

Private Litigation Risk and the Information Environment: Evidence from Cross-listed Firms

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Abstract

We use a natural experiment, the Supreme Court Ruling in *Morrison v. National Australia Bank* and the subsequent Dodd-Frank Act, to isolate and examine whether and how expected private litigation costs affect voluntary disclosure behavior. The Morrison decision applied a presumption against extraterritoriality for all securities actions. Congress quickly responded by exempting SEC actions through the Dodd-Frank Act, with the result that Morrison eliminates only private securities actions for shares purchased on non-US exchanges. These events lowered the expected private litigation costs for foreign firms cross-listed on US exchanges. We find a deterioration in voluntary disclosure for these firms relative to a matched sample of US firms. This effect is stronger for firms with weaker home country institutions. The evidence is consistent with firms responding to a reduction in expected private litigation costs by reducing public information.

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1. Introduction

We examine the causal effect of expected private litigation costs on voluntary disclosure using a unique natural experiment, the Supreme Court ruling in *Morrison v National Australia Bank*¹ (hereafter referred to as *Morrison*). This ruling eliminated the right of shareholders who purchased shares of foreign companies on a foreign exchange to pursue shareholder lawsuits in US courts under Section 10(b) of the Securities and Exchange Act. Prior to *Morrison*, there was more than 40 years of legal precedent that allowed such shareholders to pursue claims in US courts. Importantly, because of provisions in the subsequent Dodd-Frank Act these changes occurred without any impact on the public enforcement capabilities of the SEC, with the result that this setting allows us to isolate the effect of expected *private* litigation costs on voluntary disclosure.

The relation between expected private litigation costs and voluntary disclosure is unclear in the literature, in part because it is shaped by two competing economic forces. On the one hand, voluntary disclosure may reduce private litigation costs by preventing lawsuits resulting from insufficient disclosure, or failing that, by reducing the length of the class period and thus damages. On the other hand, voluntary disclosure may directly lead to litigation if the (implicit) forecasts contained therein do not come to fruition. The lack of consensus in the literature is exacerbated by the absence of an exogenous setting that can provide clean inferences on the relation between expected private litigation costs and voluntary disclosure.

Morrison provides an exogenous shock to expected private litigation costs for foreign firms cross-listed in the US as these firms can no longer be sued by shareholders who acquired shares outside the US. Expected litigation costs are reduced because total damages are lower,

¹ The full text of the *Morrison* case is available at <http://www.supremecourt.gov/opinions/09pdf/08-1191.pdf>

conditional on a successful shareholder lawsuit, and the likelihood of the firm being sued may also be lower due to reduced expected recoveries. There are two distinct aspects of Morrison that we exploit in our identification strategy. In both cases, we use a difference-in-differences research design. In the first case, we compare foreign cross-listed firms (who were affected by Morrison) with US firms (who were unaffected by Morrison). In the second case, we take advantage of the fact that foreign cross-listed firms experienced differential effects based on firm specific factors and country level factors. These factors allow us to compare the relative change in disclosure behavior of the cross-listed firms that are most affected by Morrison to those that are least affected.

We use properties of analyst forecasts as indirect tests of voluntary disclosure behavior (similar to Rogers and Van Buskirk, 2009) and properties of management guidance as direct tests of voluntary disclosure behavior. We find that there was a reduction in analyst coverage and an increase in forecast dispersion for foreign cross-listed firms relative to US firms following Morrison. These indirect proxies suggest that voluntary disclosure was curtailed in response to the reduction in expected private litigation costs. We also find that there was a reduction in both the likelihood of management guidance as well as the frequency of guidance for foreign cross-listed firms relative to US firms following Morrison. Overall, these results are consistent with a relative deterioration in voluntary disclosure behavior following a reduction in expected litigation costs.

We test whether there is a differential impact on voluntary disclosure based on the ex-ante level of expected private litigation costs and the strength of country-level institutions. Firms with higher ex-ante expected private litigation costs will experience a greater decline in those costs due to Morrison, which should cause a greater decline in voluntary disclosure. Similarly,

firms in countries with weak institutions will also experience greater declines in expected private litigation costs. This is because Morrison transfers the private litigation rights of shareholders who purchased shares on a non-US exchange from the US regulatory system to the home country's regulatory system. Therefore, firms in countries with weak institutions should have a greater decline in voluntary disclosure due to Morrison. We find results generally consistent with these expectations. While we do not find evidence that the ex-ante litigation risk measure from Kim and Skinner (2012) moderates the impact of Morrison, we do find that cross-listed firms located in countries with weak institutions experience a greater decline in voluntary disclosure relative to cross-listed firms located in countries with strong institutions.

Our final set of tests examines the differential impact of Morrison based on the volume of shares traded on non-US relative to US exchanges. A firm with a higher percentage of its total shares trading on non-US exchanges experiences a greater reduction in expected private litigation costs due to Morrison, as a higher percentage of its shareholders can no longer pursue litigation in the US. Consistent with our earlier results, we find that firms with a higher percentage of shares traded on non-US exchanges experienced a greater deterioration in voluntary disclosure behavior in response to the reduction in expected private litigation costs.

We make several contributions to the literature. Our primary contribution is our finding that expected litigation costs are positively related to voluntary disclosure. More specifically, we find that an exogenous decrease in expected private litigation costs leads to a reduction in voluntary disclosure. This adds to the literature on the relation between private securities litigation and voluntary disclosure.

Our findings also contribute to the literature on the costs and benefits of cross-listing. Extant research documents that cross-listed firms have better information environments, which

are associated with higher market valuation (Lang, Lins and Miller, 2003; Doidge, 2004; Doidge, Karolyi, and Stulz, 2004, 2009). The sources of these benefits have been largely attributed to the firm's voluntary bonding to a more stringent mandatory reporting regime (Coffee, 2002). Cheng, Srinivasan, and Yu (2012) find that private securities litigation against cross-listed firms in US courts is also relatively common, which suggests that US courts provide a potential alternative bonding mechanism. Our evidence shows that these bonding mechanisms are related, and in particular that the private securities litigation rights of a firm's shareholders affects a cross-listed firm's voluntary disclosure behavior.

We also add to the literature on Morrison by identifying a specific firm response to the ruling and by documenting specific costs and benefits of the change in expected private litigation costs. The literature on Morrison has focused exclusively on the stock market response. For example, Licht et al. (2012) investigate the overall wealth effects of private securities litigation using a short window stock market event study. They find inconsistent results, and conclude that private securities litigation does not increase firm value. Gagnon and Karolyi (2012) investigate the relative stock market response of US listed to non-US listed shares of the same firm. They find a positive effect, which they suggest is because investors who acquired US listed shares can still collect damages through litigation, but only bear a portion of the overall litigation costs, which fall on the firm as a whole. Neither of these studies examines the firm's response to Morrison, and in particular, whether and how Morrison influences the firm's voluntary disclosure behavior.

This paper proceeds as follows. In Section 2, we summarize the legal setting that we exploit as a natural experiment. We then outline the existing literature and present our

hypotheses in Section 3. We present our data collection in Section 4, followed by our research design in Section 5. The results are presented in Section 6. We conclude in Section 7.

2. Institutional Setting

This section summarizes the regulatory landscape for shareholder lawsuits under Section 10(b) of the Securities and Exchange Act prior to and after the Supreme Court ruling in *Morrison* and the subsequent Dodd-Frank Act. Section 10(b) and Rule 10b-5 give shareholders the right to recover damages from the firm for any act or omission resulting in fraud or deceit in connection with the purchase or sale of the firm's shares. Prior to *Morrison*, the Court of Appeals had established two tests for applying Section 10(b) to cases with foreign elements: the "effects test" and the "conduct test." Under the effects test, Section 10(b) applied to fraudulent conduct that directly affected US investors or markets. In practice, the effects test was satisfied when either the securities were traded on a US exchange or the securities were purchased by a US investor. Under the conduct test, Section 10(b) applied to fraudulent conduct in the US that caused losses abroad, even if those losses were incurred by foreign investors. As a result, it was possible for a foreign issuer to be sued by foreign plaintiffs who bought their securities on a foreign exchange—what was popularly referred to as an "F-cubed" securities class action. In such cases, the conduct test was typically satisfied if the fraudulent conduct occurred in the US.

