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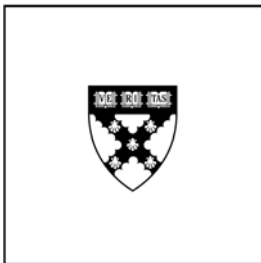
Admitting mistakes: Home country effect on the reliability of restatement reporting

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Admitting mistakes: Home country effect on the reliability of restatement reporting

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Abstract

We study the frequency of restatements by foreign firms listed on the U.S. exchanges. We find that the restatement rate by U.S. listed foreign firms is significantly lower than that of comparable U.S. firms and the difference depends on the home country characteristics of the foreign firm. Foreign firms from countries with a weak rule of law are less likely to restate than firms from strong rule of law countries are, despite companies from the weaker rule of law countries having higher levels of earnings management. After controlling for the materiality of the restatement, firms from weak rule of law countries are more likely to opt for less visible restatement disclosure methods. We interpret these findings as home country enforcement affecting firms' likelihood of reporting existing accounting irregularities. This suggests that for U.S. listed foreign firms, less frequent restatements can be a signal of opportunistic reporting rather than high quality earnings.

Keywords: Accounting restatements, earninings management, home country enforcement

1. INTRODUCTION

We examine the reporting of accounting restatements by foreign firms listed in the United States. Accounting rules in the U.S. require firms to issue a restatement correcting prior errors, upon discovery, in a timely manner (Statement of Financial Accounting Standards 154). The mandatory reporting requirement implies that, in principle, lower earnings quality should increase the likelihood of an accounting restatement. Consequently, a number of studies consider restatements to be a signal of poor earnings quality (e.g., Plumlee and Yohn 2010; Ecker et al. 2011).

While a restatement implies less reliable financial reporting quality, it also means that the firm detected and disclosed the error. The process leading to reporting a restatement involves two steps (Dyck et al. 2010). First, managers commit an unintentional error or deliberate manipulation that results in misstated accounting numbers. Second, the firm detects and reports the misstatement (Keune and Johnstone 2012). The second step, requiring detection and self reporting of the misstatement, depends on the firm's and auditors' ability and willingness to comply with the mandated rule (Heitzman et al. 2010). Therefore, observing a restatement is a joint outcome of 1) committing an accounting error and 2) correcting and reporting the prior misstatement. Therefore, a high rate of restatements can signify both weakness in accounting quality but also the ability to subsequently detect and report the error.

A number of prior studies focus on the first step and show how incentives to engage in earnings management are associated with more frequent restatements (e.g., Richardson et al. 2002; Doyle. et al. 2007a; Efendi et al. 2007). The higher frequency of restatements in the late 1990s has been used to motivate regulatory action to improve accounting quality (GAO 2002; Coates 2007). In this paper, we also explicitly consider the second step, which implies that a higher frequency of restatements also suggests compliance with reporting requirements and the

ability of internal controls and auditors to detect and disclose mistakes. We examine whether foreign firms differ from U.S. firms in their tendency to detect and disclose errors and irregularities in their financial statements, conditional on having low earnings quality. Drawing on prior literature, we examine if country factors are an important determinant of a firm's reporting behavior (Ball et al. 2000) and whether they continue to impact reporting quality even after a firm lists in the U.S.

We use the large number of restatements in recent years, by both U.S. and foreign registrants, to examine the effect of home country characteristics on the reliability of restatement reporting. The self reporting nature of restatements provides a good setting to compare foreign firms to U.S. firms and assess how home country characteristics influence the reliability of the financial statements of foreign firms listed in the U.S. Furthermore, since foreign firms are subject to the disclosure requirements set forth by the Securities and Exchange Commission (SEC), this setting allows us to examine the effect of home country characteristic while holding the extent of regulation constant (Jenkins 1999; Lang et al. 2006).

Our main prediction is that the extent to which errors and irregularities in financial statements are reported as a restatement will vary by a firm's incentives for rule enforcement. Following prior literature, we argue that variation in home country enforcement continues to shape the firm's reporting behavior. Lang et al. (2006) document lower earnings quality in foreign listers compared to U.S. firms, which should result in a greater extent of restatements by foreign firms listed in the U.S., relative to domestic U.S. firms. However, this assumes that errors are detected and reported equally for foreign and U.S. firms. If foreign firms fail to report misstatements due to a lack of detection or due to opportunistic misreporting, it is possible that higher level of earnings management will not necessarily lead to more frequent restatements.

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Empirically, we infer the magnitude of detection and disclosure by associating the frequency of restatements with the level of earnings management and the existence of internal control weaknesses (ICW). If firms correctly report their accounting irregularities, the frequency of restatements will be positively associated with proxies for a firm's earnings management and ICW. In contrast, if potential restatements go undetected or unreported, we expect the relationship between restatement frequency and earnings management (or ICW) to weaken. In our empirical analyses we test whether the association between restatement frequency and earnings management (ICW) will increase with the home country's rule of law.

Our sample comprises 7,890 firm-year observations for U.S. listed foreign firms from 52 countries between 2000 and 2010. The foreign firms report accounting restatements in 9.94% of the firm-years, compared to 15.31% for a matched sample of U.S. domestic firms.[1] We confirm the lower rate of restatements among the foreign firms compared to U.S. firms with multivariate tests that control for factors that prior papers have found to be associated with restatements.

Next, we examine whether home country factors affect the likelihood of restatements. We follow prior studies such as Ball et al. (2000) and Leuz et al. (2003), which document cross country variation in accounting quality driven by the strength of the domestic legal institutions. Even though stricter disclosure and governance rules in the U.S. provide incentives for companies to improve their reporting quality, weak domestic demand for high quality financial reporting can limit the availability of resources (e.g., good auditors, independent boards) needed for firms to improve on this dimension. We use a country level measure of the rule of law as a summary indicator of the extent of compliance with laws and regulations that can shape a firm's reporting

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[1] The restatements we consider are all made to correct misstatements resulting from a failure to comply with the standards companies use to report in the U.S. We do not measure violations of local accounting rules since we are interested in understanding reporting behavior in the U.S., how it compares with that of similar U.S. firms, and how it varies across countries. Hence we use a common basis which is the requirements that are in place for U.S. reporting.

behavior by impacting factors such as auditor effort, investor protection, managerial self-dealing, etc. We use the rule of law index from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. 2003) and used in La Porta et al. (2006).[2,3] If home country factors continue to affect the occurrence and/or reporting of accounting irregularities, it will have a systematic effect on the restatement frequency of U.S. listed foreign firms, despite all these firms being held to the same reporting and auditing standards in the U.S.

We find that the frequency of restatements varies with the home country's rule of law. Firms from weak rule of law countries are less likely to restate, with 7.64% of firm years restated, compared to 14.6 % of firm years for the matched sample of U.S. firms, despite the foreign firms having higher levels of earnings management on average; this difference is statistically significant (p-value <0.001). On the other hand, firms from strong rule of law countries show a smaller difference in their restatement frequency compared to matched U.S. firms (11.4% vs. 15.8% of firm years). The findings hold in multivariate tests after controlling for the difference in the earnings properties of foreign firms that provide GAAP reconciliation as opposed to providing a full set of U.S. GAAP accounts.

The lower rate of restatements for weak rule of law countries, however, can represent an absence of accounting irregularities as well as a lack of detection and disclosure. We distinguish between two interpretations of restatements – (1) a signal of poor earnings quality and (2) a signal of prudent restatement reporting – by associating the frequency of restatements with the quality of reported earnings. We find that the association between restatement frequency and

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[2] Rule of law measures the extent to which agents have confidence in and abide by the rules of society as measured in the year 2000. These include the effectiveness and predictability of the judicial system, the enforceability of contracts, and perceptions of the incidence of crime in the country (LaPorta et al. 2006).
[3] In additional analysis, we test the sensitivity of our inferences to the rule of law index used in Leuz et al. (2003). In addition to the original rule of law measure, the modified rule of law index includes (1) the efficiency and integrity of the country's judicial system and (2) the degree of government corruption.

earnings management increases with the home country's rule of law effectiveness. Firms from weak rule of law countries show no evidence of more frequent restatements when the level of earnings management is high than when it is low. In contrast, firms from strong rule of law countries and the matched U.S. sample show the expected strong positive relationship between restatements and earnings management. We confirm these results using internal control weaknesses (instead of earnings management) as a measure of weak accounting quality. Thus, the lower frequency of restatements seen in firms from weaker rule of law countries is related to lower compliance with restatement reporting rather than higher accounting quality.

Finally, we examine the disclosure medium that U.S. listed foreign companies use to reveal a restatement. Following Myers et al. (2010), less visible disclosure methods are those announced in scheduled financial statements or in amended statements (e.g., 10-K, 20-F, or equivalent), with no prominent notice of the restatement. These are sometimes called 'stealth restatements' in the literature. Visible announcement methods include filing a separate form (e.g., 8-K, 6-K, late filing notice) or a press release. We test whether firms from weak rule of law countries are more likely to choose opaque disclosure methods after controlling for restatement severity. The results show that 73.3% of firms from weak rule of law countries use "stealth" disclosure methods, considerably higher than the 48.3% for the matched U.S. firms and the 61.5 % for firms from strong rule of law countries. The findings hold in multivariate analysis after controlling for the magnitude of the restatements and for other firm and country characteristics.

Our findings suggest that home country factors affect the reporting behavior of foreign firms listed in the U.S., despite all firms being subject to the same U.S. rules and enforcement mechanisms. In economic terms, after controlling for other determinants of restatement probability, firms from weak rule of law countries are 1.72 times less likely to restate than are

firms from strong rule of law countries. Our analysis highlights the two parts of the restatement decision – the first is low earnings quality and the second, the disclosure decision. Since our analysis conditions restatement reporting on prior earnings management and internal control weaknesses the lower frequency of restatement for firms from weak rule of law countries is likely due to a reluctance to admit misstatements, rather than a reflection of a lack of such problems.

Our paper contributes to a few streams of literature. The first examines the causes and consequences of restatements. These studies generally focus on U.S. firms and conclude that restatements represent poor earnings quality and that firms suffer capital market consequences as a result (Palmrose et al. 2004; Plumlee and Yohn 2010). We highlight the two stages in the restatement decision and show that in the absence of overall good governance in some countries, restatement reporting can be opportunistic and thus only weakly related to a firm's earnings quality.

Our findings have broader implications for understanding reporting quality of foreign firms listed in the U.S. The stringent disclosure rules required by U.S. securities laws and the resulting transparency are considered important mechanism through which foreign firms bond to the U.S. regulatory regime. However, prior studies show that the reporting quality of foreign firms listed in the U.S. falls short of that of the U.S. firms (Lang et al. 2006). Natuarally, one can expect more errors and irregularities in the financial statement of U.S. listed foreign firms (and therefore more frequent restatements). However, we find that foreign firms are less likely to restate. This is because the degree to which firms reliably disclose existing accounting irregularities also shows large variation across foreign and U.S. firms. The variation in the reliability of restatement

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reporting suggests that for foreign firms, less frequent restatements can be a signal of opportunistic reporting rather than high quality earnings.

Finally, our findings have regulatory implications. The disclosure of accounting problems provides a basis for SEC investigations and investor scrutiny (Feroz et al. 1991; Hennes et al. 2008; Files et al. 2009). The SEC describes restatements as "the most visible indicator of improper accounting — and source of new investigations" (Schroeder 2001). Firms that do not restate errors/irregularities in their financials lower the risk of an SEC investigation and securities litigation. In the absence of an alternative mechanism that can trigger investigations, our results imply that U.S. listed foreign firms are under-scrutinized by U.S. public and private enforcement mechanisms.

The remainder of the paper is organized as follows. Section 2 reviews the literature and develops our hypotheses. Section 3 describes the data and empirical tests; section 4 presents our results. In section 5, we present additional analyses and conclude in Section 6.

2. HYPOTHESIS DEVELOPMENT AND INSTITUTIONAL DETAILS

2.1 Home country effect and reporting by foreign firms listed in the U.S.

Foreign firms listed in the U.S. follow disclosure requirements set forth by the SEC and relevant laws such as the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002. Under U.S. securities laws, foreign private issuers listed on a major U.S. stock exchange are required to make ongoing filings with the SEC and are subject to SEC oversight and enforcement actions. Prior research considers this commitment to ongoing disclosure and enforcement of securities laws as enabling foreign firms to reap the benefits of listing on the U.S. capital market (Karolyi 2006; Reese and Weisbach 2002). As a result, studies find benefits of U.S. listing such

as a lower cost of capital (Errunza and Miller 2000), higher firm value (Foerster and Karolyi 1999), and a better reporting quality relative to non-cross listed firms (Lang et al. 2003).

In addition to subjecting firms to higher quality reporting standards, U.S. listing can increase reporting quality by increasing the monitoring of the auditors involved. Auditors of firms listed in the U.S. face higher litigation risk than those in other countries (Choi et al. 2009; La Porta et al. 2006), and this can lead to greater audit effort. Case law shows that provisions of the Securities Acts extend to all auditors of U.S. registrants, even if the auditors are not based in the U.S. (Seetharaman et al. 2002). Also, the SEC seeks increasing oversight of the auditors of foreign registrants through the Public Company Accounting Oversight Board (PCAOB).[4] For example, for foreign registrants, the quality control standards of PCAOB (SECPS 1000.08) Appendix K requires a qualified auditor familiar with SEC rules and regulations ("filing reviewer") to review the sample audit procedure of all non-U.S. auditors.

Despite such increased monitoring, prior studies find that the quality of disclosure by U.S. listed foreign firms is not always on par with that of U.S. firms. Lang et al. (2006) show that reported earnings of foreign issuers show more evidence of earnings management than earnings of U.S. firms. They also find that accounting quality of cross-listed firms varies systematically by home country characteristics such as investor protection and legal enforcement. While Lang et al. results are informative, they caution in their conclusions that the earnings quality metrics used in their study have weaknesses. Restatements offer the advantage that they are a clear violation of accounting rules and hence a more precise signal of accounting quality (Dechow et al., 2010). Foreign firms from weak investor protection countries are less likely to voluntarily report

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[4] In additional analysis, we use the variation in the Public Company Accounting Oversight Board (PCAOB)'s ability to conduct an investigation into the auditors of the foreign firms listed in the U.S. and show that U.S. enforcement is also an important determinant of restatement likelihood. See secion 5.1 for details.

incidents of internal control weaknesses (Gong et al. 2010) and are less likely to provide management forecasts (Hope et al. 2011). These findings suggest that U.S. regulation, monitoring by the SEC, and the demands of U.S. investors and analysts do not completely harmonize the reporting behavior of U.S. listed foreign firms with that of domestic U.S. firms.

