

Cross-listings and Voluntary Disclosure: International Evidence

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Abstract

This paper examines changes in firms' disclosure behavior around cross-listings. Using an international setting, we find that cross-listed firms have higher management forecast likelihood and frequency than similar firms that are not cross-listed. Within the cross-listing sample, we observe higher likelihood and frequency of management forecasts when differences in accounting standards between a cross-listed firm's home and target countries are larger. Further, we find that firms choosing to cross-list in target countries with larger difference in accounting standards tend to provide more voluntary disclosure prior to, rather than after, their cross-listings, and such voluntary disclosure helps firms attract more foreign institutional ownership in their cross-listing target countries. Our evidence suggests that although accounting differences deter firms' cross-listing activities, management forecasts can preemptively alleviate the information disadvantage faced by foreign institutional investors.

Keywords: Cross-listings, Voluntary Disclosure, Management Forecasts

Cross-listings and Voluntary Disclosure: International Evidence

I. INTRODUCTION

Voluntary disclosure is an important channel through which firms use to influence their information environment and reduce cross-border information and regulatory barriers (Li and Yang 2016; Gu et al. 2016). In this study, we examine whether cross-listed firms actively shape their information environments around their cross-listings by voluntarily providing more management forecasts (our proxy for firms' voluntary disclosure practices) and how cross-listed firms' voluntary disclosure practices vary with the differences in accounting standards between their home and target countries. In addition, we also examine the consequences of voluntary disclosure around firms' cross-listing activities. Specifically, we examine whether cross-listed firms that voluntarily issue more management forecasts attract more foreign institutional investors from their cross-listing target countries.

Using a large sample of manually collected international data on cross-listings and management forecasts for firms domiciled in 61 home countries spanning from 2004 to 2011, we find some difference in the voluntary disclosure practices between cross-listed firms and their matched non-cross-listed peers on average. In addition, further analyses indicate that firms cross-listed in target countries with greater difference in accounting standards from their home countries, appear to provide significantly more management forecast than firms cross-listed in countries with more similar accounting standards. Further analyses on the timing of changes in management forecasts around cross-listings suggest that, firms choosing to cross-list in target countries with larger accounting standards difference from their home countries tend to provide more voluntary disclosure prior to, instead of after, the cross-listing. Specifically, our evidence suggests that firms generally exhibit a greater likelihood and higher frequency of providing management forecasts

approximately two years before a cross-listing. However, we find no evidence that firms change their management forecasts practices significantly after their cross-listings take place, even for firms cross-listed in countries that have accounting standards and disclosure requirements more different from their home country.

Combined, these results suggest that the improvement in voluntary disclosure stems from firms choosing to increase voluntary disclosure prior to initiating a cross-listing rather than in response to investors' (especially foreign investors') information demand subsequent to a cross-listing. This finding is also consistent with the notion that firms strategically use voluntary disclosure to overcome information barriers faced by foreign investors, especially when firms anticipate foreign investors in their cross-listing target countries to face greater information disadvantage due to a larger difference in accounting standard from their (i.e. the investees') home countries. In addition, the finding that firms do not reduce their voluntary disclosure after they undertake cross-listings also suggests that any changes in voluntary disclosure associated with cross-listings appear to be permanent.

Finally, consistent with prior studies (Bae et al. 2008; O'Brien and Tan 2015), our results indicate that while differences in accounting standards and disclosure requirements across countries hinder firms from attracting institutional investors in their cross-listing target countries – which in turn may reduce firms' cross-listing incentives – voluntary disclosure appears to help cross-listed firms alleviate such concern. Specifically, our finding shows that foreign institutional investors are less hesitant to hold the shares of cross-listed firms with more voluntary disclosure.

Our paper contributes to the literature in several ways. First, prior research documents that cross-listings confer many potential benefits to firms (see, for example, Karolyi (1998; 2006) for

reviews of the cross-listing literature).¹ Despite of the various documented benefits associated with cross-listings, the sources of these benefits remain unclear. This is partly because most prior research examines foreign firms cross-listed in the United States or other countries with relatively strong investor protection. As such, it is difficult to disentangle whether the observed benefits associated with cross-listings stem from firms' internal forces such as changes in firms' voluntary disclosure behavior, or from the external institutional characteristics of the cross-listing target market, such as more different accounting standards from firms' home countries. For example, Fernandes and Ferreira (2008) find that the change in analyst coverage around cross-listings possibly explains the increase in price informativeness around cross-listings for non-U.S. stocks.² Our study contributes to this literature by providing evidence on another undocumented channel through which cross-listings could have an effect on firms' information environment, and ultimately on the capital market benefits associated with cross-listings. Specifically, our findings suggest that firms preemptively increase their voluntary disclosure prior to cross-listing, which in turn, improves firms' information environment. As such, our results highlight the importance of considering changes in voluntary disclosure behavior in examining the capital market benefits associate with cross-listings.