The applicability of the effects and conduct tests are summarized in Panel A of Figure 1. The two-by-two matrix identifies the applicable test for a foreign issuer based on the location of the exchange and the nationality of investor. The effects test was used when either a US investor or US exchange was involved, and the conduct test was used for F-cubed cases. US courts have heard a significant number of F-cubed cases and admitted a large portion of those cases. In the

15-year period between the Private Securities Litigation Reform Act of 1995 and the Morrison decision, there were approximately 277 class action lawsuits against foreign companies filed in US Courts, which represented around 10% of all class action lawsuits. Of these filings, 107 included F-cubed investors in the initial class, and there were 41 cases where the court decided on F-cubed subject matter jurisdiction. In 27 of 41 cases (66%), courts found that subject matter jurisdiction existed over F-cubed investors' trades (Buckberg and Gulker, 2011).

The Morrison case involved an F-cubed securities class action. Australian investors who purchased shares on a foreign exchange sued National Australia Bank ("NAB"), a foreign issuer. The specific fraudulent act involved the overstatement of the servicing rights asset of a Florida-based NAB subsidiary which was in the business of servicing mortgages. The Court of Appeals ruled that there was no subject matter jurisdiction using the conduct test, because the act of overstating the value of the servicing rights asset was undertaken by executives located in Australia. The fact that the specific asset that was overstated was located in the US was insufficient to create jurisdiction. The court concluded that any actions in the US were, at most, a link in a securities fraud that was conducted abroad.

The Supreme Court affirmed, but in so doing, ruled that the main fraud-related provisions of US securities laws apply only to transactions in securities that take place in the United States or to transactions in securities listed on a US securities exchange. While the decision to find a lack of subject matter jurisdiction was not surprising, the application of a presumption against extraterritoriality was completely unexpected as it reversed more than 40 years of established legal precedent. The new requirement set forth by the court is referred to as the transactional test, and it represents a narrower version of the effects test. While the effects test is satisfied when either the investor or the exchange is based in the US, the transactional test can only be satisfied

if the securities in question were sold on an US exchange. In addition to reducing the scope of the effects test, the Morrison ruling eliminated the conduct test entirely. The applicability of the transactional test is summarized in Panel B of Figure 1. For both US and foreign investors, Section 10(b) can only be applied to fraudulent conduct that has caused losses on securities traded in the US. Comparing Panel A and Panel B, the Morrison decision only impacted firms in the bottom row of the two-by-two matrix.

The Morrison decision applied a presumption against extraterritoriality for all securities actions, both public and private. As a result, Morrison prevented the SEC from pursuing actions against foreign companies under Section 10(b). However, on July 21, 2010, only four weeks after Morrison, Congress passed the Dodd-Frank Act. This Act gives federal district courts jurisdiction over SEC actions charging entities with violating federal securities law antifraud provisions if misconduct in the US has significantly furthered those violations, even if the securities were traded outside the US and the transactions only involved foreign traders, or if misconduct that happened abroad had a foreseeable substantial effect within the US. This new legislation restored the SEC's extraterritorial reach to its pre-Morrison level, with the result that only private enforcement was affected by Morrison.

The provisions added to the Dodd-Frank Act in response to Morrison also tasked the SEC with studying the need for further legislation to reinstate extraterritoriality for private securities litigation. The SEC issued a study on April 11, 2012 (U.S. Securities and Exchange Commission, 2012), which did not express an opinion regarding the desirability of reinstatement. No legislation has been passed since Morrison to expand the extraterritorial reach of US courts for private securities litigation. As a result, Morrison provides an ideal setting to isolate the effects of private litigation on the firm's voluntary disclosure behavior.

3. Literature Review and Hypothesis Development

Empirical findings on the relation between expected private litigation costs and voluntary disclosure have been somewhat mixed. Skinner (1994) shows that firms are more likely to preemptively disclose earnings information in bad news quarters when compared with good news quarters. This evidence suggests that firms disclose more when the threat of litigation is perceived to be higher. This result contrasts with Francis, Philbrick and Schipper (1994) who find that more than half of their litigation sample is sued based on an earnings forecast or a preemptive earnings disclosure, not an earnings announcement. Skinner (1997) similarly finds that firms that are eventually sued have higher levels of voluntary disclosure, but suggests that this is due to the endogeneity of the disclosure behavior. As the threat of litigation increases, firms increase their disclosure to reduce expected litigation costs.

The main challenge in these studies is the endogenous nature of voluntary disclosure and litigation. Subsequent research has tried to address this in different ways. Baginski, Hassell and Kimbrough (2002) investigate the management guidance behavior of US and Canadian firms and find that Canadian firms are more likely to provide guidance. In contrast to US firms, Canadian firms are not more likely to voluntarily disclose in bad news quarters. Overall, their findings suggest that the threat of litigation discourages voluntary disclosure, but encourages the early disclosure of bad news. Using a simultaneous equations approach, Field, Lowry, and Shu (2005) find no evidence that voluntary disclosure triggers litigation, and some evidence that disclosure deters certain types of litigation. In contrast, Rogers and Van Buskirk (2009) find that firms reduce their voluntary disclosure following lawsuits. They interpret this finding as suggesting that firms act as if they believe voluntary disclosure increases expected litigation costs. This suggests that an increase in expected litigation costs would lead to a reduction in voluntary

disclosure. Lowry (2009) challenges this interpretation and suggests that the experiences of firms that have been sued may be not representative of the overall population.

Morrison gives us a unique setting in which to examine this issue given that expected private litigation costs were unexpectedly and suddenly altered for certain types of foreign firms. This setting allows us to examine the same firm under two litigation regimes and gives us a natural comparison group in the US firms which were not affected by Morrison. Given the conflicting economic forces and the mixed findings in the literature we state our first hypothesis in the null form:

H1: Foreign firms do not differentially alter their voluntary disclosure behavior after Morrison.

Under the alternative hypothesis that expected private litigation costs increase (decrease) voluntary disclosure, we expect that foreign cross-listed firms increase (decrease) their voluntary disclosure relative to US firms.

The effect of a decline in expected private litigation costs likely differs across firms. Kim and Skinner (2012) suggests that litigation risk varies predictably across firms. Morrison has the greatest effect on firms that are most likely to be sued since they experience the greatest decline in expected private litigation costs. This effect works both ways. If the drop in expected private litigation costs reduces voluntarily disclosure we would expect the reduction to be greatest for firms with higher ex-ante expected private litigation costs. In contrast, if the drop in expected private litigation costs increases voluntary disclosure we would expect the increase to be greatest for firms with higher ex-ante expected private litigation costs. We therefore state our second hypothesis in the alternative:

H2: The change in voluntary disclosure behavior following Morrison is stronger for firms with higher expected private litigation costs.

Similarly, firms in countries with weak institutions will also experience greater declines in expected private litigation costs. This is because Morrison transfers the private litigation rights of shareholders who purchased shares on a non-US exchange from the US regulatory system to the home country's regulatory system. Therefore, firms in countries with weak institutions should have a greater decline in voluntary disclosure due to Morrison. We therefore state our third hypothesis in the alternative:

H3: The change in voluntary disclosure behavior following Morrison is stronger for firms with weaker home country institutions.

4. Data

This section proceeds as follows. First, we explain our choice of event window. We then summarize the data collection for the treatment firms (i.e. those firms affected by Morrison) and the control firms (i.e. those firms not affected by Morrison).

4.1 Event Window

The event window is summarized in Figure 2. We use equal-length two year periods before and after Morrison for the pre- and post-periods, respectively. The pre-Morrison period commences on January 1, 2008 and ends on December 31, 2009. This period starts after the elimination of the 20-F reconciliation requirement for IFRS and ends before the oral arguments for Morrison, which occurred on March 29, 2010. The post-Morrison period commences on January 1, 2011 and ends on December 31, 2012. This period is after the Morrison decision is published and the Dodd-Frank Act is adopted, the latter of which occurred on July 21, 2010. We

use calendar year periods for both the pre- and post-periods to ensure that our data is comparable over time.