Firms have an incentive to avoid reporting restatements, because the truthful reporting of a past misstatement, whether intentional or otherwise, draws attention to the severity of accounting mistakes, undermines the credibility of internal controls and financial statements, and has negative firm-level and managerial consequences (Palmrose and Scholz 2004; Srinivasan, 2005; Desai et al. 2006; Collins et al. 2009;DeHaan, Hodge, and Shevlin 2012).[5] Foreign firms are sensitive to this incentive, as one reason for listing in the U.S. is to be bound to a higher quality financial reporting regime (Stulz 1999;Coffee 2002). At the same time, prior studies find that foreign cross-listed firms show a greater tendency towards earnings management, which can in turn increase the likelihood of restatements (DeFond and Jiambalvo 1991; Lang et al. 2006). Thus, we first examine whether foreign firms restatement frequency differs from that of U.S. firms and whether the difference varies systematically by home country characteristics.

H1: The probability of restatements by foreign firms cross-listed in the U.S. will vary by the level of home-country rule of law.

There are several reasons to expect restatement frequency to vary systematically by home country characteristics. Restatements often represent extreme examples of poor quality earnings (Palmrose et al. 2004; Dechow et al. 2011). Leuz et al. (2003) document that foreign firms exhibit more evidence of earnings management, especially in countries with weak enforcement. Also, Lang et al. (2006) find that even after cross-listing, the accounting quality of foreign firms

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[5] Misstatements can also be detected by the SEC. Cheng et al. (2011) argue that the SEC functions as the "monitors of last resort" since management create the financial statements that are reviewed by the auditors before they are filed and then reviewed by the SEC.

does not measure up to that of U.S. firms. Therefore, if foreign firms listed in the U.S. continue to have low quality accounting and more so when firms are from weak rule of law countries, the likelihood of restatements for firms from this group of countries will be higher.

Prior literature on cross-listings suggests that, for U.S. listed foreign firms, the extent of bonding to the U.S. regulatory and governance regime differs systematically across countries (Frost and Pownall, 1994; Fuerst 1998). This is partly because it is more costly for the SEC to pursue enforcement actions and for plaintiffs to sue foreign companies relative to U.S. companies (Siegel 2005). There are also differences across countries in the level of domestic supply of expert intermediaries like auditors, analysts, lawyers, and institutional investors, as well as the extent of domestic enforcement by local capital market regulators. In fact, the cost of enforcement by the SEC and private litigation also depends on the availability of a local infrastructure (e.g. lawyers and auditors) to support enquiries and action in the home country.

We use the measure "rule of law" in the home country (La Porta et al. 2006) as a summary measure to capture the variation across countries on all of the dimensions discussed above. We believe this parsimony is desirable and necessary, as many of the local institutional development measures are highly endogenous and develop together. This measure has been widely used in the prior literature (e.g., Doidge et al. 2007). We also confirm the robustness of the results with an alternate measure of the rule of law index as used in Leuz et al. (2003).

As discussed earlier, companies have an incentive to hide misstatements, and perhaps smooth them over time, without reporting a restatement that draws attention to the accounting mistakes. We identify whether firms report misstatements appropriately by conditioning our analysis on the existing level of earnings management or internal control (IC) weakness in the firm. If firms correctly report their accounting problems, the frequency of restatements will be

positively associated with proxies for earnings management or IC weakness. In contrast, if restatements are likely to be concealed, we expect to find a less significant relationship between restatement frequency and earnings management.

Prior research suggests that not all material misstatements get reported as restatements even in the U.S. context. Libby and Kinney (2000) report experimental evidence that auditors are less likely to correct an earnings overstatement if it will result in the company missing the analyst consensus forecast. Keune and Johnstone (2012) find that auditors are more likely to waive reporting material misstatements when their reputational and economic stakes in the client are lower. They also find that audit committees with lower financial expertise are more likely to allow managers to waive material misstatements compared to audit committees with higher level of expertise.

We examine whether the relationship between the level of earnings management and the tendency to restate financials varies with the strength of home country rule of law and test the following hypothesis.

H2: The relation between the probability of restatement and earnings management will be weaker when the U.S.listed firm is from a country with weak rule of law.

2.2 Restatement disclosure method choices of foreign firms listed in the U.S.

Prior studies show that, conditional on reporting a restatement, firms make disclosure choices in the announcement medium and timing to minimize the cost of the restatement (Files et al. 2009; Myers et al. 2010). Restatements are generally announced in one of four different ways: 1) a separate filing (e.g., 8-K or 6-K), 2) a press release, 3) an amended financial statement (e.g., 10-K/A, 10-Q/A, 20-F/A, or 40-F/A) or non-timely filing (e.g., 10-NTK or equivalent), or 4) a scheduled financial statement (10-K, 10-Q, 20-F, or 40-F). The first two types, i.e., separate filings or press releases, are more visible methods that clearly indicate the existence of the

restatement and a timely disclosure. The other two, i.e., amended statements or regularly scheduled filings – sometimes called 'stealth restatements' – provide information with less publicity at the time of a regular filing. If home country characteristics affect foreign firms' disclosure methods, then we predict that foreign firms are more likely to disclose restatements using a stealth medium, and more so if the firm is from a weak rule of law country.

In August 2004, the SEC announced the *Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date* (SEC, 2004), with rules for disclosing restatements. The *Final Rule* limits the use of "stealth" restatements by requiring firms to file an 8-K for restatements deemed material. Acito et al. (2009) note that this accounting and auditing guidance does not provide bright line rules for materiality assessments, thus allowing for judgment in materiality determination. More importantly for this study, the rule does not apply to foreign firms filing 20-F or 40-F (SEC, 2004). Foreign firms do not file 8-Ks and instead furnish current reports on form 6-K for timely disclosure of a material event (Latham and Watkins, 2010).[6] This provides foreign firms with more latitude in the disclosure method used for restatements.

Consistent with the previous hypotheses, we predict that restatement disclosure visibility will weaken when firms are from a weak rule of law country.

H3: Firms from weak rule of law countries are more likely to disclose material restatements with less visibility than are firms from strong rule of law countries.

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[6] Unlike *filed* 8-Ks, which hold the preparer liable for any false or misleading information, 6-Ks are *furnished*, holding the preparer liable only when the preparer is proven to have 'intentionally' provided false or misleading information. Filed information is subject to the liability provisions of Section 18 of the Exchange Act of 1934 and is automatically incorporated into issuers' registration statement. Furnished information is not subject to the same liability section and is not automatically incorporated into the registration statement, unless the issuer specifically requests its incorporation. (Morrison and Foerster, LLP – Frequently Asked Questions about Foreign Issuers)

3. SAMPLE AND DESCRIPTIVE STATISTICS

3.1 Sample construction

Our sample consists of all foreign firms listed on major U.S. exchanges - NYSE, NASDAQ and AMEX - from 2000 to 2010. We include both American Depository Receipts (ADRs) and foreign firms directly listed on the U.S. exchanges. We exclude OTC traded firms and private equity issuers because such firms are not required to register with the SEC under the Securities Act of 1933 and therefore do not need to follow U.S. disclosure practices (Doidge 2004).

We classify firms as foreign if they are headquartered in a foreign country regardless of the place of incorporation using the variable LOC from Compustat.[7] We drop firm-years with no financial data in Compustat, CRSP, and Worldscope that we need to compute the variables in our regression models. These selection criteria provide us with a sample of 1,364 unique foreign firms and 7,890 firm-years. The restatement sample is obtained from Audit Analytics. This database has been used in prior restatement studies (e.g., Myers et al. 2010; Badertscher and Burks 2011).

We partition the foreign firm sample by rule of law in the home country, using the rule of law index from the World Bank's Worldwide Governance Indicators following La Porta et al. (2006). We classify firms into strong and weak rule of law country-firms using our sample country median (=1.64) of the rule of law index. Table 1 presents the distribution of firm-year observations and restatements for all countries in the two groups. The table shows that firms from weak rule of law countries, on average, restate less than firms from strong rule of law

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[7] Firms with foreign headquarters that are incorporated in the U.S. frequently represent foreign firms that acquired a firm domiciled in the U.S. and did a reverse merger to get listed in the U.S. Since such firms are better characterized as non-U.S. firms, we include the reverse-merger firms in our foreign firm sample.

countries do. Of the 3,061 firm-years in the weak group, 234 (7.64%) were restated; of the 4,829 firm-years in the strong group, 550 (11.39%) were later restated.

Table 2, Panel A presents the descriptive statistics across our sample firms from strong and weak rule of law countries and their respective matched samples of U.S. companies. All variables are defined in Appendix A. The matched sample is obtained by performing an exact match on year and industry, and a propensity score match based on four firm characteristics – size, leverage, ROA, and book-to-market – for each firm year. Compared to firms from countries with a strong rule of law, firms from weak rule of law countries are similar in size and leverage, have higher profitability (ROA), and fewer growth opportunities (book-to-market ratio). Firms from weak rule of law countries are audited by a big five audit firm less frequently (65.9%), relative to firms from strong rule of law countries (69.1%) and the U.S. matched sample (79.4%); they have smaller ownership by U.S. institutions (18.1% vs. 20.1% and 60.7%), less analyst coverage (4.03 vs. 6.5 and 9.2), and are less likely to prepare financials using U.S. GAAP than by using local GAAP with reconciliation to U.S. GAAP. Also, a smaller portion of firms from weak rule of law countries (73.7%) have auditors that allow PCAOB to inspect the firm's audits than the proportion allowed in strong rule of law countries (84.9%).

3.2 Measures of earnings management

We use four commonly used measures of earnings management (EM), all estimated at the firm-year level computed using "as reported" financials i.e., un-restated numbers. The underlying accounting standards used for the financials reported in Compustat vary by the reporting choice of the foreign firm. Foreign registrants listed in the U.S. are allowed to prepare financials using U.S. GAAP, IFRS, or local GAAP with reconciliation to U.S. GAAP.[8] One

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[8] Company's accounting standards for foreign registrants are collected from Capital IQ.

concern with using financials prepared under different standards is that the differences in accounting standards can cause differences in reporting quality (e.g., EM). This can bias our inference, particularly if the firm's reporting choice varies systematically by the firm's home country rule of law. Therefore, in addition to controlling for the accounting standards (*Reporting choice*) in our multivariate analysis, we examine the sensitivity of our findings after dropping observations that report using local GAAP with 20-f reconciliation. Untabulated analysis shows that our findings remain qualitatively unchanged.

Our first measure (EM1) is the proportion of small positive income following Burgstahler and Dichev (1997). For each firm-year, we calculate the percentage of years with small positive income using a three-year rolling window, where small positive income is defined as net income that falls between 0 and 1% of the firm's total assets. This measure is used in an international setting by Lang et al. (2003) and has been shown to be appropriate when model estimation-based earnings management measures are likely to be subject to large measurement error.

Our second measure of earnings management (EM2) is the magnitude of total accruals measured as the ratio of the absolute value of total accruals to the absolute value of operating cash flows from Leuz et al. (2003). The magnitude of the total accruals is used as a proxy for the use of managerial discretion, and scaling by operating cash flows adjusts for the differences in firm economics. We use the approach from Dechow et al. (1995) to measure total accruals.

Our third measure of earnings management (EM3) is accruals quality, which captures estimation errors in the accounting process by measuring how well accruals map into cash flow realizations following Dechow and Dichev (2002). We operationalize this measure as the standard deviation of the residual from a firm-level regression of prior and future operating cash flow.

Finally, we use a smoothing measure to capture the level of management discretion in the reported earnings (EM4). The accounting literature has traditionally used a negative correlation between changes in accruals and operating cash flows to proxy for management intervention over and beyond the normal level of accrual accounting (e.g., Francis et al. 2005). We operationalize this by calculating the three-year rolling Spearman correlation between changes in accruals and changes in operating cash flows.

We aggregate the four measures into an EM index for each firm-year by first ranking the individual measures, an approach similar to that used in Leuz et al. (2003). We use the average percentile rank of all four EM proxies. Since firm-level EM measures are expected to have large measurement errors (Dechow et al. 2010), we use the quintile ranks of the aggregate EM index in our empirical analysis. We sign the measures so that higher values reflect higher EM.

Table 2 Panel B presents the descriptive statistics of the earnings management measures. Consistent with Lang et al. (2006) and Leuz et al. (2003), firms in our sample from weak rule of law countries have higher levels of earnings management compared to firms from strong rule of law countries, measured using any of the four earnings management measures and the index variable, and compared to the U.S. matched sample, on three of the four earnings management variables used. It is worth noting that despite having a higher level of earnings management, on average, firms from weak rule of law countries show less propensity to restate their earnings.

With the exception of the % of firm-years with a small positive income measure (5.8% for weak rule of law countries and 6.7% for the U.S. matched sample), firms from countries with a weak rule of law, on average, have a higher level of earnings management on all the measures relative to the matched U.S. firm sample. Consequently, firms from weak rule of law countries also have a significantly higher level of earnings management on the overall EM index (p-value

< 0.001). On the other hand, the difference in EM index between firms from strong rule of law countries and their matched U.S. sample is not statistically significant (p-value of 0.652).

