULTI_i * H-TECH_i + \gamma_{11} MULTI_i * LEV_i + \varepsilon_t
\end{aligned}
$$

Panel B:

$$
\begin{aligned}
EMJ_i = {} & \alpha + \beta_1 MULTI_i + \beta_2 INST_i + \beta_3 B\_INDP_i + \beta_4 AUD_i + \beta_5 IPO_i + \beta_6 UW_i + \beta_7 FSIZE_i \\
& + \beta_8 PROFIT + \beta_9 TENURE_i + \beta_{10} LIT_i + \beta_{11} H-TECH_i + \beta_{12} LEV_i \\
& + \gamma_1 MULTI_i * INST_i + \gamma_2 MULTI_i * B\_INDP_i + \gamma_3 MULTI_i * AUD_i + \gamma_4 MULTI_i * IPO_i + \gamma_5 MULTI_i * UW_i \\
& + \gamma_6 MULTI_i * FSIZE_i + \gamma_7 MULTI_i * PROFIT_i + \gamma_8 MULTI_i * TENURE_i \\
& + \gamma_9 MULTI_i * LIT_i + \gamma_{10} MULTI_i * H-TECH_i + \gamma_{11} MULTI_i * LEV_i + \varepsilon_t
\end{aligned}
$$

The "Difference" column reports the value of the γ_i, i = {1-11} coefficients, their p-values, as well as the adjusted R^2 for the regression.

Appendix: Variable Definitions

Variable	Definition	Source
EM1	Abnormal accruals in foreign firms calculated according to the modified Jones measure of abnormal accruals in Dechow et al. (1995)	COMPUSTAT and IPO Prospectus
EM 2	Abnormal accruals in foreign firms calculated following Ashbaugh et al. (2003) and Kothari et al. (2005)	COMPUSTAT and IPO Prospectus
EM3	Abnormal accruals in foreign firms calculated according to the regression in Ball and Shivakumar (2008)	COMPUSTAT and IPO Prospectus
INST	An indicator variable that is set equal to 1 if the product of law enforcement index (the International Country Risk Guide – ICRG - Law and Order index) and the revised anti-director index of La Porta et al. (1998) for the home country is above the sample median, 0 otherwise	ICRG website and La Porta et al. (1998)
B_INDP	The ratio of independent directors to total directors serving at the firm's board of directors as shown in prospectus	IPO Prospectus
AUD	An indicator variable that is set equal to 1 if the auditing firm is a Big-6, Big-5 or Big-4 in 1990-1997, 1998-2001 and 2002 onwards, respectively; 0 otherwise	IPO Prospectus
IPO	An indicator variable that is set equal to 1 if the foreign registrant issues shares directly on the US market, 0 otherwise (i.e., for ADRs IPO = 0)	IPO Prospectus
UW	Underwriters Rank obtained from Jay Ritter's website on 06/05/2011	IPO Prospectus
FSIZE	Natural logarithm of sales at the end of fiscal year preceding the IPO. The variable is indexed to 2005 value of US dollars	IPO Prospectus
PROFIT	Net Income the year preceding IPO over total sales of the same year	IPO Prospectus
TENURE	The number of years the incumbent CEO has held this position as of the time of the IPO	IPO Prospectus
LIT	An indicator variable that is set equal to 1 if the firm operates in a high-litigation industry and 0 otherwise where high litigation industries are industries with SIC codes of 2833-2836, 3570-3577, 3600-3674, 5200-5961, and 7370-7374 as defined in Ashbaugh et al. (2003).	SDC Platinum and CRSP
H-TECH	An indicator variable that is set equal to 1 if the firm operates in a high-tech industry and 0 otherwise, as defined in Tech America Foundation[14]	SDC Platinum and CRSP

[14] See http://www.techamerica.org/sic-definition. Retrieved on 02/08/2011