4.2 Selection of Treatment Firms

The Morrison ruling affects foreign firms with shares traded on a non-US exchange. For these firms, shareholders who purchase shares outside the US can no longer use US courts to initiate shareholder actions. Following prior research on Morrison (Gagnon et al., 2012; Licht et al., 2012), we select as our treatment firms the subset of foreign firms that are cross-listed in the US, and thus have shares that trade both on a US and non-US exchange. We categorize a firm as foreign if it is either incorporated outside the US or headquartered outside the US based on information collected from Compustat.² We collect information on the US dollar equivalent trading volume on US and non-US exchanges on which the firm is traded using Bloomberg terminal. We exclude firms whose proportion of trading volume on US exchanges exceeds 98 percent from the treatment group because for those firms Morrison only affects a very small fraction of the firm's shareholders. We also exclude Chinese firms that list on US exchanges following reverse mergers, as these firms have attributes that are different from other cross-listed firms (Chen et al., 2012; Lee et al., 2013).

For each firm, we obtain financial and stock return data from Compustat and CRSP, and analyst forecast and management guidance from I/B/E/S. We exclude firms with insufficient data for our tests. Finally, we balance our dataset by requiring the foreign cross-listed firms have at least one observation in both the pre- and post-Morrison period. Table 1 provides summary statistics for the treatment firms. There are 416 unique firms and 1,361 firm-year observations

² The one exception to this rule is firms incorporated in offshore centers (and headquartered in the US). Since incorporation in offshore centers is often associated with tax reasons, one can argue that the nationalities of such firms are better represented by the headquartered country (i.e., the US). We therefore exclude these firms from our foreign firm sample.

from 39 countries. Canadian firms comprise the largest proportion, with about one-third of the firms headquartered in Canada, followed by Israel, Japan, and the United Kingdom. Table 1 also presents the country institutional variables we use in the cross-sectional analyses.

4.3 Selection of Control Firms

The control firms in our setting are US firms that are not affected by Morrison. We do not use foreign non-cross-listed firms since those might also be affected by the Morrison ruling as discussed in Section 2. The challenge in using US firms as control firms for cross-listed firms is that prior research shows that cross-listed firms are not easily comparable to the average US firm (Karolyi, 2006). To better control for these differences, we generate a matched sample of US firms using a propensity score model. We use a propensity score model in lieu of matching on a small set of specific characteristics, such as firm size and industry classification, because it places less restrictive assumptions on the functional form for the relationship between the control variables and the outcome variable (Rosenbaum and Rubin, 1983).

We use a set of analyst forecast variables as an indirect proxy for voluntary disclosure and a set of management guidance variables as a direct proxy for voluntary disclosure. These variables are defined in Table 2. Given these two different categories of proxies (i.e. indirect and direct), we develop two separate propensity score matching models to ensure that we are controlling for confounding factors in each category of tests. We populate the propensity score model for the management guidance tests using the determinants of voluntary disclosure from Lang and Lundholm (1993). The matching variables are firm size (Log of total assets), growth options (book-to-market), performance (stock returns, ROA, and earnings surprise), and firm risk (return variability). Each variable is defined in Table 2. All variables are winsorized at the 1st and 99th percentile. We do not include the returns-earnings correlation, because it requires a long

time-series of data, thereby unduly restricting the sample size. We match firms based on the last available year within the pre-period. Once a treatment firm is matched to a control firm, the firms remain matched for the entire sample period. The propensity score model for the analyst based tests additionally requires that each firm has at least one analyst in the pre-period before matching. This ensures that the pair is not dropped in subsequent analyses if one of two firms had no coverage. We do not make this requirement in the post-period, as doing so would be sampling on the outcome we are trying to document.

Table 3 provides the propensity score model for the analyst forecast tests. To identify which US firms are most similar to the foreign cross-listed firms, and hence which firms are the most effective controls for our analysis, we first run a probit model predicting whether the firm received the treatment, i.e., the firm is a foreign cross-listed firm. This model shows that cross-listed firms are generally larger, have greater growth opportunities and higher volatility than the average US firm. The pseudo R2 is 13% suggesting a reasonable fit. We calculate the propensity score for both treatment (i.e. foreign cross-listed) and control (i.e. US) firms using this model. We then match each treatment firm to a control firm with the closest propensity score in the same year. We sample the control firms with replacement as this allows for the closest possible match and best control. We cluster standard errors by firm to correct our standard errors for the possibility that a single control firm may have multiple occurrences. Panel B provides the covariate balance between the matched treatment and control firms. Overall, the sample seems well-matched on all dimensions included in the propensity score model. None of the pairwise differences are statistically significant. The propensity score matching results for the management guidance tests are very similar for sample and therefore not tabulated.

5. Research Design

Morrison provides an exogenous shock to expected private litigation costs for foreign firms with shares traded on a foreign exchange as these firms can no longer be sued by shareholders who acquired shares outside the US. We use this natural experiment to investigate the relation between private litigation risk and voluntary disclosure. There are two distinct aspects of this natural experiment that we exploit in our identification strategy. In both cases, we use a difference-in-differences research design. In the first case, we compare foreign cross-listed firms (who were affected by Morrison) with US firms (who were unaffected by Morrison). In the second case, we take advantage of the fact that foreign cross-listed firms experienced differential effects based on firm characteristics and home country institutions, and therefore conduct a test that compares foreign cross-listed firms with each other based on the scope of the impact of Morrison.

We compare foreign cross-listed firms to US firms using the following specification:

$$Vol_Disc_{j,t} = \beta_0 + \beta_1 Post_t + \beta_2 Post_t * Foreign_j + Controls_j + IndustryFE + CountryFE + \varepsilon_{j,t} \quad (1)$$

We use five different variables to proxy for voluntary disclosure behavior. We use *Analyst Following*, *Forecast Accuracy* and *Forecast Dispersion* as indirect tests of voluntary disclosure behavior (similar to Rogers and Van Buskirk, 2009). We use *Management Guidance* and *Guidance Frequency* as direct tests of voluntary disclosure behavior. Each variable is defined in Table 2. *Post* is an indicator variable that takes on the value of ‘1’ for fiscal year starts after January 1, 2011 and ends before December 31, 2012; and takes on the value of ‘0’ if the fiscal year starts after January 1, 2008 and ends before December 31, 2009. *Foreign* is an indicator variable that takes the value of ‘1’ if the firm is a foreign cross-listed firm and ‘0’ otherwise. We do not include *Foreign* as a non-interacted variable since we already include country fixed

effects in all our regressions. The control variables include the explanatory variables from the propensity score model to control for any residual differences in these variables across the treatment and control sample. Each of these variables is defined in Table 2.

The coefficient of interest in this specification is β_2 , which measures the differential change in voluntary disclosure behavior for firms affected by Morrison relative to firms unaffected by Morrison. Our first hypothesis, stated in null form, predicts that $\beta_2 = 0$. To the extent that a decline in expected private litigation costs leads to a deterioration (improvement) in voluntary disclosure, then our specification implies that $\beta_2 < 0$ ($\beta_2 > 0$).

The decline in expected private litigation costs likely differs across firms based on the ex-ante level of total litigation. Firms who faced the highest levels of ex-ante litigation risk will experience the greatest absolute declines in expected private litigation costs as a result of Morrison. We examine this differential effect using the following specification:

$$\begin{aligned} Vol_Disc_{j,t} = & \beta_0 + \beta_1 Post_t + \beta_2 Post_t * Foreign_j + \beta_3 High_Litigation_Risk_j + \beta_4 Post_t * \\ & High_Litigation_Risk_j + \beta_5 Foreign_j * High_Litigation_Risk_j + \beta_6 Post_t * Foreign_j * High \\ & Litigation_Risk_j + Controls_j + IndustryFE + CountryFE + \varepsilon_{j,t} \quad (2) \end{aligned}$$

Vol_Disc , $Post$ and $Foreign$ are defined as in equation (1). $High_Litigation_Risk$ is an indicator variable that equals ‘1’ if the foreign (US) firm’s $Litigation_Risk$ is above the foreign (US) firm sample median. We calculate $Litigation_Risk$ using the method in Kim and Skinner (2012). As with equation (1), we do not include $Foreign$ as a non-interacted variable due to the inclusion of country fixed effects in all our regressions, and we control for any residual difference in the explanatory variables across the treatment and control sample from our propensity score model.