3.3 Restatement characteristics

Table 3 presents descriptive statistics relating to restatement characteristics. Out of the 360 restatements by foreign firms, 116 are by firms from weak rule of law countries and 244 by firms from strong rule of law countries. For our tests of disclosure method choices, we create a second matched sample of U.S. firms using only the restatement sample. The matched U.S. restatement sample is selected by propensity score matching on four firm characteristics, size, leverage, profitability (ROA), and growth opportunities (book-to-market), within the same two-digit SIC code, fiscal year, and whether the account restated was a core account or a non-core account.[9]

Table 3 shows that across all restatement characteristics, the mean values for restatements from weak rule of law countries are statistically not different from their matched sample of U.S. restatements except that they are more likely to issue a 'stealth' restatement than matched U.S. firms and are economically similar in their materiality, as measured by magnitude. The restatement duration of foreign firms is marginally higher (by one month) compared to that of the U.S. firms. In terms of the accounts restated, foreign firms are more likely to report restatements related to the cost of good solds and special items relative to matched U.S. firms.

In terms of restatement consequences, univariate evidence suggests that a firm is likely to face similar regulatory or legal action regardless of it's country of origin. 7.8% of restatements by firms from weak rule of law countries are followed by securities litigation, which is not statistically different from 9.5% for the matched U.S. sample. The SEC investigates 7.8% of firms from weak rule of law countries and 8.6% for the matched sample of U.S. firms, the

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[9] Following Palmrose et al. (2004), we define core accounts as revenue recognition, cost of goods sold, operating expenses, and depreciation. All other accounts are considered non-core.

difference is statistically insignificant. As a comparison, 7.4% and 10.2% of restatements by firms from strong rule of law countries are followed by securities litigation and an SEC investigation respectively, which are again not statistically different from their U.S. matched sample. In contrast, we observe significant differences in CEO turnover following restatements: CEO turnover for firms from both weak and strong rule of law countries are significantly lower than the CEO turnover rates for the corresponding matched samples of U.S. firms.

4. EMPIRICAL RESULTS

4.1 Frequency of restatements and home country effect

We first present restatement rates for U.S. listed foreign companies. Table 4, Panel A shows the percentage of firm-years restated for foreign companies (9.94%) is lower than that of the matched U.S. sample (15.31%). Foreign firms from weak rule of law countries restate their financial less frequently (7.64%) than firms from strong rule of law countries do (11.4%) and both are lower than the respective matched U.S. firm samples (14.60% and 15.76%). We use the following multivariate restatement prediction model to examine foreign firms' likelihood of restating financial statements as a function of firm-level and country-level characteristics.

$$Restatement_{i,t} = \beta_0 + \beta_1 Weak\_ROL_c + \beta_2 EM\_Index_{i,t} + \beta_{3-13} Firm\_Controls_{i,t} + \beta_{14-16}$$
$$Country\_Controls_{c,t} + Industry\ FE + Year\ FE + \varepsilon_{i,t}. \tag{1}$$

The dependent variable $Restatement_{i,t}$ equals 1 if firm i restated financial statements for year t, and zero otherwise. $Weak\_ROL_c$ is the primary variable of interest and equals 1 for firms from countries with a *Rule of law* score below our sample country median, zero otherwise. $EM\_Index_{i,t}$ is the earnings management index variable, as described in section 3.3. For comparison purposes, the same model is also estimated for the U.S. matched sample.

In addition to the EM measures, we use a number of control variables hypothesized to affect the likelihood of a restatement. Firm characteristics that can affect the propensity to restate include size, leverage, profitability, and growth (Kinney and McDaniel 1989; DeFond and Jiambalvo 1991). We also include complexity, measured as the number of business segments, measures of the firm's monitoring environment: auditor, analyst following, and institutional ownership. We control for whether the foreign firm reports using U.S. GAAP or using local GAAP with reconciliation to U.S. GAAP following the results in Lang et al. (2006). Finally, to mitigate the possibility that the weak rule of law partition is capturing differences in local accounting versus U.S. GAAP, capital market development, economic growth, or differences in auditor legal liability, all of which may be associated with the propensity to restate, we include these as control variables. Finally, we include year and industry fixed effects to control for unobservable time and industry factors that may affect restatement probability.

Table 4, Panel B presents the results from estimating the logistic regression in equation (1). Model (1) shows the estimated coefficient using the pooled foreign and U.S. matched firm sample. The coefficient estimate on *Foreign firm indicator* is negative and statistically significant (coefficient = -0.381, p-value<0.001), suggesting that U.S. listed foreign firms are less likely to restate their financials relative to the matched U.S. sample. Model (2) shows the estimated coefficients using only the foreign firm sample. The coefficient on *Weak ROL* is negative and statistically significant (coefficient = -0.541, p-value<0.001), indicating that firms from weak rule of law countries are less likely to restate their financials. It is worth noting that the *EM Index* has no significant effect on the restatement probability (coefficient =0.048, p-value=0.236) for foreign firms. This finding is in contrast to the matched sample of U.S. firms in Model (3), which shows a greater probability of restatements when firms have higher EM

(coefficient =0.092, p=0.004). In economic terms, this implies that firms from weak rule of law countries are 1.72 times less likely to restate their financials than firms from strong rule of law countries, after controlling for other determinants of restatement probability.[10] Consistent with prior studies (Kinney and McDaniel, 1989; DeFond and Jimbalvo, 1991), firm size and profitability (ROA) are all significant determinants of restatements.

In Models (4) to (6), we use an alternative measure of reporting quality, the internal control (IC) effectiveness, as a predictor of restatements. As before, we estimate equation (1) for the foreign firms and the matched U.S. sample. However, we limit our anlaysis to years after 2007 since IC weakness disclosure became mandatory only after 2007 for foreign firms. The number of firm-year observations are therefore significantly reduced.[11] Model (4) shows the estimated coefficient using the pooled foreign and U.S. matched sample. As before, we find that U.S. listed foreign firms are less likely to restate (-0.619, p-value=0.004) relative to the matched U.S. firms sample. Model (5) shows the estimated coefficients using only the foreign firm sample. We find that firms with weak home country rule of law are less likely to restate (-1.287, p-value=0.007). The coefficient estimate on IC weakness is positive and significant (=0.802, p-value=0.018), suggesting that IC weaknesses are predictors of restatements. We find a similar effect on IC weakness for the foreign and matched U.S. sample (Models (5) and (6)). Overall, the results imply that firms from weak rule of law countries are less likely to restate than firms from strong

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[10] The 1.72 figure is based on the odds ratio of the estimated logit model. The odds ratio is calculated as $\exp^{\beta_0}$ (= exp $^{-0.541}$), suggesting that the odds of a weak rule of law firms versus a strong rule of law firm restating is 0.582. That is, a firm with a high rule of law has 1.72 (=1/0.582) greater odds of restating, all else equal.

[11] The sum of the number of observations in models (5) and (6) does not add up to the number of observations used in model (4). This is because when the sample is partitioned into two subsamples, some two-digit SIC industries with no variation in restatement rates drop out from the estimation.

rule of law countries are and that the lower rate is not driven by weak rule of law-country firms having better earnings quality, as proxied by earnings management and IC effectiveness.

4.2. Home country effect and restatements conditional on the level of earnings management

The likelihood of restatement for U.S. listed foreign firms can vary across countries for two reasons. The governance and compliance environment that exists with a given level of rule of law can affect (1) the likelihood of committing accounting irregularities and (2) likelihood of detecting and reporting the irregularities. Evidence discussed in the previous section suggests that foreign firms especially those from weaker rule of law countries, report fewer restatements. In our next set of tests, we attempt to distinguish between the two explanations – firms in weaker rule of law countries have better accounting quality versus these firms being less likely to report potential restatements – by examining the effect of home country rule of law conditional on the level of earnings management in reported earnings. Our intuition is that the companies engaging in earnings management would be more likely to restate and that the restatement outcome is more likely with a stronger private and public enforcement regime in that economy. Gong et al. (2009) follow a similar approach in assessing the relevance of internal control reports using measures of earnings quality. We test this prediction using the following model.

$$Restatement_{i,t} = \beta_0 + \beta_1 EM\_Index_{i,t} + \beta_{2\text{-}12}Firm\_Controls_{i,t} + \beta_{13\text{-}15}Country\_Controls_{c,t} + \varepsilon_{i,t}. \quad (2)$$

The dependent variable $Restatement_{i,t}$ equals 1 if firm i restated its financial statements for year t, and zero otherwise. In order to compare estimates on our main variable of interest, the β_1 coefficients, across the foreign firms and their matched U.S. sample, we estimate equation (2) as a seemingly unrelated regression (SUR) model. If restatements by firms from weak rule of law countries are as informative about accounting quality as the restatements of similar U.S. firms,

we expect to find no significant difference in the β_1 coefficients between the two samples. To the extent that restatements by firms from weak rule of law countries are less informative, we predict the coefficient to be less positive for these firms relative to the U.S. matched sample.

Panel A of Table 5 presents the univariate result of the difference in restatement probability for firms in the highest and lowest earnings management quintiles. In all samples, firms in the high EM group restate much more frequently than do firms in the lower EM group. The last row reports the difference in restatement probability between the high and low EM groups for each subsample. The foreign firms sample shows a difference of 1.74%, whereas the U.S. matched firm sample shows a greater difference of 3.81% in restatement probability for firms in the highest and lowest EM quintiles. Among the foreign firms, the weak rule of law sample shows a 0.40% difference in restatement probability, compared to 3.47 % for its U.S. matched sample and 3.04% for the strong rule of law group.

Next, we examine the association between earnings quality and restatement likelihood in a multivariate regression. Table 5, Panel B presents the results of the logit regression of equation (2). In Model (1), we estimate a SUR model using the foreign firms and the U.S. matched sample. The estimated coefficient on the EM index shows that there is a significant relation between earnings quality and restatement probability only in the U.S. matched firm sample, but not for the foreign firms. However, the F-test of the difference between the two coefficients is not significant at conventional levels. Next, we divide the foreign firms into high vs. low rule of law countries and compare the EM index coefficient to the estimates from their matched sample. Model (2) estimates a SUR model using the weak rule of law firms and their U.S. matched sample. The *EM_Index* coefficient is positive and significant only for the U.S. matched sample (=0.127, p-value=0.006), but not for the foreign firm sample. F-tests show that the difference in

the estimated coefficient is statistically significant (p-value=0.038). Model (3) shows results

using the strong rule of law country sample and its matched U.S. sample. The estimated

coefficient on *EM_Index* is positive and significant for both the strong rule of law and U.S.

matched sample; the difference in coefficients is not statistically significant (p-value = 0.839)

across the two samples. The results suggest that, relative to similar U.S. firms, restatements by

firms from weak rule of law countries are not as reflective of underlying accounting properties as

they are for firms from strong rule of law countries.[12] The coefficient estimates on the control

variables show that more frequent restatements are associated with lower profitability

(*ROA_current*), sales growth, and having a non-big five auditor for foreign firms from weak rule

of law countries. For those from strong rule of law countries, however, this relationship weakens

and is often even reversed. For example, having a big-five auditor is often associated with a

higher rate of restatements for strong rule of law firms.

4.3 Home country effect and restatements conditional on the level of IC weaknesses

A common criticism of the earnings management measures is that they are subject to

measurement error and hence are a noisy proxy for managerial discretion (Dechow et al. 2010).

We therefore repeat the analyses above with internal control weakness as an alternative proxy for

earnings quality following Doyle et al. (2007b), who find that control weaknesses are associated

with low accruals quality.

We collect internal control weakness (ICW) disclosure from Audit Analytics. Prior literature

shows that good internal control systems increase the reliability of financial reporting

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[12] In untabulated analysis, we repeat the analysis comparing the two foreign samples of strong and weak rule of law firms to each other, without the matched U.S firm sample. An F-test comparing the coefficient estimates on the EM variable shows that the difference is significant ($\chi 2$ (1) = 7.80, p-value=0.005). However, since foreign firms from strong and weak rule of law countries tend to have very different firm characteristics (Table 2, Panel B), inferences that can be drawn from this analysis are limited.

(Ashbaugh-Skaife et al. 2008; Doyle et al. 2007a). For U.S. accelerated filers, ICW disclosure under Section 404 of Sarbanes-Oxley became mandatory from November 2004. For foreign-private issuers, ICW disclosure was required only from the fiscal year ending on or after July 2006.[13] We thus limit our analysis to firm-years starting from 2007 so that we only consider periods when ICW reporting was mandatory. Table 2 shows the descriptive statistics of the ICW disclosure for our sample. For the sample of firms from weak rule of law countries over the 2007-2010 period, 8% of firm-years are reported as having internal control weaknesses compared with 3.9% for the U.S. matched sample 5.1% for firms from strong rule of law countries.

We test whether the association between IC weakness and restatement likelihood varies systematically by home country rule of law using the following equation.

$$Restatement_{i,t} = \beta_0 + \beta_1 IC\_Weakness_{i,t-1} + \beta_{2-12} Firm\_Controls_{i,t} + \beta_{13-15} Country\_Controls_{c,t} + \varepsilon_{i,t.} \ (3)$$

The dependent variable $Restatement_{i,t}$ equals 1 if firm i restated financial statements for year t, and zero otherwise.[14] As before, we expect that the association with IC weakness and restatement probability to systematically vary by the level of home country rule of law. We compare estimates on $IC\_Weakness$ across the foreign firms and their matched U.S. samples using a SUR model. To the extent that restatements by firms from weak rule of law countries are less informative, we predict the coefficient to be less positive for these firms relative to the U.S. matched sample.

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[13] See White & Case LLP "Guide for Foreign Private Issuers: Preparing your Upcoming Annual Report on Form 20-F".

[14] Since restatements almost always result in an ICW disclosure, the β_1 coefficient on $IC\_Weakness$ in equation (3) may be affected by a mechanical relationship between restatements and ICW disclosures. To avoid this, we align the restatement observations with ICW disclosures one year *prior to* the year of the restatement. For restatements that last for more than a single year, we use the ICW disclosure one year prior to the first restating year.