The coefficients of interest in this specification are β_2 and β_6 . In this specification, β_2 measures the differential change in the voluntary disclosure behavior for low litigation risk

foreign firms relative to low litigation risk US firms, which were unaffected by Morrison. β_6 measures the differential change in voluntary disclosure behavior for foreign firms with high levels of litigation risk relative to foreign firms with low levels of litigation risk. Our second hypothesis implies that the change in voluntary disclosure behavior following Morrison is stronger for firms with higher litigation risk. Therefore, to the extent that a decline in expected private litigation costs leads to a deterioration in voluntary disclosure behavior, then our specification implies that both $\beta_2 < 0$ and $\beta_6 < 0$.

We further examine the effect of private securities litigation on voluntary disclosure by conducting cross-sectional tests using a series of country-level institutional variables. We conduct these tests because Morrison transfers private litigation rights to a firm's shareholders who purchased shares outside the US from the US regulatory system to the home country's regulatory system. Therefore, to the extent that the foreign firm resides in a country with a weak regulatory structure, there should be a larger impact associated with Morrison. We conduct these tests using the following specification.

$$Vol_Disc_{j,t} = \beta_0 + \beta_1 Post_t + \beta_2 Post_t * Foreign_j + \beta_3 Post_t * Foreign_j * Weak Home Institution_j + Controls_j + IndustryFE + CountryFE + \varepsilon_{j,t} \quad (3)$$

Vol_Disc, *Post* and *Foreign* are defined as in equation (1). We use five different variables to proxy for the strength of the home country institutions. We use a country's *Legal Origin* as a proxy for its investor protection as the rights of minority shareholders are arguably better protected in common law countries than in code law countries (La Porta et al., 2000). We use the *Rule of Law* variable from Kaufmann, Kraay, and Mastruzzi (2012) because countries with higher values of this variable have stricter enforcement of shareholder rights. We use the *Aggregate Earnings Management* score from Leuz et al. (2003) as earnings management is

generally associated with weak shareholder protections. We use the *Disclosure Requirements* score from La Porta et al. (2006) because strong disclosure is associated with better developed markets. Finally, we use the *Public Enforcement Resources* variable from Jackson and Roe (2009) because shareholders in countries with weak public enforcement are likely to rely more on the US regulatory structure. Each variable is defined in Table 1. We do not include *Foreign*, *Weak Home Institution*, and *Foreign * Weak Home Institution* due to the inclusion of country fixed effects in all our regressions, and we include the variables from the propensity score model to control for any residual differences in the explanatory variables across the treatment and control sample.

The coefficients of interest in this specification are β_2 and β_3 . In this specification, β_2 measures the differential change in voluntary disclosure behavior for foreign firms with strong home country institutions relative to US firms, which unaffected by Morrison. β_3 measures the differential change in voluntary disclosure behavior for foreign firms with weak home country institutions relative to foreign firms with strong home country institutions. Our third hypothesis implies that the change in voluntary disclosure behavior following Morrison is stronger for firms with weak home country institutions. Therefore, to the extent that a decline in expected private litigation costs leads to a deterioration in voluntary disclosure behavior, then our specification implies that both $\beta_2 < 0$ and $\beta_3 < 0$.

Our final set of tests take advantage of the differential impact of Morrison based on the volume of shares traded on foreign exchanges relative to US exchanges. This test is equivalent to a difference-in-differences design that examines foreign cross-listed firms who were strongly affected by Morrison to foreign cross-listed firms who were weakly affected by Morrison. The specification we employ is as follows:

$$Vol_Disc_{j,t} = \beta_0 + \beta_1 Post_t + \beta_2 Post_t * Foreign_j + \beta_3 Foreign * High\ Foreign\ Trading_j + \beta_4 Post_t * Foreign_j * High\ Foreign\ Trading_j + Controls_j + IndustryFE + CountryFE + \varepsilon_{j,t}$$

(4)

Vol_Disc, *Post* and *Foreign* are defined as in equation (1). *High Foreign Trading* is an indicator variable equals to ‘1’ if the foreign firm’s *Foreign Trading* is above the foreign firm sample median. *Foreign Trading* equals the proportion of trading volume outside of the US. For US firms, this variable is set to zero. We do not include *Foreign* or *High Foreign Trading* as non-interacted variables due to the inclusion of country fixed effects in all our regressions and the fact that foreign trading is zero for US firms. As with equation (1), we also include the explanatory variables from our propensity score model.

The coefficients of interest in this specification are β_2 and β_4 . In this specification, β_2 measures the differential change in voluntary disclosure behavior for foreign firms with low foreign trading relative to US firms, which were unaffected by Morrison. β_4 measures the differential change in voluntary disclosure behavior for foreign firms with a high proportion of shares traded on foreign exchanges relative to foreign firms with low proportion of shares traded on foreign exchanges. Therefore, to the extent that a decline in expected private litigation costs leads to a deterioration in voluntary disclosure behavior, then our specification implies that both $\beta_2 < 0$ and $\beta_4 < 0$.

6. Results

Table 4 Panel A presents the univariate difference-in-differences analyses for each voluntary disclosure proxy for the treatment (i.e., foreign cross-listed) and the matched control (i.e., US) firms. The comparison across the cells is a straightforward way to account for

unobserved differences between foreign cross-listed and US firms and to control for general trends in the data. Throughout the panel, the tenor of the results is the same. For example, in the upper-left panel, cross-listed and US firms both experience an increase in analyst coverage following Morrison. However, the increase is significantly smaller for cross-listed firms. In the upper-right panel, analyst forecast dispersion decreases over time for US firms, but increases for cross-listed firms. The difference-in-differences estimate is positive and significant. In each case, the difference-in-differences estimates are consistent with a relative deterioration in the voluntary disclosure behavior of foreign cross-listed firms.

The univariate results on management guidance provide similar inferences. The likelihood of management guidance increases for US firms and decreases for cross-listed firms following Morrison. The difference between these changes is negative and significant. Once again, this is consistent with a relative deterioration in the voluntary disclosure behavior in response to a reduction in expected private litigation costs. We find that guidance frequency increases at a greater rate for US versus cross-listed firms. However, the difference between these changes is not statistically significant.

The results of equation (1), provided in Panel B, are consistent with our univariate results in Panel A. We find a statistically significant relative deterioration in analyst coverage, analyst forecast dispersion, and likelihood of management guidance for foreign firms as compared to the matched US firms. In addition, the frequency of management guidance is now also statistically significant. The only variable that is not statistically significant is analyst forecast accuracy, although the direction of the effect is consistent with the other results. Overall, our findings are consistent with a relative deterioration in voluntary disclosure in response to a reduction in expected private litigation costs.

The decline in expected private litigation costs likely differs across the foreign cross-listed firms, with those firms facing the highest levels of ex-ante litigation risk experiencing the greatest absolute declines in expected private litigation costs. We examine this differential effect using the specification in equation (2), the results of which are reported in Table 5. Given the results in Table 4, we predict a negative coefficient on *Post*Foreign*High Litigation Risk*. However, we do not find statistically significant results for this coefficient and thus fail to find support for our second hypothesis. The results for the foreign low litigation risk firms (*Post*Foreign*) are similar to the main effects found in Table 4. One potential explanation for the lack of findings on the litigation risk proxy is that the US based model developed in Kim and Skinner (2012) is not an effective proxy for the private litigation risk for our sample of cross-listed firms.

We further investigate the effect of expected litigation costs on voluntary disclosure using cross-sectional tests involving country-level institutional variables. We examine the differential effects using the specification in equation (3), the results of which are presented in Table 6. Within each panel, columns 1-5 present tests using each of our voluntary disclosure proxies from Table 4, and Panels A-E present these regressions based on each of the five different country institutional measures.

The coefficient on the triple interaction, *Post*Foreign*Weak Home Institution*, measures the differential change in voluntary disclosure behavior for cross-listed firms with weak home country institutions relative to cross-listed firms with strong home country institutions. In Panel A, the coefficient on this term is significant and in the predicted direction for three of the voluntary disclosure proxies. In particular, a reduction in expected private litigation costs decreases management guidance activity in code law countries relative to common law countries.

In Panel B, we partition on the rule of law index. Consistent with our third hypothesis, the results show that the decrease (increase) in analyst following (dispersion) for cross-listed firms after Morrison is magnified for firms located in countries with a low value for the rule of law index. In contrast, the triple interaction is positive and significant in Column 4, which is inconsistent with our hypothesis.

In Panel C, we report results using the aggregate earnings management score as a proxy for the strength of the institutional environment. We again find results consistent with a deterioration in voluntary disclosure behavior. The relative decrease in analyst following and management guidance frequency for cross-listed firms is larger for firms located in less transparent environments. Panel D shows that the relative decrease in analyst forecast accuracy for cross-listed firms is larger for firms located in countries with fewer disclosure requirements. In Panel E, we report results using a measure of the public enforcement of securities law based on regulatory budgets. We expect firms located in countries with fewer resources devoted to public enforcement to react more strongly to Morrison. Consistent with this hypothesis, the relative decrease in analyst forecast accuracy for cross-listed firms is greater for firms located in countries with weaker public enforcement of securities law.

In Table 7, we examine the differential impact of Morrison based on the volume of shares traded on foreign exchanges relative to US exchanges. The coefficient on *Post*Foreign*High Foreign Trading* measures the differential impact of the ruling for cross-listed firms with more trading volume outside the US relative to cross-listed firms with less trading volume outside the US. We expect the Morrison ruling to have a larger differential effect for cross-listed firms with more trading volume outside the US. Consistent with this hypothesis, the coefficient on

*Post*Foreign*High Foreign Trading* is negative and significant using both measures of management guidance activity.

Overall, the findings in our cross-sectional tests support the hypothesis that the effects of the Morrison ruling on voluntary disclosure behavior are the strongest for firms where the ruling should have the greatest impact. While a number of tests are statistically insignificant and thus inconclusive, all significant coefficients but one support the conclusion that a reduction in expected private litigation costs leads to a deterioration in voluntary disclosure behavior. Out of the 35 specifications we run in Tables 5-7, 11 coefficients are in the predicted direction and statistically significant at the 10% level or better. Based on a binomial test, the likelihood that we would observe at least 11 significant coefficients by random chance is less than 0.1%. Thus, we can have a reasonable degree of confidence in the overall results even if several individual tests are inconclusive.

7. Conclusion

We use a natural experiment to isolate and examine whether and how expected private litigation costs affect voluntary disclosure behavior. We find that firms respond to an exogenous decrease in expected private litigation costs by reducing voluntary disclosure. We document a reduction in analyst coverage and an increase in forecast dispersion for foreign cross-listed firms relative to US firms following Morrison. We also find that there was a reduction in both the likelihood of management guidance as well as the frequency of guidance for foreign cross-listed firms relative to US firms. In addition, we find that the deterioration in our proxies for voluntary disclosure is greater for firms with weaker home country institutions. Similarly, we find that firms with a higher percentage of shares traded on non-US exchanges experienced a greater

deterioration in voluntary disclosure behavior. Our evidence suggests that shareholders' private litigation rights act as a bonding mechanism, and that this mechanism affects cross-listed firms' voluntary disclosure behavior.

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Figure 1: Subject Matter Jurisdiction for Investors in Foreign Firm

Panel A: Pre-Morrison

		Investor Nationality	
		US	Foreign
Location of exchange	US	Admitted via Effects Test	Admitted via Effects Test
	Foreign	Admitted via Effects Test	Admitted via Conduct Test

Panel B: Post-Morrison

		Investor Nationality	
		US	Foreign
Location of Exchange	US	Admitted via Transactional Test	Admitted via Transactional Test
	Foreign	Fails Transactional Test	Fails Transactional Test

Figure 2: Timeline

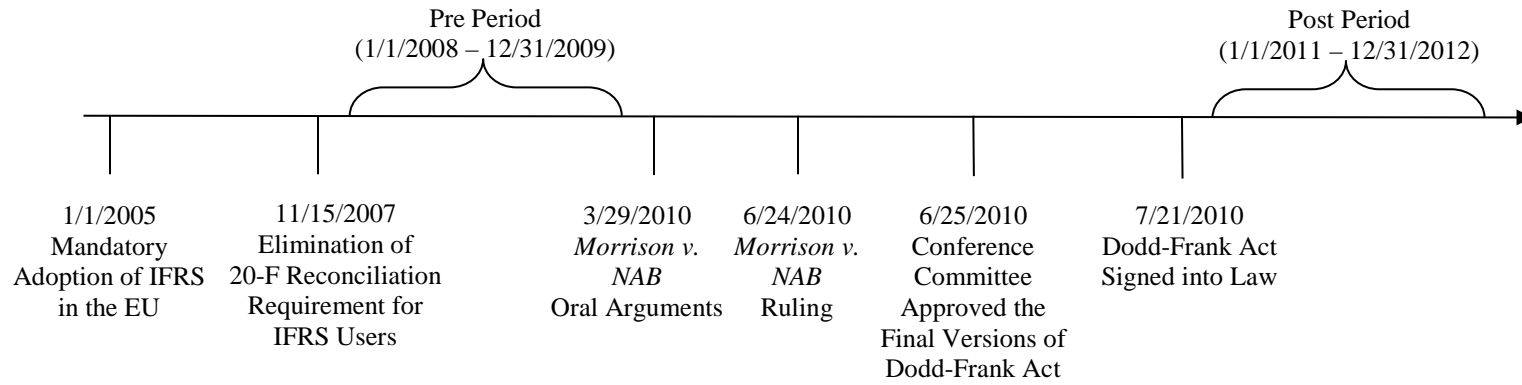


Table 1: Sample Composition by Country for Foreign Cross-listed Firms

<i>Country</i>	<i>Unique Firms</i>	<i>Firm-Years</i>	<i>Legal Origin</i> (1 = Code Law; 0 = Common Law)	<i>Rule of Law</i> (1 = Weaker Enforcement)	<i>Aggregate Earnings Management</i> (1 = Less Transparent Earnings)	<i>Disclosure Requirement</i> (1 = Less Disclosure Requirement)	<i>Public Enforcement</i> (1 = Lower Securities Enforcement Budget)
Argentina	10	32	1	-0.67 (1)	NA	0.50 (1)	15,994 (1)
Australia	11	25	0	1.74 (0)	4.8 (0)	0.75 (0)	89,217 (0)
Belgium	1	4	1	1.39 (0)	19.5 (1)	0.42 (1)	27,276 (1)
Bermuda	6	18	0	0.90 (1)	NA	NA	NA
Brazil	12	40	1	-0.20 (1)	NA	0.25 (1)	31,729 (1)
Canada	142	472	0	1.79 (0)	5.3 (0)	0.92 (0)	82,706 (0)
Chile	11	39	1	1.24 (0)	NA	0.58 (0)	66,093 (0)
China	12	42	1	-0.34 (1)	NA	NA	NA
Colombia	1	4	1	-0.41 (1)	NA	0.42 (1)	42,660 (1)
Denmark	2	7	1	1.91 (0)	16.0 (0)	0.58 (0)	25,940 (1)
Finland	1	4	1	1.97 (0)	12.0 (0)	0.50 (1)	45,937 (1)
France	7	26	1	1.46 (0)	13.5 (0)	0.75 (0)	28,851 (1)
Germany	8	27	1	1.65 (0)	21.5 (1)	0.42 (1)	12,903 (1)
Greece	3	10	1	0.63 (1)	28.3 (1)	0.33 (1)	60,111 (0)
Hong Kong	4	13	0	1.50 (0)	19.5 (1)	0.92 (0)	320,531 (0)
Hungary	1	3	1	0.79 (1)	NA	NA	79,996 (0)
India	10	21	0	0 (1)	19.1 (1)	0.92 (0)	NA
Indonesia	2	7	1	-0.60 (1)	18.3 (1)	0.50 (1)	5,576 (1)
Ireland	9	30	0	1.74 (0)	5.10 (0)	0.67 (0)	72,639 (0)
Israel	41	153	0	0.81 (1)	NA	0.67 (0)	145,673 (0)
Italy	3	10	1	0.36 (1)	24.8 (1)	0.67 (0)	61,239 (0)
Japan	23	47	1	1.29 (0)	20.5 (1)	0.75 (0)	15,754 (1)
Luxembourg	3	11	1	1.81 (0)	NA	NA	473,894 (0)
Mexico	16	56	1	-0.59 (1)	NA	0.58 (0)	49,864 (0)
Netherlands	9	34	1	1.81 (0)	16.5 (0)	0.50 (1)	131,285 (0)
New Zealand	1	2	0	1.93 (0)	NA	0.67 (0)	37,539 (1)
Norway	1	4	1	1.90 (0)	5.8 (0)	0.58 (0)	25,109 (1)
Peru	2	8	1	-0.67 (1)	NA	0.33 (1)	108,353 (0)
Philippines	1	4	1	-0.56 (1)	8.8 (0)	0.83 (0)	65,848 (0)
Portugal	1	3	1	1.04 (1)	25.1 (1)	0.42 (1)	75,562 (0)
Russia	2	7	NA	-0.78 (1)	NA	NA	NA
South Africa	9	23	0	0.09 (1)	5.6 (0)	0.83 (0)	49,291 (1)
South Korea	8	26	1	0.98 (1)	26.8 (1)	0.75 (0)	80,192 (0)
Spain	4	15	1	1.15 (0)	18.6 (1)	0.50 (1)	29,873 (1)
Sweden	2	7	1	1.95 (0)	6.8 (0)	0.58 (0)	21,988 (1)
Switzerland	7	24	1	1.77 (0)	22.0 (1)	0.67 (0)	29,340 (1)
Taiwan	6	20	1	0.92 (1)	22.5 (1)	0.75 (0)	44,090 (1)
Turkey	1	4	1	0.09 (1)	NA	0.50 (1)	58,893 (0)
United Kingdom	23	79	0	1.74 (0)	7.0 (0)	0.83 (0)	80,902 (0)
Total	416	1,361					