Panel A of Table 6 presents univariate evidence on the difference in restatement probability for firms with weak internal controls and for those with strong internal controls. In each sub-sample, the weak IC firms are always more likely to restate than are the strong IC firms. As seen with the EM measures, the difference in restatement probability between the weak and strong IC weakness firms is smallest for companies from weak rule of law countries and largest for the U.S. firms. The weak rule of law sample shows a 6.90% difference in the restatement probability for firms with and without an IC weakness. This difference increases to 13.13% for the strong rule of law group and 28.20% for the matched U.S. sample.[15, 16]

Table 6, Panel B presents the multivariate results of the logit regression using equation (2). As before, we estimate a SUR model and compare the coefficient estimates for the foreign and U.S. matched firms. Model (1) shows the estimated coefficients for U.S. listed foreign firms and the U.S. matched sample. For both samples, IC weaknesses are strongly related to restatement probability, but the relation is stronger for the U.S. sample (coefficient = 2.054, p-value<0.001). Model (2) shows the estimated coefficients for the U.S. listed firms from weak rule of law countries and their U.S. matched sample. For weak rule of law countries, there is no significant relation between IC weakness and restatement probability (coefficient = 0.652, p-value = 0.221), while the relation is positive and significant (coefficient = 1.916, p-value<0.001) for the U.S. matched sample. F-tests show that the difference in the coefficients is statistically significant (p-value=0.070). Model (3) shows the estimated coefficients using the strong rule of law sample

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[15] Since IC weaknesses are self-reported, the discretion inherent in IC disclosure may cause us to misclassify weak IC firms as strong IC firms. If firms from weak rule of law countries disproportionally misreport themselves as strong IC firms, this will cause a systematic bias in the classification. Gong et al. (2010) show that the effect of home country enforcement on ICW disclosure has been significantly reduced after SOX 404 in effect since 2007. Thus, we restrict our sample period to after 2007 when reporting under Section 404 was required for all accelerated filers.

[16] Non-accelerated filers, i.e., firms with public float shares less than $75 million, were exempt from Section 404 even after 2007. In untabulated analysis, we drop firms that qualify as non-accelerated filers and limit our analysis to firms where ICW disclosures were mandated. Our inferences remain unchanged.

and its matched U.S. sample. IC Weakness is a strong predictor of restatements for both the strong rule of law country sample and its matched U.S. firm sample and the F-test shows that the relationship is stronger for U.S. companies than it is for companies from strong rule of law countries.

Overall, the results in sections 4.2 and 4.3 suggest that the restatements by companies in the weak rule of law country sample are not associated with the two measures of accounting weakness - earnings management and weak internal controls. On the other hand, for the strong rule of law sample and the U.S. matched sample, higher earnings management and poor internal controls are associated with a greater likelihood of restatements. These findings are consistent with the hypothesis that a lower frequency of restatements by firms from weak rule of law countries is indicative of opportunistic reporting.

4.4 Disclosure choice and home country enforcement

Finally, we examine the restatement disclosure medium of U.S. listed foreign firms. Restatements may be announced in various ways: a separate filing (e.g., form 8-K or 6-K), a press release, amended financial statements (e.g., 10-K/A, 10-Q/A, 20-F/A, or 40-F/A), regularly scheduled financial statements (10-K, 10-Q, 20-F, or 40-F), or non-timely filings (e.g., 10-NTK or equivalent). Restatements announced using a separate filing form, press release, or non-timely filing draw attention to the restatement and its severity and provide the restatement announcement with the greatest level of visibility. The other two types of restatements i.e., those announced in the amended statements or in regularly scheduled financial statements, are sometimes referred to as 'stealth restatements', reflecting the lower visibility of the disclosure.

Prior studies show that the manner in which a restatement is disclosed affects the investor reaction. Files (2011) and Myers et al. (2010) find that stealth restatements are associated with

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less negative stock reaction around the announcement date. Thus, if firms from countries with a weak rule of law use disclosure choice opportunistically, the choice to announce a restatement using more visible methods will be less associated with restatement magnitude. We test this hypothesis using the following model:

$$Stealth\ Restatement_{i,t} = \beta_0 + \beta_1 Magnitude_i + \beta_{2\text{-}12} Firm\ Control_i + \beta_{13\text{-}15}\ Country\ Control_c + \varepsilon_{i,t}. (4)$$

The dependent variable, *Stealth Restatement_{i,t}*, equals 1 if the restatement is reported in a regularly scheduled financial statement (10-K, 10-Q, 20-F, or 40-F) or an amended financial statement (e.g., 10-K/A, 10-Q/A, 20-F/A, or 40-F/A) without a separate filing or press release, and zero otherwise (Files et al. 2009). *Magnitude* is an indicator variable equal to 1 if the restatement amount, as a percentage of total assets, is in the top quartile of all restatements, and zero otherwise. We also use an alternative measure of restatement severity, the duration of the restatement, measured as the number of months restated.

We estimate a SUR model to compare the coefficient estimate for firms from weak rule of law countries and their matched sample, and for firms from strong rule of law countries and their matched sample. Table 7 examines whether, conditional on a restatement, firms from weak rule of law countries exhibit opportunistic behavior when choosing the disclosure medium. We define opportunistic behavior as firms choosing to disclose the restatement via a less visible method – such as in the regularly scheduled financial report filing (10-K, 10-Q, 20-F, or 40-F) or an amended regular filing (10-K/A, 10-Q/A, 20-F/A, or 40-F/A) – even when the restatement was material. The alternative, non-opportunistic behavior, is to disclose in a more visible, non-stealth manner. Non-stealth restatements are considered to be those that are announced via press release, a separate filing (8-K, 6-K), or a non-timely filing (NT 10-K or equivalent).

The descriptive evidence in Table 3 shows that 73.3% of all restatements by weak rule of law countries are stealth restatements, compared to 48.3% of the restatements by the matched U.S. sample. Compared to the weak rule of law countries, strong rule of law countries are closer to their matched sample of U.S. firms in the extent to which they use a less visible disclosure medium (61.5% vs. 42.6%).

Panels B and C of Table 7 present the results of estimating equation (4). The main variable of interest is the coefficient on restatement magnitude ($\beta1$). Panel B measures restatement magnitude as the equity impact of the restatement as a percentage of total assets, and Panel C measures magnitude as the number of months affected by the restatement. Since the SEC requires restatements that have a material impact to be disclosed using a visible medium like an 8-K, we expect the restatement magnitude to be negatively associated with the likelihood of using a stealth disclosure ($\beta1<0$).

Coefficient estimates show that the association between restatement magnitude and stealth disclosure varies systematically across the two groups of countries. Model (1) of Panel B shows that β_1 coefficients are negative and significant for both foreign and U.S. matched firms and the difference in the coefficients is statistically significant (F-test =3.22, p-value= 0.073). Model (2) shows that the magnitude and statistical significance of the difference in the β_1 coefficient for the weak rule of law-country sample and its U.S. matched firms is even greater (F-test =5.61, p-value= 0.018). In contrast, the strong rule of law-country sample shows no significant difference in the β_1 coefficients from their U.S. matched firms (F-test =0.36, p-value= 0.549).

Panel C results show a negative relationship between restatement duration stealth disclosure choices consistent with materiality playing a role in the decision. Model (1) results show that foreign and U.S. domestic firms do not differ in their disclosure choice conditional on

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restatement duration. However, Model (2) shows that in weak rule of law countries, the association between restatement magnitude and stealth restatement is insignificant, while for the matched U.S. firm sample, the association between restatement magnitude and the likelihood of using stealth disclosure is negative and significant (= -0.080, p-value= 0.004). This is in contrast to the strong rule of law sample and its U.S. matched sample, which shows that the difference in the coefficients is statistically not significant (F-test= 0.01, p-value = 0.929). These results confirm that the tendency to avoid visible disclosure choices for restatements is greater when firms are from a weak rule of law country.

5. ADDITIONAL ANALYSIS

5.1 PCAOB enforcement and the restatement probability of foreign firms

In this section, we examine the role of U.S. regulatory monitors in shaping the reporting behavior of foreign firms in the U.S. We examine the role of U.S. enforcement using the variation in the Public Company Accounting Oversight Board's (PCAOB's) ability to conduct an investigation of the auditors of foreign firms listed in the U.S.

The PCAOB was established after the Sarbanes-Oxley Act of 2002 (SOX), which required all audit firms auditing a publicly listed U.S. firm to register with the PCAOB. Once registered, the audit firms become subject to PCAOB's periodic inspections, even if the audit firm is domiciled outside of the U.S. In practice, many individual audit firms are yet to allow such an inspection and in certain jurisdictions, local regulators have denied PCAOB the ability to conduct inspections (e.g., China, Switzerland, and certain EU member states).[17] We use this

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[17] Carcello et al. (2010) reports that as of April 2010, 38% of the firms registered with the PCAOB are audit firms domiciled in foreign countries. When a registered audit firm refuses to allow an inspection, the PCAOB has the statutory authority to deregister the audit firm. The board, however, has chosen a measured approach. In 2010, the

variation in PCAOB's reach across foreign countries and auditors to test how U.S. enforcement can affect reporting quality for foreign companies.

In Table 8, we present the results of estimating the logit regression in Model (2) after partitioning the sample by whether firms are audited by auditors that allow PCAOB inspections.[18] Panel A shows that in the weak rule of law sample, restatement probability is positively associated with earnings management when PCAOB inspection is allowed, but negatively associated when PCAOB inspection is not allowed. This suggests that the weaker association between earnings management and restatement likelihood in weak rule of law countries observed in Table 5 is driven by firms with weak U.S. enforcement i.e., auditors that do not allow PCAOB inspections.

Panel B results show that in countries with a strong rule of law, the positive association between earnings management and restatement likelihood is driven by firms that allow PCAOB inspections. Taken together, the findings suggests that the differences in the association between EM and restatement probability for foreign firms and the matched U.S. sample is driven by 1) foreign firms with auditors where PCAOB were *not allowed* to perform inspections for the weak rule of law sample, and 2) foreign firms with auditors where PCAOB were *allowed* to perform inspections for the strong rule of law sample. This suggests that U.S. enforcement, together with stronger home country institutions, is an important determinant of restatement likelihood.

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board publicly disclosed the names of the audit firms that refused to be inspected and delayed the deadline for them to allow inspections.

[18] We obtain the list of countries that allow PCAOB inspections from the international inspection program progress report downloaded from the PCAOB's webpage. The report contains the list of non-U.S. jurisdictions where PCAOB has conducted inspections as of December 2011.

5.2 Alternative measure of country-level institutions

Finally, we examine the sensitivity of our analysis to an alternative measure of country level institutional quality that we have measured using the rule of law. Following Leuz et al. (2003), we measure the strength of a country's law enforcement institutions using the mean score of three law enforcement variables identified in La Porta et al. (1998). The three enforcement variables include the original rule of law measure, and two additional proxies based on assessments from risk rating agencies that attempt to capture: (1) the efficiency and integrity of the country's judicial system and (2) the degree of government corruption.

Panel B of Table 9 reports the results of three logistic regression models in which we use the La Porta et al. (1998) enforcement measure and partition the country into high and low enforcement countries. Similar to the analysis in Table 5, we find that the estimated coefficients on the EM index are significantly associated with restatement likelihood only for the matched U.S. firms. Using foreign firms in weak enforcement countries in model (2), we find that the *EM_index* coefficient is positive and significant only for the U.S. matched sample (coefficient=0.134, p-value=0.003). F-tests show that the difference in the estimated coefficient is statistically significant (p-value=0.033). In model (3), using foreign firms from strong enforcement countries and the matched U.S. sample, we find that difference in the estimated coefficient on *EM_index* is not statistically significant. Our results therefore remain unchanged using alternative measures of enforcement. In untabulated results, we find that our analysis of internal controls is also robust to the La Porta et al. (1998) measure of law enforcement.

6. CONCLUSION

We study restatements by foreign firms listed in the U.S., compare the extent of restatements by the foreign firms to that of domestic U.S. firms, and examine the role of home

country characteristics on the likelihood of the foreign firms restating their financials. On the one hand, restatements reflect weak accounting quality. On the other hand, a restatement announcement implies than an accounting error or irregularity was identified and corrected, reflecting that internal and external governance mechanisms like internal controls and external audit performed their expected roles. Results in the paper suggest that foreign firms listed in the U.S. restate lesser than comparable U.S. firms and this difference is not because the foreign firms have superior accounting quality but because of opportunistic avoidance of issuing a restatement. The difference with U.S. firms is driven primarily by firms that originate from countries with weaker institutions.

Our results suggest that foreign firms listed in the U.S. are subject to a less rigorous monitoring and enforcement regime than domestic U.S. firms. Further, weaker institutions in the firm's country of origin lowers financial reporting quality of foreign firms accessing U.S. markets despite a common set of U.S. rules and enforcement that apply to all foreign firms. The implication of these findings is that restatements are a less accurate measure of the extent of reporting problems in an international setting compared to U.S. domestic firms. An accurate reflection of accounting quality through restatement reporting is a necessary information mechanism for the SEC and investors to hold managers and auditors accountable. Fewer restatements can lead to a lower level of scrutiny which is a concern from an investor protection point   of   view.

REFERENCES

Acito, A., J. Burks, and B. Johnson. 2009. Materiality Decisions and the Correction of Accounting Errors. *The Accounting Review* 84 (3): 659–88.

Ashbaugh-Skaife, H., D. Collins, W. Kinney, and R. Lafond. 2008. The Effect of SOX Internal Control Deficiencies and Their Remediation on Accrual Quality. *The Accounting Review* 83: 217–5

Badertscher, B. A., and J. J. Burks. 2011. Accounting Restatements and the Timeliness of Disclosures. *The Accounting Horizons*. Forthcoming.

Bae, K. H., H. Tan, and M. Welker. 2008. International GAAP differences: The Impact on Foreign Analysts. *The Accounting Review* 83: 593-628.

Ball, R., S. Kothari, and A. Robin. 2000, The Effect of International Institutional Factors on Properties of Accounting Earnings. *Journal of Accounting & Economics* 29: 1-51.

Burgstahler, D., and I. Dichev. 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics* 24: 99-126.

Carcello, J. V., B.L. Roper, and A. Yerger. 2010. Foreign Inspections – Presentation to PCAOB investor advisory group. *PCAOB*: May 4, 2010.

Cheng, X., L. Lei, J. Lawrence, and D. Smith. 2011 CEO power and SEC Prompted Restatements. Working Paper.

Choi J-H, J-B Kim, X. Liu, and D.A. Simunic 2009 Cross-Listing Audit Fee Premiums: Theory and Evidence. *The Accounting Review* 84(5):1429-1463.