The foreign cross-listed firm sample comprises a maximum of 416 unique firms and 1,361 firm-year observations from 39 countries, for which we have sufficient data to estimate our propensity score model (see Table 3). We classify a firm as foreign cross-listed if it is incorporated or headquartered outside of the US and is listed on an US exchange. We eliminate Chinese reverse mergers and firms with over 98 percent of the trading volume in the US exchanges. We require the foreign cross-listed firms to have at least one observation pre and post Morrison. The table also lists the institutional variables we use in the cross-sectional analyses: (1) We distinguish between countries of code law *Legal Origin* (= '1') and countries of common law legal origin (La Porta et al. 1998). (2) The *Rule of Law* variable from Kaufmann, Kraay, and Mastruzzi (2012) measured for the year 2009. Higher values represent countries with stricter enforcement. (3) The *Aggregate Earnings Management* score from Leuz et al. (2003). Higher values represent countries with more earnings management. (4) The *Disclosure Requirements* score from La Porta et al. (2006). Higher values represent more disclosure requirements. (5) *Public Enforcement* resources measured as the securities regulators' budget per billion US\$ of GDP based on the extended sample in Jackson and Roe (2009). Variables (2) to (5) are transformed into binary indicators (in parentheses) by splitting the sample by the median.

Table 2: Descriptive Statistics for Variables Used in the Regression Analyses*Panel A: Foreign Cross-listed Firms*

Variable	<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>P25</i>	<i>Median</i>	<i>P75</i>	<i>Max</i>
<i>Dependent Variables:</i>								
Analyst Following	1,020	4.34	4.80	0	1	2	6	27
Forecast Accuracy	764	-0.03	0.09	-0.95	-0.02	-0.01	0	0
Forecast Dispersion	518	0.23	0.31	0	0.04	0.11	0.30	1.36
Management Guidance	1,283	0.18	0.38	0	0	0	0	1
Guidance Frequency	1,283	0.99	2.92	0	0	0	0	26
<i>Propensity Score Matching and Other Variables:</i>								
Log (Total Assets)	1,020	8.74	2.47	1.23	7.04	8.89	10.51	12.76
Book-to-Market	1,020	0.69	0.62	0.04	0.32	0.56	0.87	5.24
Earnings Surprise	1,020	0.07	0.12	0	0.01	0.03	0.07	0.90
Return Variability	1,020	0.15	0.08	0.03	0.1	0.13	0.19	0.50
Stock Return	1,020	0.61	0.81	-0.89	0.11	0.48	0.91	3.09
Return on Assets	1,020	0.01	0.13	-1.24	-0.01	0.02	0.07	0.29
Litigation Risk	836	0.47	1.76	-3.83	-0.76	0.40	1.51	9.55
Foreign Trading	1,014	0.61	0.31	0.01	0.34	0.67	0.90	1

Panel B: Matched US Firm

Variable	<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>P25</i>	<i>Median</i>	<i>P75</i>	<i>Max</i>
<i>Dependent Variables:</i>								
Analyst Following	1,153	11.3	7.79	0	4	10	17	29
Forecast Accuracy	877	-0.02	0.10	-0.95	-0.01	0	0	0
Forecast Dispersion	579	0.10	0.18	0	0.02	0.05	0.10	1.36
Management Guidance	1,415	0.66	0.47	0	0	1	1	1
Guidance Frequency	1,415	6.04	7.14	0	0	4	9	26
<i>Propensity Score Matching and Other Variables:</i>								
Log (Total Assets)	1,153	8.91	2.22	2.73	7.32	8.89	10.58	12.76
Book-to-Market	1,153	0.78	0.7	0.04	0.36	0.59	1.01	5.24
Earnings Surprise	1,153	0.07	0.14	0	0.01	0.02	0.07	0.90
Return Variability	1,153	0.16	0.1	0.04	0.09	0.13	0.19	0.50
Stock Return	1,153	0.52	0.97	-0.88	-0.05	0.26	0.8	3.09
Return on Assets	1,153	0.02	0.11	-0.63	0	0.02	0.06	0.29
Litigation Risk	907	0.58	2.12	-3.96	-0.71	0.12	1.61	7.55

The table presents descriptive statistics for the variables used in the regression analyses for the foreign firm sample (Panel A) and matched US firm sample (Panel B). We use five dependent variables in our primary analyses: (1) *Analyst Following* is the number of analyst providing an EPS forecast, measured in the month prior to earnings

announcement or latest available date. (2) *Forecast Accuracy* is defined as the absolute difference between the consensus EPS forecast and actual EPS, scaled by end of fiscal year stock price. We multiply by negative one such that larger values represent more accurate forecast. (3) *Forecast Dispersion* is the standard deviation of analyst EPS forecasts, measure in the month prior to earnings announcement or latest available date. (4) *Management Guidance* is a binary variable equals to one if the firm issue any management guidance for the fiscal year. (5) *Forecast Frequency* is the number of issuances of management guidance for the fiscal year. We use the following variables in the propensity score matching model: (1) *Total Assets* are denominated in US\$ millions. (2) *Book-to-Market* is the ratio of book value of equity divided by market value of equity. (3) *Earnings Surprise* is the absolute change in earnings before extraordinary items scaled by beginning total assets. (4) *Return Variability* is the annual standard deviation of daily stock returns over a firm's fiscal year. (5) *Stock Return* is the annual buy-and-hold return including dividends for the fiscal year. (6) *Return on Assets* is the ratio of earnings before extraordinary items divided by total assets. The table presents descriptive statistics for the analyst forecast matching sample; descriptive statistics for the management guidance matching samples are largely similar. We use two additional variables for our cross-sectional predictions: (1) *Litigation Risk* is measured based on the model in Kim and Skinner (2012). (2) *Foreign Trading* equals the proportion of trading volume outside of the US. For US firms, this variable is set to zero. Accounting data and market values are measured as of the fiscal year end. Except for variables with natural lower or upper bounds, we winsorize all variables at the first and 99th percentile, and we use the natural log of the raw values where indicated.

Table 3: Identification of a Matched US Firm Sample*Panel A: Propensity-Score Estimation Using a Probit Regression*

Dependent variable:	<i>Foreign</i>
Log (Total Assets)	0.228*** (12.31)
Book-to-Market	-0.144** (-2.24)
Earnings Surprise	0.202 (0.71)
Return Variability	-0.847* (-1.83)
Stock Return	0.299*** (6.08)
Return on Assets	-0.258 (-0.89)
Constant	-3.004*** (-17.47)
Pseudo R-squared	0.130
Log likelihood	-774.0
Observations	2,911

Panel B: Covariate Balance between Matched Pairs

	Mean Foreign	Mean US	Median Foreign	Median US	t-test difference p-value	Wilcoxon signed- ranks test p-value
Log (Total Assets)	8.773	8.811	8.895	8.872	0.841	0.312
Book-to-Market	0.721	0.778	0.575	0.590	0.294	0.659
Earnings Surprise	0.066	0.074	0.029	0.021	0.456	0.274
Return Variability	0.155	0.159	0.138	0.127	0.602	0.123
Stock Return	0.516	0.510	0.391	0.243	0.936	0.303
Return on Assets	0.007	0.015	0.022	0.019	0.443	0.134
N	309	309	309	309		

The table reports the propensity score matching procedures for the analyst forecast sample; results for the management guidance samples are largely similar. Panel A presents coefficient estimates from a probit regression where the dependent variable is a binary variable equal to one if the firm is a foreign firm. For details of the remaining variables see Table 2. Panel B presents the test statistics of covariate distributions for the foreign and matched US firms. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 4: Changes in Voluntary Disclosure Behavior Following Changes in Private Litigation Risk

Panel A: Difference-in-Differences Analysis of Firms' Voluntary Disclosure Behavior around Morrison

		<i>Analyst Following</i>			<i>Forecast Accuracy</i>			<i>Forecast Dispersion</i>		
		Pre-Morrison Period (a)	Post-Morrison Period (b)	(b)-(a)	Pre-Morrison Period (a)	Post-Morrison Period (b)	(b)-(a)	Pre-Morrison Period (a)	Post-Morrison Period (b)	(b)-(a)
US	(i)	9.76 N=590	12.92 N=563	3.16***	-0.035 N=442	-0.008 N=435	.027***	0.113 N=289	0.078 N=290	-.035*
Foreign	(ii)	3.61 N=551	5.19 N=469	1.58***	-0.040 N=401	-0.023 N=363	.017**	0.212 N=26	0.253 N=258	.041*
(i)-(ii)		-6.15***	-7.73***	-1.58***	-.005	-.015**	-.010	.099***	.175***	.076**
		<i>Management Guidance</i>			<i>Guidance Frequency</i>					
		Pre-Morrison Period (a)	Post-Morrison Period (b)	(b)-(a)	Pre-Morrison Period (a)	Post-Morrison Period (b)	(b)-(a)			
US	(i)	0.646 N=727	0.680 N=688	.034	5.76 N=727	6.33 N=688	.575*			
Foreign	(ii)	0.188 N=695	0.165 N=588	-.024	0.96 N=695	1.02 N=588	.058			
(i)-(ii)		-.458***	-.515***	-.057*	-4.79***	-5.31***	-.517			

Panel B: Firms' Voluntary Disclosure Behavior around Morrison

	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.856*** (8.96)	0.026*** (3.22)	-0.037** (-2.32)	0.027 (1.41)	0.506 (1.56)
Post*Foreign	-1.448*** (-3.93)	-0.010 (-1.01)	0.078*** (2.75)	-0.062** (-2.46)	-0.600* (-1.74)
Log (Total Assets)	1.884*** (12.82)	0.001 (0.68)	0.019** (2.35)	0.051*** (5.24)	0.443*** (3.12)
Book-to-Market	-1.529*** (-3.39)	-0.004 (-0.40)	0.100*** (2.69)	-0.059*** (-3.39)	-0.572** (-2.37)
Earnings Surprise	2.116 (0.90)	-0.067 (-1.47)	0.138 (1.50)	-0.027 (-0.31)	-2.884** (-2.01)
Return Variability	-5.025 (-1.34)	-0.352*** (-3.17)	0.015 (0.07)	0.097 (0.52)	0.836 (0.27)
Stock Return	-0.167 (-0.48)	0.006 (0.61)	-0.005 (-0.27)	0.015 (0.78)	0.331 (1.01)
Return on Assets	2.861 (1.12)	0.005 (0.15)	0.106 (0.95)	0.065*** (4.00)	0.996*** (3.26)
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6088	0.1917	0.3235	0.4369	0.3782
Observations	2,173	1,641	1,097	2,698	2,698
US Firms	309	234	158	391	391
Foreign Firms	309	234	158	391	391

The table reports changes in firms' voluntary disclosure behavior following a change in private litigation risk. In Panel A, we report the mean values of the voluntary disclosure behavior variables across the foreign - US matched pair sample, before and after the Morrison. All variables are defined in Table 2. We indicate statistical significance of differences across cells with t-tests. In Panel B, we report OLS coefficient estimates and (in parentheses) t-statistics based on robust standard errors clustered by firm. The *Post* variable takes on the value of '1' for fiscal year starts after January 1, 2011 and ends before December 31, 2012; and takes on the value of '0' if the fiscal year starts after January 1, 2008 and ends before December 31, 2009. *Foreign* is an indicator variable set to '1' for the sample of foreign firms. All other variables are defined in Table 2. We include industry- and country-fixed effects in the regression, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 5: Cross-sectional Analyses using Firm-Specific Litigation Risk

	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.427*** (5.89)	0.004** (2.39)	-0.032 (-1.28)	0.053** (2.13)	0.564 (1.61)
Post*Foreign	-1.143** (-2.24)	-0.001 (-0.19)	0.108*** (2.73)	-0.095** (-2.49)	-0.840** (-2.17)
Post*High Litigation Risk	0.927 (1.27)	0.024* (1.68)	-0.009 (-0.25)	-0.065 (-1.46)	-0.565 (-0.99)
Foreign*High Litigation Risk	-2.848*** (-2.73)	-0.018 (-1.20)	0.057 (0.83)	0.028 (0.34)	1.458 (1.39)
Post*Foreign*High Litigation Risk	-0.675 (-0.79)	-0.007 (-0.36)	0.002 (0.03)	0.082 (1.35)	0.895 (1.44)
High Litigation Risk	3.261*** (3.09)	0.000 (0.02)	-0.049 (-0.90)	0.070 (0.97)	-1.486 (-1.38)
Log (Total Assets)	1.715*** (7.64)	-0.001 (-0.84)	0.029** (2.49)	0.044*** (3.03)	0.558*** (2.75)
Book-to-Market	-1.401** (-2.36)	-0.002 (-0.33)	0.137*** (4.00)	-0.059* (-1.66)	-0.285 (-0.53)
Earnings Surprise	0.926 (0.41)	-0.081 (-1.56)	0.186 (1.64)	0.003 (0.03)	-1.737 (-1.00)
Return Variability	-8.540* (-1.82)	-0.282*** (-3.61)	0.019 (0.07)	-0.195 (-0.71)	-1.385 (-0.38)
Stock Return	-0.293 (-0.67)	-0.007 (-1.12)	0.037 (1.53)	0.032 (1.01)	1.066** (2.14)
Return on Assets	5.568 (1.22)	-0.027 (-0.76)	0.015 (0.11)	0.065*** (2.93)	1.240*** (3.20)
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6530	0.2015	0.3743	0.4447	0.4156
Observations	1,514	1,180	822	1,796	1,796
US Firms	201	158	112	237	237
Foreign Firms	201	158	112	237	237

The table reports firm-level cross-sectional analyses of changes in firms' voluntary disclosure behavior following a change in private litigation risk. The *Post* variable takes on the value of '1' for fiscal year starts after January 1, 2011 and ends before December 31, 2012; and takes on the value of '0' if the fiscal year starts after January 1, 2008 and ends before December 31, 2009. *Foreign* is an indicator variable set to '1' for the sample of foreign firms. *High Litigation Risk* is an indicator variable equals to '1' if the foreign (US) firm's *Litigation Risk* is above the foreign (US) firm sample median. All other variables are defined in Table 2. We report OLS coefficient estimates and (in parentheses) t-statistics based on robust standard errors clustered by firm. We include industry- and country-fixed effects in the regression, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 6: Cross-sectional Analyses using Foreign Country Institutions