Coffee Jr., J., 2002. Racing towards the top?: the impact of cross-listings and stock market competition on international corporate governance. Columbia Law Review 102, 1757–1831.

Collins, D., A. Masli, A. L. Reitenga, and J. M. Sanchez. 2009. Earnings Restatements, the Sarbanes-Oxley Act, and the Disciplining of Chief Financial Officers. *Journal of Accounting, Auditing & Finance* 24 (1): 1–34.

Dechow, P. M., R. Sloan, and A. Sweeny. 1995. Detecting Earnings Management. *The Accounting Review* 70(2):193-225.

Dechow, P. M., and I. D. Dichev. 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review* 77: 35-59.

Dechow, P. M., W. Ge, C. R. Larson, and R. G. Sloan. 2011. Predicting Material Accounting Misstatements. *Contemporary Accounting Research* 28:17-82.

Dechow, P. M., W. Ge, and C. Schrand. 2010. Understanding Earnings Quality: A Review of the Proxies, their Determinants and their Consequences. *Journal of Accounting and Economics* 50: 344-401.

DeFond, M. L., and J. Jiambalvo. 1991. Incidence and Circumstances of Accounting Errors. *The

Accounting Review 66: 643-655.

DeHaan, E., Hodge, F. D. and Shevlin, T. J. 2012. Does Voluntary Adoption of a Clawback Provision Improve Financial Reporting Quality? Contemporary Accounting Research, Forthcoming.

Desai, H., C. E. Hogan, and M. S. Wilkins. 2006. The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Management Turnover. *The Accounting Review* 81:83-112.

Doidge, C. 2004. U.S. Cross-Listings and the Private Benefits of Control: Evidence from Dual-Class Firms. *Journal of Financial Economics* 72: 519-553.

Doidge, C., G. A. Karolyi, and R. M. Stulz. 2007. Why Do Countries Matter So Much for Corporate Governance? *Journal of Financial Economics*, 86(1): 1–39.

Doyle, J., W. Ge, and S. McVay. 2007a. Accruals Quality and Internal Control over Financial Reporting. *The Accounting Review* 82: 1141-1170.

Doyle, J., W. Ge, and S. McVay. 2007b. Determinants of Weaknesses in Internal Control over Financial Reporting. *Journal of Accounting & Economics* 44: 193-223.

Dyck, A., A. Morse, and L. Zingales. 2010. Who Blows the Whistle on Corporate Fraud? *Journal of Finance* 65: 2213-2253.

Ecker, F., J. Francis, P. Olsson, and K. Schipper. 2011. Peer Firm Selection for Discretionary Accruals Models. Duke University Working Paper.

Efendi, J., S., A., and Swanson, E. P. 2007. Why do corporate managers misstate financial statements? The role of option compensation and other factors. *Journal of Financial Economics*, 85 (3): 667-708.

Errunza, V., and D.P. Miller. 2000. Market Segmentation and the Cost of Capital in International Equity Markets., Journal of Financial and Quantitative Analysis 35: 577-600.

Feroz, E. H., K. Park, and V. S. Pastena. 1991. The Financial and Market Effects of the SEC's Accounting and Auditing Enforcement Releases. *Journal of Accounting Research* 29: 107-142.

Files, R., E. Swanson, and S. Tse. 2009. Stealth Disclosure of Accounting Restatements. *The Accounting Review* 84: 1495-1520.

Files, R.. 2011. SEC Enforcement: Does Forthright Disclosure and Cooperation really Matter? *Journal of Accounting and Economics*. Forthcoming.

Foerster, S., and G. A. Karolyi, 1999, The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the U.S., *Journal of Finance* 54, 981–1013.

Francis, J., R. LaFond, P. Olsson, and K. Schipper. 2005. The Market Pricing of Accruals Quality. *Journal of Accounting and Economics* 39: 295-327.

Frost, C. A., and G. Pownall. 1994. Accounting Disclosure Practices in the United States and the United Kingdom. *Journal of Accounting Research* 32: 75-102.

Fuerst, O. 1998. A Theoretical Analysis of the Investor Protection Regulations Argument for Global

Listing of Stocks. *SSRN eLibrary*.

GAAP 2001: A Survey of National Accounting Rules Benchmarked Against International Accounting Standards (IFAD 2001).

GAO 2002 : Financial Statement Restatements Trend, Market Impacts, Regulatory Responses, and Remaining Challenges. United States General Accounting Office.

Gong, G., B. Ke, and Y. Yu. 2010. Home Country Investor Protection, Ownership Structure and Cross-Listed Firms' Compliance with SOX-Mandated Internal Control Deficiency Disclosures. *SSRN eLibrary*.

Heitzman, S., C. Wasley, and J. Zimmerman. 2010. The Joint Effects of Materiality Thresholds and Voluntary Disclosure Incentives on Firms' Disclosure Decisions. *Journal of Accounting and Economics* 49: 109-132.

Hennes, K. M., A. J. Leone, and B. P. Miller. 2008. The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover. *The Accounting Review* 83: 1487-1519.

Hope, O-K., T. Kang, and J. W. Kim. 2011. Voluntary Disclosure Practices by Foreign Firms Cross-Listed in the United States. *SSRN eLibrary*.

Jenkins, E., 1999. Financial reporting in a global capital market world. Financial Accounting Series, No. 198-A (June 29), 2-6.

Karolyi, G. A. 2006. The World of Cross-Listings and Cross-Listings of the World: Challenging Conventional Wisdom. *Review of Finance* 10: 99-152.

Kaufmann, D., A. Kraay, and M. Mastruzzi, 2003, Governance Matters III: Governance Indicators for 1996-2002. *World Bank Policy Research Working Paper* 3106.

Kinney, W. R., and L. S. McDaniel. 1989. Characteristics of Firms Correcting Previously Reported Quarterly Earnings. *Journal of Accounting and Economics* 11: 71-93.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. Law and Finance. *Journal of Political Economy* 106: 1113-55.

La Porta, R., F. Lopez-De-Silanes, and A. Shleifer. 2006. What Works in Securities Laws? *The Journal of Finance* 61: 1-32.

Lang, M., J. S. Raedy, and M. H. Yetman. 2003. How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality. *Journal of Accounting Research* 41: 363-386.

Lang, M., J. S. Raedy, and W. Wilson. 2006. Earnings Management and Cross Listing: Are Reconciled Earnings Comparable to US Earnings?. *Journal of Accounting and Economics* 42: 255-283.

Latham and Watkins. 2010. Financial Statement Requirements in US Securities Offerings: What Non-US Issuers Need to Know. http://www.lw.com/upload/pubContent/_pdf/pub3337_1.pdf.

Leuz, C., D. Nanda, and P. D. Wysocki. 2003. Earnings Management and Investor Protection: An International Comparison. *Journal of Financial Economics* 69: 505-527.

Li, F., 2012. Discussion of Analyzing Speech to Detect Financial Misreporting. *Journal of Accounting Research*, 50(2): 393-400.

Libby, R., and W.R. Kinney. 2000. Earnings management, audit differences, and analysts' forecasts. *The Accounting Review* 75 (4):383-404.

Keune M., and K., Johnstone. 2012. Materiality Judgments and the Resolution of Detected Misstatements: The Role of Managers, Auditors, and Audit Committees. *The Accounting Review* forthcoming.

Myers, Linda A., Susan Scholz, and Nathan Y. Sharp. 2010. Restating Under the Radar? Determinants of Restatement Disclosure Choices and the Related Market Reactions. *SSRN eLibrary*.
 Palmrose, Z.V. and S. Scholz. 2004. The circumstances and legal consequences of non-GAAP reporting: Evidence from restatements. Contemporary Accounting Research 21 (1): 139-180.

Palmrose Z.-V., Vernon J. Richardson, and Susan Scholz. 2004. Determinants of Market Reactions to Restatement Announcements. *Journal of Accounting & Economics* 37: 59-89.

Plumlee, M., and T. Yohn. 2010. An Analysis of the Underlying Causes Attributed to Restatements. *Accounting Horizons* 24: 41-64.

Reese, W. A., and M. S. Weisbach. 2002. Protection of Minority Shareholder Interests, Cross-Listings in the United States, and Subsequent Equity Offerings. *Journal of Financial Economics* 66: 65-104.

Richardson, S., Y. Tuna, and M. Wu. 2002. Predicting Earnings Management: The Case of Earnings Restatements. Working paper.

Schroeder, M. 2001. SEC List of Accounting-Fraud Probes Grows. *Wall Street Journal* (July 6): C1, C16.

SEC.2004. Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date (Release No. 33-8400; 34-49424; File No. S7-22-02)

Seetharaman, A., Gul, F. A. and Lynn, S. G. 2002. Litigation risk and audit fees: evidence from U.K. firms crosslisted on U.S. markets. *Journal of Accounting and Economics*, 33(1), 91-115.

Siegel, J. 2005. Can Foreign Firms Bond Themselves Effectively by Renting U.S. Securities Laws? *Journal of Financial Economics* 75: 319-359.

Srinivasan, S. 2005. Consequences of Financial Reporting Failure for Outside Directors: Evidence from Accounting Restatements and Audit Committee Members. *Journal of Accounting Research* 43: 291-334.

Stulz, R., 1999. Globalization of equity markets and the cost of capital. Journal of Applied Corporate Finance 12, 8–25.

APPENDIX A VARIABLE DEFINITIONS

(i=firm, c=country, r=restatement, t=year)

Variable	Description
Earnings management	
$EM1_{i,t}$: Small positive income	Indicator variables that take a value of 1 if the firm's net income available to common shareholders, scaled by total assets, falls between 0 and 0.01, zero otherwise.
$EM2_{i,t}$: |Accruals|/|CFO|	Ratio of the absolute value of total accruals to the absolute value of operating cash flows. Total accruals are calculated as (Δ Current Assets - Δ Cash) - (Δ Current Liabilities - Δ Current Debt - Δ Tax Payable) - Δ Depreciation.
$EM3_{i,t}$: Accruals quality	The standard deviation of the residual from a firm-level regression of prior and future operating cash flow (Dechow and Dichev (2002) and modified in Wysocki (2009)). The regression model is estimated cross-sectionally each year for each industry (two-digit SIC-code). The measure captures estimation errors in the accounting process by measuring how well accruals map into cash flow realizations.
$EM4_{i,t}$: -Corr(ΔAccrual,Δ CFO)	Negative value of the Spearman correlation of the change in total accruals to the change in operating cash flows, calculated on a rolling basis over the three prior years.
$EM\ Index_{i,t}$	Average percentile rank for each firm for the year across the four (or as many as are available) measures of earnings management. Each year, all firms are ranked on each measure and percentile rank is assigned to the firm for all four (or all available) measures. Higher values indicate higher earnings management.
Firm characteristics	
$Size_{i,t}$	Natural log of total assets.
$Leverage_{i,t}$	Long term and short term debt, scaled by total assets.
$ROA_{i,t}$	Income before extraordinary items, scaled by total assets.
$Book\text{-}to\text{-}Market_{i,t}$	Book to market ratio.
$Big\ Five\ Auditor_{i,t}$	Indicator variable equal to 1 if the firm is audited by one of the big 5 audit firms, zero otherwise.
$Analyst\ coverage_{i,t}$	Number of analysts covering the firm at any point during the year.
$Institutional\ ownership_{i,t}$	Percentage of float shares owned by the U.S. institutional investors. Non-float shares are from Thompson Datastream.
Sales growth$_{i,t}$	% increase in sales from prior year.
$Segment_{i,t}$	Natural log of the number of the firm's business segments.
$Reporting\_Standard_{i,t}$	Indicator variable equal to 1 if firms use U.S. GAAP or IFRS without reconciliation, 0 if firms use local GAAP with reconciliation to U.S. GAAP.
$IC\ Weakness_{i,t}$	Indicator variable equal to 1 if the firm reported an internal control weakness for the year, prior to identifying the need to restate the financials, zero otherwise.
Firms with auditors allowing PCAOB inspection	Indicator variable equal to 1 if firms are audited by audit companies that are not disclosed as companies that deny PCAOB inspection, 0 otherwise (PCAOB webpage accessed December 2011).
Restatement characteristics	
Stealth disclosure$_r$	Indicator variable equal to 1 if the restatement is reported in a regularly scheduled financial statements (10-K, 10-Q, 20-F, or 40-F) or in amended financial statements (e.g., 10-K/A, 10-Q/A, 20-F/A, or 40-F/A) without a separate filing or press release, and zero otherwise.
Magnitude$_r$	The dollar amount of equity restated, scaled by total assets.
Litigation$_r$	An indicator variable equal to 1 if there is an identified litigation related to the restatement within one year after the restatement announcement, zero otherwise.

Core_Account$_r$	An indicator variable equal to 1 if the restatement impacts the core net operating income of the firm, and zero otherwise.
Duration$_r$	The number of months the restatement event affected the financial statements.
SEC investigation$_r$	Indicator variable equal to one if an SEC investigation relating to the restatement is identified by Audit Analytics, zero otherwise.
CEO turnover$_r$	An indicator variable equal to 1 if the CEO leaves his post within a year following the restatement.
Country characteristics	
Weak rule of law$_c$	Indicator variable equal to one if the rule of law index is below the country sample median (=1.64). The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003)) and used in La Porta et al. (2006)) Rule of law measures the extent to which agents have confidence in and abide by the rules of society in the year 2000. These include perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts.
Accounting difference$_c$	Measure of the difference between two local accounting standards from Bae et al. (2008). Measure is constructed based on a survey examining the extent to which local accounting standards deviate from IFRS for a list of 21 accounting rules (GAAP 2001). Two rules are considered similar when the rules of both countries comply with IFRS. Two countries that follow local standards that are not compliant with IFRS are considered to have similar rules only if they derive from the same legal origin. A higher score implies a greater difference.
Country market cap$_{c,t}$	Market capitalization in $ billion, by country and year, obtained from Standard and Poor's Global Stock Markets Factbook 2010.
Country GDP growth$_{c,t}$	Percentage GDP growth by country and year, obtained from the Economist Intelligence Unit.
Auditor legal liability$_c$	Liability standard for accountant measure from La Porta et al. (2006).