<i>Panel A: Legal Origin</i>					
	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.815*** (8.74)	0.026*** (3.17)	-0.038** (-2.30)	0.026 (1.33)	0.520 (1.59)
Post*Foreign	-1.241*** (-2.92)	0.004 (0.28)	0.073** (2.00)	-0.038 (-1.35)	-0.431 (-1.22)
Post*Foreign*Code Law	-0.380 (-1.08)	-0.029** (-2.37)	0.010 (0.20)	-0.064** (-1.97)	-0.554*** (-2.64)
Control Variables	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6037	0.1944	0.3171	0.4346	0.3750
Observations	2,136	1,604	1,061	2,665	2,665
US Firms	304	229	153	386	386
Foreign Firms	304	229	153	386	386
<i>Panel B: Rule of Law</i>					
	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.837*** (8.83)	0.026*** (3.18)	-0.037** (-2.30)	0.026 (1.33)	0.517 (1.59)
Post*Foreign	-1.073*** (-2.69)	-0.004 (-0.34)	0.043 (1.31)	-0.083*** (-3.06)	-0.679* (-1.93)
Foreign*Post*Weak Rule of Law	-0.894** (-2.50)	-0.017 (-1.33)	0.096* (1.92)	0.071** (2.13)	0.119 (0.52)
Control Variables	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6063	0.1924	0.3239	0.4353	0.3730
Observations	2,151	1,619	1,076	2,678	2,678
US Firms	306	231	155	388	388
Foreign Firms	306	231	155	388	388

Table 6: Cross-sectional Analyses using Foreign Country Institutions (Continued)

<i>Panel C: Aggregate Earnings Management</i>					
	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.992*** (7.47)	0.025*** (2.79)	-0.039** (-1.97)	0.015 (0.65)	0.373 (0.88)
Post*Foreign	-1.110** (-2.28)	-0.002 (-0.15)	0.053 (1.40)	-0.057* (-1.84)	-0.382 (-0.86)
Post*Foreign*High Aggregate Earnings Management	-1.120*** (-3.06)	-0.013 (-0.81)	0.073 (0.93)	-0.020 (-0.49)	-0.489* (-1.86)
Control Variables	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6235	0.2056	0.3601	0.4541	0.3763
Observations	1,466	1,128	691	1,916	1,916
US Firms	210	161	98	280	280
Foreign Firms	210	161	98	280	280
<i>Panel D: Disclosure Requirements</i>					
	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.823*** (8.63)	0.023*** (2.88)	-0.030** (-2.03)	0.027 (1.34)	0.526 (1.55)
Post*Foreign	-1.464*** (-3.76)	-0.003 (-0.26)	0.069** (2.13)	-0.061** (-2.30)	-0.588 (-1.64)
Post*Foreign*Low Disclosure Requirements	0.491 (1.10)	-0.044*** (-2.61)	0.061 (1.24)	0.019 (0.45)	-0.089 (-0.27)
Control Variables	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6105	0.1890	0.3373	0.4299	0.3686
Observations	2,002	1,515	995	2,536	2,536
US Firms	285	216	143	367	367
Foreign Firms	285	216	143	367	367

Table 6: Cross-sectional Analyses using Foreign Country Institutions (Continued)

Panel E: Public Enforcement

	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.904*** (8.73)	0.027*** (3.05)	-0.031** (-2.09)	0.028 (1.40)	0.527 (1.53)
Post*Foreign	-1.775*** (-4.07)	-0.033** (-2.46)	0.026 (0.62)	-0.067* (-1.74)	-0.854** (-2.03)
Post*Foreign*Low Public Enforcement	-0.374 (-1.01)	-0.024* (-1.93)	-0.071 (-1.45)	-0.005 (-0.13)	-0.294 (-1.15)
Control Variables	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6162	0.1928	0.3367	0.4286	0.3690
Observations	1,979	1,495	998	2,508	2,508
US Firms	280	212	143	361	361
Foreign Firms	280	212	143	361	361

The table presents country-level cross-sectional analyses of changes in firms' voluntary disclosure behavior following a change in private litigation risk. The *Post* variable takes on the value of '1' for fiscal year starts after January 1, 2011 and ends before December 31, 2012; and takes on the value of '0' if the fiscal year starts after January 1, 2008 and ends before December 31, 2009. *Foreign* is an indicator variable set to '1' for the sample of foreign firms. Panels A – E report results for the following foreign country institutions: (1) *Legal Origin*, (2) *Rule of Law*, (3) *Aggregate Earnings Management*, (4) *Disclosure Requirements* and (5) *Public Enforcement*. All variables are defined in Tables 1 and 2. The panels only report the OLS coefficient estimates and (in parentheses) t-statistics of the main variables of interest, but include the full set of controls and fixed effects (see Table 4 Panel B). ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 7: Cross-sectional Analyses using Proportion of Foreign Trading

	(1) <i>Analyst Following</i>	(2) <i>Forecast Accuracy</i>	(3) <i>Forecast Dispersion</i>	(4) <i>Management Guidance</i>	(5) <i>Guidance Frequency</i>
Post	2.845*** (8.86)	0.026*** (3.21)	-0.037** (-2.31)	0.026 (1.34)	0.484 (1.50)
Post*Foreign	-1.220*** (-2.82)	-0.010 (-0.81)	0.101*** (3.34)	-0.032 (-1.12)	-0.272 (-0.74)
Foreign*High Foreign Trading	-3.937*** (-5.89)	-0.012 (-0.90)	0.024 (0.56)	-0.080 (-1.63)	-0.592 (-1.48)
Post*Foreign*High Foreign Trading	-0.497 (-1.41)	-0.001 (-0.11)	-0.048 (-1.00)	-0.053* (-1.69)	-0.575*** (-2.71)
Log (Total Assets)	1.957*** (13.44)	0.001 (0.93)	0.018** (2.26)	0.052*** (5.30)	0.451*** (3.17)
Book-to-Market	-1.508*** (-3.36)	-0.004 (-0.39)	0.100*** (2.69)	-0.058*** (-3.36)	-0.566** (-2.34)
Earnings Surprise	2.176 (0.95)	-0.069 (-1.50)	0.142 (1.52)	-0.044 (-0.51)	-3.003** (-2.10)
Return Variability	-5.619 (-1.52)	-0.355*** (-3.20)	0.010 (0.05)	0.102 (0.55)	1.030 (0.33)
Stock Return	-0.185 (-0.55)	0.007 (0.62)	-0.005 (-0.31)	0.014 (0.72)	0.303 (0.93)
Return on Assets	2.634 (1.05)	0.005 (0.14)	0.104 (0.93)	0.060*** (3.94)	0.945*** (3.24)
Industry Fixed Effects	Included	Included	Included	Included	Included
Country Fixed Effects	Included	Included	Included	Included	Included
R-squared	0.6235	0.1924	0.3238	0.4423	0.3838
Observations	2,159	1,633	1,089	2,684	2,684
US Firms	307	233	157	389	389
Foreign Firms	307	233	157	389	389

The table reports cross-sectional analyses of changes in firms' voluntary disclosure behavior following a change in private litigation risk. The *Post* variable takes on the value of '1' for fiscal year starts after January 1, 2011 and ends before December 31, 2012; and takes on the value of '0' if the fiscal year starts after January 1, 2008 and ends before December 31, 2009. *Foreign* is an indicator variable set to '1' for the sample of foreign firms. *High Foreign Trading* is an indicator variable equals to '1' if the foreign firm's *Foreign Trading* is above the foreign firm sample median. *Foreign Trading* equals the proportion of trading volume outside of the US. All other variables are defined in Table 2. We report OLS coefficient estimates and (in parentheses) t-statistics based on robust standard errors clustered by firm. We include industry- and country-fixed effects in the regression, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).