TABLE 1: SAMPLE DESCRIPTIVE

Panel A: Distribution of cross-listed firms and restatements by home-country of domicile, firms from weak rule of law countries

WEAK RULE OF LAW COUNTRIES	Total number of restated firm-years	Total number of cross-listed firm-years	% of restating firm-years
Argentina	4	113	4%
Brazil	11	84	13%
Chile	4	162	2%
China	75	689	11%
Colombia	1	2	50%
Dominican Republic	1	4	25%
France	29	234	12%
Ghana	0	3	0%
Greece	2	142	1%
India	14	111	13%
Indonesia	1	21	5%
Israel	32	769	4%
Italy	4	78	5%
Korea (Rep.)	9	94	10%
Malaysia	0	1	0%
Mexico	5	199	3%
Panama	0	16	0%
Peru	4	24	17%
Philippines	7	20	35%
Portugal	0	19	0%
South Africa	15	96	16%
Spain	6	72	8%
Taiwan	8	84	10%
Thailand	0	4	0%
Turkey	0	10	0%
Venezuela	2	10	20%
Total Weak ROL	234	3061	8%
US Matched Sample	447	3061	15%
Total Weak ROL & US Matched	681	6122	11%

This table shows the number of firm-year observations for each country, and the number of firm-years subsequently restated. Weak countries are countries whose rule of law index score (La Porta et al. (2006)) is below the country sample median (=1.64), while strong countries are those with an index score at or above the sample country median. Offshore centers include the Bahamas, Bermuda, the Virgin Islands, the Netherlands Antilles, the Cayman Islands, the Marshall Islands and Papua New Guinea. Since these countries are either British or Dutch territories or have a legal system that follows the British judicial system, we classify them as strong rule of law countries.

TABLE 1 (CONTINUED)

Panel B: Distribution of cross-listed firms and restatements by home-country of domicile, firms from strong rule of law countries

STRONG RULE OF LAW COUNTRIES	Total number of restated firm-years	Total number of cross-listed firm-years	% of restating firm-years
Australia	25	158	16%
Austria	0	7	0%
Belgium	2	18	11%
Canada	200	1819	11%
Czech Rep.	0	1	0%
Denmark	0	25	0%
Finland	6	39	15%
Germany	15	180	8%
Hong Kong	22	258	9%
Hungary	5	19	26%
Iceland	3	9	33%
Ireland	15	210	7%
Offshore Centers	70	512	14%
Japan	20	259	8%
Kazahkstan	4	4	100%
Luxembourg	9	78	12%
Netherlands	27	269	10%
New Zealand	6	22	27%
Norway	2	33	6%
Poland	0	2	0%
Puerto Rico	0	4	0%
Russia	7	45	16%
Singapore	9	60	15%
Sweden	2	62	3%
Switzerland	41	204	20%
United Kingdom	60	532	11%
Total Strong ROL	550	4829	11%
Total US Matched Sample	761	4829	16%
Total Strong ROL & US Matched	1311	9658	14%
Total All Firms (Weak, Strong, US)	1992	15780	13%

This table shows the number of firm-year observations for each country, and the number of firm-years subsequently restated. Weak countries are the countries whose rule of law index score (La Porta et al. (2006)) is below the country sample median (=1.64.), while strong countries are those with an index score at or above the sample country median. Offshore centers include the Bahamas, Bermuda, the Virgin Islands, the Netherlands Antilles, the Cayman Islands, the Marshall Islands and Papua New Guinea. Since these countries are either British or Dutch territories or have a legal system that follows the British judicial system, we classify them as strong rule of law countries.

TABLE 2: DESCRIPTIVE STATISTICS: CROSS-LISTED FIRMS AND MATCHED U.S. FIRM SAMPLE, 2000-2010

Panel A: Firm characteristics

Variables	(1) Weak rule of law country		(2) Match US firms : Weak		(3) Strong rule of law country		(4) Match US firms : Strong		P-values (1)=(2)	P-values (3)=(4)
	n	*Mean*	*n*	*Mean*	*n*	*Mean*	*n*	*Mean*		
Firm characteristics										
Size	3061	6.592	3061	6.638	4829	7.191	4829	7.257	0.449	0.188
Leverage	3061	0.205	3061	0.201	4829	0.203	4829	0.211	0.513	0.019**
ROA	3061	0.005	3061	-0.034	4829	-0.015	4829	-0.012	0.000***	0.272
Book-to-market	3061	0.770	3061	0.649	4829	0.662	4829	0.641	0.000***	0.046**
Governance variables										
IC weakness	876	0.080	1025	0.039	1212	0.051	1295	0.042	0.000***	0.303
Big Five Auditor	3061	0.659	3061	0.794	4829	0.691	4829	0.816	0.000***	0.000***
Analyst Coverage	3061	4.027	3061	9.203	4829	6.469	4829	10.987	0.000***	0.000***
Institutional Ownership	3061	0.181	3061	0.607	4829	0.201	4829	0.619	0.000***	0.000***
% of firms using US GAAP	3061	0.646	3061	0.995	4829	0.809	4829	0.994	0.000***	0.000***
% firms with auditors allowing PCAOB inspection	3061	0.737	3061	1.000	4829	0.849	4829	1.000	0.000***	0.000***

Panel B: Earnings management measures

Earning management (+)										
EM1: Small Positive Income	3061	0.058	3061	0.067	4829	0.059	4829	0.079	0.020**	0.000***
EM2: |Accruals|/|CFO|	2446	1.071	2421	0.834	3917	0.888	3782	0.808	0.000***	0.003***
EM3: Dechow/Dichev	2535	0.025	2604	0.016	3927	0.021	4016	0.017	0.001***	0.064*
EM 4: -Corr(ΔAccrual, ΔCFO)	1857	-0.172	2165	-0.231	3232	-0.185	3424	-0.232	0.007***	0.006***
EM Index	3061	3.139	3061	2.961	4829	2.975	4829	2.962	0.000***	0.652

Notes: This table presents the firm-characteristics of the foreign cross-listed firms (by level of home country rule of law) and their matched U.S. firms. Specification (1) shows the descriptive statistics for the sample of firms from weak legal rule of law countries and specification (2) shows the equivalent for the matched sample of U.S. firms. Specification (3) shows the descriptive statistics for firms from strong legal rule of law countries, and specification (4) presents the equivalent for their U.S. firm matched sample. The matched U.S. sample is selected by performing a propensity score match on size, leverage, performance, and growth, within the same two-digit SIC code and fiscal year. The number of observations for each variable is listed under "n". *% of firms using U.S. GAAP* is the percentage of firms that report using U.S. GAAP or IFRS without reconciliation (as opposed to local GAAP with reconciliation to U.S. GAAP). All other variables are defined in Appendix A. P-values are based on t-tests for differences in mean.

TABLE 3: RESTATEMENT CHARACTERISTICS OF CROSS-LISTED FIRMS AND MATCHED U.S. FIRM SAMPLE, 2000-2010

	(1) Weak rule of law country		(2) Matched US firms :Weak		(3) Strong rule of law country		(4) Matched US firms : Strong		P-values (1)=(2)	P-values (3)=(4)
	n	*Mean*	n	*Mean*	*n*	Mean	*n*	*Mean*		
Restatement characteristics										
Stealth Disclosure	116	0.733	116	0.483	244	0.615	244	0.426	0.000	0.000
Magnitude (% of total assets)	116	-0.014	116	-0.015	243	-0.013	242	-0.004	0.751	0.001
Duration (# of months)	116	28.5	116	27.100	244	27.5	244	26.300	0.000	0.000
Restatement accounts										
Core account										
Revenue recognition	116	0.164	116	0.216	244	0.135	244	0.168	0.317	0.314
Cost of goods sold	116	0.095	116	0.147	244	0.070	244	0.127	0.228	0.033
Operating expenses	116	0.086	116	0.121	244	0.148	244	0.119	0.391	0.352
Depreciation	116	0.069	116	0.052	244	0.066	244	0.045	0.583	0.323
Non-core account										
Merger-related	116	0.129	116	0.147	244	0.156	244	0.148	0.705	0.801
Special items	116	0.224	116	0.198	244	0.262	244	0.152	0.631	0.003
Stock option/compensation	116	0.121	116	0.164	244	0.123	244	0.131	0.350	0.786
Related party/subsidiary	116	0.078	116	0.060	244	0.082	244	0.078	0.606	0.868
Other	116	0.336	116	0.345	244	0.328	244	0.336	0.890	0.848
Consequences										
Litigation	116	0.078	116	0.095	244	0.074	244	0.107	0.642	0.207
SEC Investigation	116	0.078	116	0.086	244	0.102	244	0.102	0.812	1.000
CEO Turnover	116	0.009	116	0.060	244	0.041	244	0.098	0.031	0.013

Notes: This table presents the firm-characteristics of the foreign cross-listed firms (by level of the home country rule of law index) and the matched U.S. firms. We use the country sample median of the rule of law index (=1.64) to classify firms into those from strong and weak rule of law countries. The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003) and used in La Porta et al. (2006)). Specification (1) shows the descriptive statistics for the sample of firms from weak legal rule of law countries and specification (2) shows the equivalent for the matched sample of U.S. firms. Specification (3) shows the descriptive statistics for the firms from strong legal rule of law countries, and specification (4) presents the equivalent for their U.S. firm matched sample. The matched U.S. restatement sample is selected by performing a propensity score match on size, leverage, performance, and growth, within the same two-digit SIC code, restatement accounts (core vs. non-core) and fiscal year. The number of observations for each variable is listed under "n". All variables are defined in Appendix A. See Table 1 for the list of countries with strong and weak and strong rules of law. P-values are based on t-tests for differences in mean.

TABLE 4: RESTATEMENT PROBABILITY OF FOREIGN FIRMS LISTED IN U.S.

Panel A: Percentage of restatements by level of home country rule of law

	All	Weak Rule of Law	Strong Rule of Law
Foreign firms	9.94% (N=7,890)	7.64% (N= 3,061)	11.39% (N=4,829)
US matched firms	15.31% (N=7,890)	14.60% (N=3,061)	15.76% (N=4,829)
Difference [p-value]	5.37% [0.000]	6.96% [0.000]	4.37% [0.000]

Panel B: Likelihood of restatements and home country rule of law

Model: $\text{Restate}_{it} = \beta_0 + \beta_1 * \text{Weak\_ROL}_c + \beta_2 * \text{EM\_Index}_{it} + \beta_3 * \text{IC\_Weakness}_{it} + \beta_{4-17} * \text{Controls}_{it} + \text{Year FE} + \text{Industry FE} + \varepsilon_{it}$ (1)

	D=restate	D=restate	D=restate	D=restate	D=restate	D=restate
	(1)	(2)	(3)	(4)	(5)	(6)
	Foreign & US matched firms	Foreign firms	US matched firms	Foreign & US matched firms	Foreign firms	US matched firms
Foreign firm indicator	-0.381*** [0.000]			-0.619*** [0.004]		
Weak rule of law		-0.541*** [0.005]			-1.287*** [0.007]	
EM Index	0.071*** [0.005]	0.048 [0.236]	0.092*** [0.004]			
IC Weakness				1.507*** [0.000]	0.802** [0.018]	2.064*** [0.000]
Firm Controls						
Size	-0.041 [0.139]	-0.066* [0.094]	-0.006 [0.895]	-0.139** [0.044]	-0.073 [0.434]	-0.117 [0.319]
Leverage	0.384 [0.120]	0.109 [0.785]	0.514 [0.110]	0.839 [0.119]	-0.160 [0.823]	1.150 [0.141]
ROA_current	-1.093*** [0.000]	-1.128*** [0.002]	-1.032*** [0.010]	-0.539 [0.431]	-1.420 [0.192]	-0.197 [0.827]
ROA_lagged	0.568* [0.055]	0.279 [0.475]	0.572 [0.188]	1.502* [0.094]	2.197 [0.120]	1.609 [0.182]
Book-to-Market	0.077 [0.297]	0.053 [0.644]	0.093 [0.343]	0.227 [0.159]	0.198 [0.408]	0.308 [0.175]
Big five auditor	-0.034 [0.695]	-0.102 [0.518]	0.002 [0.983]	-0.366* [0.073]	-1.083*** [0.000]	0.000 [0.999]
Analyst coverage	0.003 [0.664]	0.018 [0.144]	-0.010 [0.368]	-0.013 [0.383]	-0.000 [0.989]	-0.029 [0.195]
Institutional ownership	0.312*** [0.006]	0.277 [0.210]	0.328** [0.016]	-0.040 [0.840]	-0.001 [0.997]	-0.132 [0.593]
Sales growth	0.140 [0.158]	0.128 [0.361]	0.049 [0.729]	0.005 [0.982]	0.467 [0.162]	-0.324 [0.403]
Segments	0.042 [0.629]	0.122 [0.352]	0.055 [0.653]	-0.278* [0.094]	0.030 [0.899]	-0.543** [0.018]
Reporting standard		0.034 [0.826]	0.467 [0.339]		1.115 [0.171]	-0.850 [0.446]

(Continued)

TABLE 4: RESTATEMENT PROBABILITY OF FOREIGN FIRMS LISTED IN U.S.
(CONTINUED)

	D=restate	D=restate	D=restate	D=restate	D=restate	D=restate
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Foreign & US matched firms	**Foreign firms**	**US matched firms**	**Foreign & US matched firms**	**Foreign firms**	**US matched firms**
Country Controls						
Accounting difference		0.481			0.150	
		[0.262]			[0.853]	
Country market cap		0.000**	-0.000**		-0.000	-0.000*
		[0.014]	[0.038]		[0.847]	[0.063]
Country GDP growth		8.148***	-10.841**		14.782***	-8.288
		[0.001]	[0.037]		[0.006]	[0.143]
Auditor legal liability		0.116			0.461	
		[0.754]			[0.530]	
Constant	-3.577***	-4.475***	-1.869*	-1.987***	-4.504***	1.204
	[0.000]	[0.000]	[0.099]	[0.000]	[0.003]	[0.497]
Pseudo R-squared	0.060	0.061	0.067	0.102	0.131	0.143
# obs	15,780	7,890	7,890	4,408	2,088	2,307
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

Notes: Panel A shows the percentage of firm-years in each sample group that subsequently report a restatement. Panel B reports the estimation from a logistic regression of equation (1). The dependent variable is an indicator variable that takes a value of 1 if the firm's financial statements were restated subsequently, zero otherwise. Weak_rule of law is an indicator variable equal to 1 for firms from countries with a weak rule of law and zero otherwise. We use the country sample median of the rule of law index (=1.64) to classify firms into those from strong and weak rule of law countries. The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003) and used in La Porta et al. (2006)). EM_Index is the earnings management index variable described in Appendix A. IC_Weakness is an indicator variable equal to 1 if the firm reported an internal control weakness for the year, prior to identifying the need to restate the financials, zero otherwise. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

TABLE 5: HOME COUNTRY RULE OF LAW AND RESTATEMENT PROBABILITY, CONDITIONAL ON EARNINGS MANAGEMENT

Panel A: Percentage of restatements by level of EM and home country rule of law

	Foreign firms (N=7,890)	US matched firms (N=7,890)	Foreign firms : weak rule of law countries (N=3,061)	US matched firms (N=3,061)	Foreign firms : strong rule of law countries (N=4,829)	US matched firms (N=4,829)
EM= High (5th Quintile)	11.25%	17.16%	7.56%	17.69%	13.82%	16.85%
EM= Low (1st Quintile)	9.50%	13.36%	7.16%	14.22%	10.78%	12.83%
Difference [p-value]	1.74% [0.113]	3.81% [0.003]	0.40% [0.791]	3.47% [0.099]	3.04% [0.043]	4.02% [0.011]

Panel B: Likelihood of restatements conditional on EM, by home country rule of law

Model: $\text{Restate}_{it} = \beta_0 + \beta_1 * \text{EM\_Index}_{it} + \beta_{2-15} * \text{Controls}_{it} + \text{Year FE} + \text{Industry FE} + \varepsilon_{it}.$ (2)

	(1)		(2)		(3)	
				US matched firms		US matched firms
	Foreign Firms	US Matched firms	Weak rule of law countries	: Weak	Strong rule of law countries	: Strong
EM_Index	0.037	0.092***	-0.038	0.127***	0.086*	0.073**
	[0.358]	[0.004]	[0.555]	[0.006]	[0.082]	[0.047]
F- test [Prob > χ2]	χ2 (1) =1.15 [0.284]		χ2 (1) =4.32 [0.038]		χ2 (1) =0.04 [0.839]	
Firm Controls						
Size	-0.051	-0.006	-0.014	0.078	-0.063	-0.056
	[0.182]	[0.895]	[0.809]	[0.250]	[0.237]	[0.258]
Leverage	0.099	0.514	0.379	0.136	0.160	0.706**
	[0.808]	[0.110]	[0.561]	[0.764]	[0.755]	[0.046]
ROA_current	-1.162***	-1.032***	-2.223***	-0.259	-0.758*	-1.500***
	[0.002]	[0.010]	[0.001]	[0.634]	[0.080]	[0.002]
ROA_lagged	0.241	0.572	0.937	0.371	-0.337	0.722
	[0.535]	[0.188]	[0.232]	[0.516]	[0.473]	[0.208]
Book-to-market	0.034	0.093	0.148	0.114	0.053	0.086
	[0.768]	[0.343]	[0.468]	[0.399]	[0.710]	[0.474]
Big five auditor	-0.100	0.002	-1.184***	0.184	0.642***	-0.114
	[0.528]	[0.983]	[0.000]	[0.302]	[0.004]	[0.431]
Analyst coverage	0.018	-0.010	-0.003	-0.017	0.023	-0.005
	[0.135]	[0.368]	[0.882]	[0.238]	[0.104]	[0.659]
Institutional ownership	0.263	0.328**	0.199	0.226	0.282	0.389**
	[0.237]	[0.016]	[0.553]	[0.216]	[0.301]	[0.012]
Sales growth	0.132	0.049	0.540**	0.003	-0.050	0.075
	[0.347]	[0.729]	[0.018]	[0.987]	[0.785]	[0.657]
Segments	0.133	0.055	0.261	-0.265	0.035	0.252**
	[0.306]	[0.653]	[0.158]	[0.135]	[0.842]	[0.033]
Reporting standard	0.121	0.467	0.035	1.029	-0.091	0.283
	[0.439]	[0.339]	[0.899]	[0.324]	[0.640]	[0.618]

(Continued)

TABLE 5 (CONTINUED)

	(1)		(2)		(3)	
				US matched firms		US matched firms
	Foreign Firms	US Matched firms	Weak rule of law countries	: Weak	Strong rule of law countries	: Strong
Country Controls						
Accounting difference	0.145		0.047		0.874*	
	[0.738]		[0.959]		[0.088]	
Country market cap	0.000***	-0.000**	0.000***	-0.000	0.000	-0.000*
	[0.003]	[0.038]	[0.006]	[0.299]	[0.866]	[0.057]
Country GDP growth	5.218**	-10.841**	5.093	-10.756	5.096	-12.133
	[0.020]	[0.037]	[0.231]	[0.112]	[0.210]	[0.140]
Auditor legal liability	0.312		1.296		-0.005	
	[0.413]		[0.163]		[0.990]	
Constant	-4.825***	-1.869*	-5.777***	-3.156*	-5.508***	-0.983
	[0.000]	[0.099]	[0.000]	[0.062]	[0.000]	[0.523]
# obs	7890	7890	3061	3061	4829	4829
Pseudo R-squared	0.057	0.067	0.131	0.075	0.071	0.071
Country controls (Appendix)	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

Notes: Panel A shows the percentage of firm-years in each sample group that subsequently report a restatement, split into the highest and lowest quintiles of the EM index. The calculation of the EM Index is described in Appendix A. Panel B reports the estimation from a logistic regression of equation (2). The dependent variable is an indicator variable that takes a value of 1 if the firm's financial statements were restated subsequently, and zero otherwise. We use the country sample median of the rule of law index (=1.64) to classify firms into those from strong and weak rule of law countries. The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003) and used in La Porta et al. (2006)). Coefficient estimates and p -values (in parentheses) are from seemingly unrelated regressions of restatement probability on EM index and other controls. F-tests compare the coefficients of the EM_Index variable for the weak rule of law country sample and their U.S. matched sample (Models (1) and (2)), as well as the strong rule of law country sample and its matched sample (Models (3) and (4)). All other variables are defined in Appendix A. Standard errors are clustered at the firm level. P-values are based on t-tests for differences in mean. Significance is denoted by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

TABLE 6: HOME COUNTRY RULE OF LAW AND RESTATEMENT PROBABILITY, CONDITIONAL ON IC WEAKNESS

Panel A: Percentage of restatements by level of IC weakness and home country rule of law

	Foreign firms (N=2,088)	Us matched firms (N=2,320)	Foreign: weak rule of law (N=876)	US matched: Weak (N=1,025)	Foreign: strong rule of law (N=1,212)	US matched: Strong (N=1,295)
Weak internal controls	13.64%	37.89%	10.00%	35.00%	17.74%	40.00%
Stong internal controls	3.99%	5.93%	3.10%	6.80%	4.61%	5.24%
Difference [p-value]	9.65% [0.000]	31.96% [0.000]	6.9% [0.003]	28.2% [0.000]	13.13% [0.000]	34.76% [0.000]

Panel B: Likelihood of restatement conditional on IC weakness, by home country rule of law

Model: $Restate_{it} = \beta_0 + \beta_1*IC\_Weakness_{it} + \beta_{2-17}*Controls_{it} + Year\ FE + Industry\ FE + \varepsilon_{it}$. (3)

	(1)		(2)		(3)	
			Foreign firms		Foreign firms	
	Foreign firms	US Matched firms	: weak rule of law countries	US matched firms: Weak	: strong rule of law countries	US matched firms: Strong
IC Weakness	0.785**	2.054***	0.652	1.916***	1.345***	2.528***
	[0.030]	[0.000]	[0.221]	[0.000]	[0.002]	[0.000]
F- test						
[Prob > χ2]	χ2 (1) =7.20 [0.007]		χ2 (1) =3.29 [0.070]		χ2 (1) =3.85 [0.050]	
EM_Index	0.008	0.208**	-0.310*	0.295**	0.205*	0.114
	[0.933]	[0.014]	[0.085]	[0.012]	[0.051]	[0.312]
Firm Controls						
Size	-0.028	-0.120	-0.368*	-0.104	0.104	-0.120
	[0.752]	[0.299]	[0.074]	[0.499]	[0.382]	[0.430]
Leverage	-0.225	0.984	1.091	0.546	-0.675	1.709*
	[0.759]	[0.216]	[0.450]	[0.596]	[0.463]	[0.088]
ROA_current	-1.213	-0.093	-0.285	2.097	-1.872	-2.139**
	[0.266]	[0.916]	[0.885]	[0.115]	[0.133]	[0.049]
ROA_lagged	1.895	1.697	4.226	-0.787	0.880	4.845***
	[0.164]	[0.164]	[0.305]	[0.594]	[0.604]	[0.005]
Book-to-market	0.158	0.259	0.370	0.303	0.133	0.222
	[0.523]	[0.252]	[0.343]	[0.330]	[0.686]	[0.459]
Big five auditor	-1.112***	0.039	-1.122**	0.115	-0.914**	-0.188
	[0.000]	[0.889]	[0.038]	[0.762]	[0.034]	[0.638]
Analyst coverage	0.005	-0.028	-0.011	-0.016	-0.003	-0.037
	[0.831]	[0.206]	[0.826]	[0.584]	[0.900]	[0.209]
Institutional ownership	-0.035	-0.122	-0.316	-0.403	0.095	0.184
	[0.923]	[0.620]	[0.686]	[0.258]	[0.826]	[0.575]
Sales growth	0.383	-0.351	0.230	-0.607	0.529	-0.202
	[0.249]	[0.364]	[0.687]	[0.277]	[0.200]	[0.692]
Segments	-0.008	-0.548**	0.797*	-0.817***	-0.327	-0.385
	[0.972]	[0.017]	[0.054]	[0.006]	[0.268]	[0.157]
Reporting standard	1.514*	-0.799	0.621			-1.374
	[0.060]	[0.476]	[0.518]			[0.163]

(Continued)

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TABLE 6 (CONTINUED)

	(1)		(2)		(3)	
				US matched firms		US matched firms
	Foreign Firms	US Matched firms	Weak rule of law countries	: Weak	Strong rule of law countries	: Strong
Country Controls						
Accounting difference	-0.400		1.566		0.106	
	[0.636]		[0.337]		[0.932]	
Country market cap	-0.000	-0.000**	0.000	-0.000	-0.000	-0.000
	[0.695]	[0.045]	[0.715]	[0.145]	[0.211]	[0.132]
Country GDP growth	7.612*	-9.190	14.188*	-13.011*	2.327	-5.487
	[0.096]	[0.108]	[0.060]	[0.085]	[0.765]	[0.561]
Auditor legal liability	0.974		-1.142		0.395	
	[0.240]		[0.528]		[0.628]	
Constant	-5.465***	0.675	-3.685	-0.966	-4.869***	1.446
	[0.000]	[0.708]	[0.124]	[0.651]	[0.001]	[0.518]
Pseudo R-squared	0.117	0.143	0.219	0.153	0.139	0.194
# obs	2,088	2,307	819	995	1,184	1,285
Country controls (Appendix)	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

Notes: Panel A shows the percentage of firm-years in each sample group that subsequently report a restatement, split into firm-years with reported internal control deficiencies during the same year, but before the restatement was discovered. Panel B reports the estimation from a logistic regression of equation (3). The dependent variable is an indicator variable that takes a value of 1 if the firm's financial statements were restated subsequently, and zero otherwise. We use the country sample median of the rule of law index (=1.64) to classify firms into those from strong and weak rule of law countries. The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003) and used in La Porta et al. (2006)). Coefficient estimates and p -values (in parentheses) are from seemingly unrelated regressions of restatement probability on IC Weakness and other controls. F-tests compare the coefficients of the *ICWeakness* variable for the weak rule of law country sample and its US matched sample, as well as the strong rule of law country sample and its matched sample. All other variables are defined in Appendix A. Standard errors are clustered at the firm level. P-values are based on t-tests for differences in mean. Significance is denoted by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

TABLE 7: DISCLOSURE CHOICE AND HOME COUNTRY RULE OF LAW

Panel A: Percentage of stealth restatements by the severity of restatements and home country rule of law

	Foreign firms	US matched firms	Foreign : weak rule of law countries	US matched: Weak	Foreign : strong rule of law countries	US matched: Strong
High_Magnitude	55.32%	32.94%	61.29%	30.30%	52.38%	34.62%
Low_Magnitude	68.80%	48.00%	77.65%	55.42%	64.64%	44.79%
Difference [p-value]	13.48% [0.018]	15.06% [0.015]	16.36% [0.079]	25.12% [0.014]	12.26% [0.086]	10.17% [0.190]

Panel B: Likelihood of stealth disclosure by home country rule of law, conditional on restatement magnitude

	(1)		(2)		(3)	
	Foreign Firms	US Matched firms	Foreign : weak rule of law countries	US matched firms : Weak	Foreign : strong rule of law countries	US matched firms : Strong
Magnitude	-0.841**	-2.017***	-1.555*	-5.448***	-1.021**	-1.533**
	[0.025]	[0.000]	[0.084]	[0.000]	[0.042]	[0.026]
F- test [Prob > χ2]	χ2 (1) =3.22 [0.073]		χ2 (1) =5.61 [0.018]		χ2 (1) =0.36 [0.549]	
Firm Controls						
Size	0.12	-0.303	0.23	-0.501	0.084	-0.247
	[0.368]	[0.108]	[0.452]	[0.176]	[0.641]	[0.281]
Leverage	-0.049	-0.992	0.456	-5.181	0.153	-1.477
	[0.956]	[0.418]	[0.880]	[0.111]	[0.890]	[0.283]
ROA_current	-1.220	0.138	-3.071	0.974	-0.218	1.082
	[0.278]	[0.933]	[0.400]	[0.788]	[0.861]	[0.647]
ROA_lagged	-0.654	-0.547	0.266	-6.918	-2.542	-0.609
	[0.566]	[0.696]	[0.928]	[0.128]	[0.104]	[0.713]
Book-to-Market	-0.061	-0.395	0.363	-0.485	-0.187	-0.398
	[0.853]	[0.400]	[0.725]	[0.462]	[0.666]	[0.503]
Big five auditor	1.446***	-0.752	1.128	0.993	2.023**	-1.014
	[0.008]	[0.179]	[0.331]	[0.464]	[0.016]	[0.109]
Analyst coverage	-0.086**	0.026	-0.050	0.145*	-0.082**	-0.002
	[0.010]	[0.459]	[0.786]	[0.058]	[0.040]	[0.960]
Institutional ownership	0.186	0.982*	1.004	1.836	0.296	0.971
	[0.683]	[0.098]	[0.500]	[0.158]	[0.624]	[0.175]
Sales growth	-0.094	-0.599	-0.666	-3.067*	0.026	-0.526
	[0.808]	[0.214]	[0.514]	[0.071]	[0.952]	[0.345]
Segments	-0.617**	0.585	0.186	-0.000	-1.052**	0.747
	[0.035]	[0.176]	[0.801]	[1.000]	[0.011]	[0.135]
Reporting standard	-0.780*		1.895*		-1.328*	
	[0.089]		[0.088]		[0.057]	
Constant	14.196***	19.866***	11.092**	11.917	11.095***	20.218***
	[0.000]	[0.000]	[0.026]	[0.488]	[0.000]	[0.000]
# obs	319	262	79	74	205	186
Pseudo R-squared	0.234	0.202	0.266	0.441	0.278	0.201
Country controls (Appendix)	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

TABLE 7 (CONTINUED)

Panel C: Likelihood of stealth disclosure by home country rule of law, conditional on restatement duration

	(1)		(2)		(3)	
			Foreign	US matched firms	Foreign	US matched firms
	Foreign Firms	US Matched firms	: weak rule of law countries	: Weak	: strong rule of law countries	: Strong
Duration	-0.018**	-0.026**	0.012	-0.080***	-0.024**	-0.022*
	[0.021]	[0.016]	[0.668]	[0.004]	[0.017]	[0.090]
F- test [Prob > χ2]	χ2 (1) =0.41 [0.524]		χ2 (1) =5.43 [0.020]		χ2 (1) =0.01 [0.929]	
Firm Controls						
Size	0.139	-0.217	0.17	-0.035	0.066	-0.208
	[0.282]	[0.195]	[0.603]	[0.911]	[0.704]	[0.326]
Leverage	0.191	-1.275	0.825	-3.629	0.506	-1.899
	[0.829]	[0.259]	[0.802]	[0.227]	[0.651]	[0.166]
ROA_current	-1.245	0.735	-1.046	0.065	-0.155	1.623
	[0.286]	[0.661]	[0.779]	[0.988]	[0.903]	[0.492]
ROA_lagged	-0.071	-1.164	1.574	-3.405	-1.792	-1.567
	[0.951]	[0.413]	[0.570]	[0.275]	[0.220]	[0.395]
Book-to-Market	-0.037	-0.406	0.741	-1.127	-0.139	-0.412
	[0.912]	[0.393]	[0.414]	[0.110]	[0.749]	[0.512]
Big five auditor	1.354**	-0.441	1.204	0.285	2.025**	-0.762
	[0.011]	[0.436]	[0.235]	[0.837]	[0.010]	[0.243]
Analyst coverage	-0.080**	0.028	-0.099	0.128	-0.071	0.001
	[0.020]	[0.445]	[0.591]	[0.122]	[0.100]	[0.983]
Institutional ownership	0.114	0.919	1.332	1.282	0.173	1.093
	[0.798]	[0.138]	[0.351]	[0.311]	[0.771]	[0.151]
Sales growth	-0.048	-0.459	-0.306	-0.627	-0.002	-0.585
	[0.904]	[0.296]	[0.746]	[0.675]	[0.996]	[0.221]
Segments	-0.627**	0.437	0.091	-0.857	-1.015**	0.754
	[0.028]	[0.302]	[0.904]	[0.362]	[0.012]	[0.142]
Reporting standard	1.453		-1.609		3.044***	
	[0.116]		[0.614]		[0.010]	
Constant	13.335***	18.459***	9.475*	4.744	11.462***	19.945***
	[0.000]	[0.000]	[0.066]	[0.673]	[0.000]	[0.000]
# obs	319	262	79	74	205	186
Pseudo R-squared	0.233	0.175	0.235	0.318	0.284	0.196
Country controls (Appendix)	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

Notes: Panel A of this table shows the percentage of stealth restatements (i.e., restatements that are not announcement via either 8-k disclosure, 6-k disclosure, or press release) by the severity of the restatements. The high magnitude group includes restatements where the cumulative effect of the restatement on equity, scaled by total assets, is in the top quartile of the restatement sample. Panels B and C present a seemingly unrelated logistic regression of the likelihood of stealth restatements on restatement severity. The dependent variable is an indicator variable that takes a value of 1 if the restatement was not announced via 8k, 6k, or press release announcement, zero otherwise. The severity of restatements is measured using restatement *magnitude*, the cumulative effect of the restatement on equity, scaled by total assets (Panel B), and restatement *duration*, the number of months the restatement event affected the financial statements (Panel C). Standard errors are clustered at the firm level. Significance is denoted by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.

TABLE 8: PCAOB ENFORCEMENT AND RESTATEMENT PROBABILITY OF FOREIGN FIRMS

Panel A: Percentage of restatements by foreign firms with auditors that allow PCAOB inspections

	Weak rule of law PCOAB Allowed	Weak rule of law PCOAB Not Allowed	Strong rule of law PCOAB Allowed	Strong rule of law PCOAB Not Allowed
EM= High (5th Quintile)	8.91%	2.27%	14.72%	8.40%
EM= Low (1st Quintile)	6.65%	8.57%	11.01%	9.42%
Difference [p-value]	2.27% [0.212]	-6.30% [0.023]	3.71% [0.025]	1.02% [0.770]

Panel B: Likelihood of restatements and home country rule of law, by PCAOB inspectability

Model: $\text{Restate}_{it} = \beta_0 + \beta_1 * \text{EM\_Index}_{it} + \beta_{2\text{-}17} * \text{Controls}_{it} + \text{Year FE} + \text{Industry FE} + \varepsilon_{it}$.   (2)

	(1) Weak rule of law countries PCOAB allowed	(1) Weak rule of law countries PCOAB not allowed	(2) Strong rule of law countries PCOAB allowed	(2) Strong rule of law countries PCOAB not allowed
EM_Index	0.038	-0.335***	0.110**	-0.021
	[0.605]	[0.007]	[0.033]	[0.883]
F- test [Prob > χ2]	$\chi2\,(1) = 6.81\,[\,0.009]$		$\chi2\,(1) = 0.73\,[0.394]$	
Firm Controls				
Size	0.011	-0.120	-0.052	0.028
	[0.864]	[0.313]	[0.396]	[0.779]
Leverage	0.172	1.204	0.139	0.327
	[0.824]	[0.392]	[0.802]	[0.795]
ROA_current	-1.993***	-2.833	-0.621	-0.878
	[0.005]	[0.126]	[0.190]	[0.507]
ROA_lagged	0.639	3.336**	-0.233	-1.538
	[0.476]	[0.026]	[0.645]	[0.373]
Book-to-market	-0.012	1.236***	-0.018	0.807**
	[0.955]	[0.004]	[0.910]	[0.021]
Big five auditor	-0.582**	-2.054***	0.683***	0.500
	[0.019]	[0.000]	[0.003]	[0.667]
Analyst coverage	0.003	0.037	0.014	0.084***
	[0.916]	[0.409]	[0.393]	[0.008]
Institutional ownership	0.642*	-1.756***	0.139	0.753
	[0.087]	[0.008]	[0.623]	[0.365]
Sales growth	0.325	1.269	0.004	-0.446
	[0.151]	[0.104]	[0.984]	[0.541]
Segments	0.233	0.172	0.063	-0.379
	[0.280]	[0.626]	[0.740]	[0.416]
Reporting standard	-0.125	1.359*	-0.050	0.280
	[0.716]	[0.072]	[0.816]	[0.594]
Constant	-7.991***	-4.421	-4.884***	-6.786***
	[0.000]	[0.190]	[0.000]	[0.009]
# obs	2,255	775	4,101	639
Pseudo R-squared	0.162	0.282	0.067	0.213
Country controls (Appendix)	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES

 Notes: Panel A of this table shows the percentage of firm-years in each country-group subsequently restated, split into two groups: firms with an auditor who is inspectable by PCAOB and firms with an auditor who is not inspectable by PCOAB. Panel B presents a regression analysis of the difference in the relationship between earnings management and the likelihood of restatement for the sub-group of PCAOB-inspectable reporters versus the non-inspectable reporters, within the weak and strong rule of law groups. We use the country sample median of the rule of law index (=1.64) to classify firms into those from strong and weak rule of law countries. The rule of law index is from the Worldwide Governance Indicators created by the World Bank (Kaufmann et al. (2003) and used in La Porta et al. (2006)). Standard errors are clustered at the firm level. Significance is denoted by ***, **, and * for 1%, 5%. and 10% respectively, using a two-tailed test.

TABLE 9: SENSITIVITY ANALYSIS USING DIFFERENT ENFORCEMENT MEASURE

Panel A: Percentage of restatements by level of EM and home country enforcement

	Foreign firms	US matched firms	Foreign firms: weak rule of law countries	US matched: Weak	Foreign firms: strong rule of law countries	US matched: Strong
EM= High (5th Quintile)	11.25%	17.16%	6.95%	17.97%	14.09%	16.61%
EM= Low (1st Quintile)	9.50%	13.36%	7.77%	13.85%	11.02%	13.01%
Difference [p-value]	1.74% [0.113]	3.81% [0.003]	0.82% [0.582]	4.12% [0.040]	3.07% [0.048]	3.60% [0.027]

Panel B: Likelihood of restatement and EM, by home country's level of enforcement

	(1)		(2)		(3)	
	Foreign Firms	US Matched firms	Weak rule of law countries	US matched firms : Weak	Strong rule of law countries	US matched firms : Strong
EM_Index	0.037	0.092***	-0.031	0.134***	0.093*	0.067*
	[0.358]	[0.004]	[0.617]	[0.003]	[0.065]	[0.081]
F- test [Prob > χ2]	χ2 (1) =1.15 [0.284]		χ2 (1) =4.56 [0.033]		χ2 (1) =0.17 [0.679]	
Firm controls						
Size	-0.051	-0.006	-0.005	0.062	-0.081	-0.057
	[0.182]	[0.895]	[0.931]	[0.346]	[0.170]	[0.264]
Leverage	0.099	0.514	0.548	0.246	0.049	0.677*
	[0.808]	[0.110]	[0.366]	[0.567]	[0.927]	[0.064]
ROA_current	-1.162***	-1.032***	-1.923***	-0.499	-0.743*	-1.426***
	[0.002]	[0.010]	[0.004]	[0.344]	[0.088]	[0.004]
ROA_lagged	0.241	0.572	0.665	0.742	-0.213	0.455
	[0.535]	[0.188]	[0.325]	[0.197]	[0.669]	[0.432]
Growth opportunities	0.034	0.093	0.053	0.146	0.180	0.053
	[0.768]	[0.343]	[0.778]	[0.267]	[0.239]	[0.669]
Big five auditor	-0.100	0.002	-1.058***	0.235	0.720***	-0.167
	[0.528]	[0.983]	[0.000]	[0.170]	[0.001]	[0.259]
Analyst coverage	0.018	-0.010	-0.007	-0.018	0.023*	-0.005
	[0.135]	[0.368]	[0.775]	[0.197]	[0.099]	[0.692]
Institutional ownership	0.263	0.328**	0.139	0.193	0.321	0.428***
	[0.237]	[0.016]	[0.675]	[0.273]	[0.249]	[0.007]
Sales growth	0.132	0.049	0.436**	0.026	-0.050	0.056
	[0.347]	[0.729]	[0.047]	[0.898]	[0.793]	[0.747]
Segments	0.133	0.055	0.192	-0.227	0.043	0.258**
	[0.306]	[0.653]	[0.272]	[0.182]	[0.817]	[0.034]
Reporting standard	0.121	0.467	0.108	0.972	-0.199	0.332
	[0.439]	[0.339]	[0.676]	[0.357]	[0.326]	[0.556]
Constant	-4.825***	-1.869*	-5.671***	-3.142*	-5.579***	-1.038
	[0.000]	[0.099]	[0.000]	[0.065]	[0.000]	[0.503]
# obs	7890	7890	3415	3415	4475	4475
Pseudo R-squared	0.057	0.067	0.109	0.078	0.078	0.070
Country Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES

Notes: We use the modified rule of law index (Leuz, Nanda, and Wysocki (2003)) to classify firms into those from strong and weak rule of law countries. The modified rule of law index is the mean score of three law enforcement variables identified in La Porta et al. (1998). Panel A shows the percentage of firm-years in each sample group that subsequently report a restatement, split into the highest and lowest quintiles of the EM index. The calculation of the EM Index is described in Appendix A. Panel B reports the estimation from a logistic regression of equation (2). The dependent variable is an indicator variable that takes a value of 1 if the firm's financial statements were restated subsequently, and zero otherwise. Coefficient estimates and p -values (in parentheses) are from seemingly unrelated regressions of restatement probability on EM index and other controls. F-tests compare the coefficients of the EM_Index variable for the weak rule of law country sample and their U.S. matched sample (Models (1) and (2)), as well as for the strong rule of law country sample and its matched sample (Models (3) and (4)). All other variables are defined in Appendix A. Standard errors are clustered at the firm level. Significance is denoted by ***, **, and * for 1%, 5%, and 10% respectively, using a two-tailed test.