Second, we add to research on the costs and benefits of cross-listings. Despite of the proposed benefits to cross-listings, the observed number of cross-listings remains relatively small.³

¹ For example, the benefits include attracting foreign investment (Ammer et al. 2012), improving stock price informativeness (Fernandes and Ferreira 2008), increasing firm visibility (Baker et al. 2002), enhancing shareholder base (Bradshaw et al. 2004), reducing cost of equity capital (Hail and Leuz 2009), improving liquidity (Errunza and Miller 2000), protecting minority shareholders (Reese and Weisback 2002), and easing access to foreign product markets (Pagano et al. 2002).

² Other studies, for example, Merton (1987)'s investor recognition hypothesis and the subsequent empirical evidence documented in the literature (e.g., Foerster and Karolyi 1999; Errunza and Miller 2000; Baker et al. 2002) support the notion that cross-listings increase investor awareness of firms, thereby reducing cost of capital.

³ For example, the World Federation of Exchanges (WFE) report in 2012 that there were 2,990 cross-listings on member exchanges around the world compared with 43,342 domestic listings, representing only 6.45% of the total.

Major explanations for the paucity of cross-listings include the cost of navigating a different set of generally accepted accounting principles (GAAP) and disclosure requirements (especially before the International Financial Reporting Standards were adopted and accepted by many countries), and the perceived reluctance of foreign investors to own their securities due, at least in part, to the higher information disadvantages faced by foreign investors (Biddle and Saudagaran 1989; Bae et al. 2008; Brochet et al. 2012 Lundholm et al. 2014; O'Brien and Tan 2015).⁴ Consistent with the view that information asymmetry hinders foreign investors from owning securities, our results suggest that voluntary disclosure helps cross-listed firms to reduce the information asymmetry between the firms and investors, especially when firms are cross-listed in target countries with little proximity to their home countries. In particular, we find that firms appear to increase voluntary disclosure even several years prior to their undertaking of cross-listing activities.

In addition, limited studies examine cross-listings on non-U.S. stock exchanges. For example, prior research suggests that cross-listings on a non-U.S. exchange might not result in the same economic improvements as witnessed by the cross-listings in the U.S. Consistent with this view, Lang et al. (2003) find that firms cross-listed in the U.S. exhibit better accounting quality than firms cross-listed on non-U.S. or unregulated U.S. exchanges. Gagnon and Karolyi (2010) conclude that one of the most promising directions for future research in the cross-listing literature is to expand the current U.S.-centered research to provide a global perspective.⁵ As such, our study responds to their suggestion and extends existing research on cross-listings from mainly a U.S.

⁴ The recent wave in cross-delisting provides anecdotal support to this view. For example, the two major reasons provided by Siemens to justify its cross-delisting from the New York Stock Exchange (NYSE) were (1) because a lower trading volume in the firms' cross-listing target countries, and the fact that most of the trading of Siemens shares is conducted predominantly in Germany, and (2) a reduction in the complexity of the firm's financial reporting.

⁵ Gagnon and Karolyi (2010) suggest five directions and challenges for future research related to cross-listings, and the first one is "Overcoming a U.S.-centered perspective on the market for international cross-listings."

focus to a global scale, which in turn, sheds light on firms' disclosure behavior around cross-listings for firms around the world.

Finally, Lang et al. (2003) find that firms that choose to cross-list in the U.S. have higher quality accounting information than firms that choose not to. Focusing on non-U.S. firms' decisions to cross-list in the U.S., Leuz et al. (2009) find that strong disclosure regulations in foreign firms' home countries help firms attract U.S. investors, which suggests that investors prefer foreign firms with a higher level of corporate transparency. Similarly, Lundholm et al. (2014) show that foreign firms cross-listed in the U.S. tend to provide more readable annual reports as an attempt to reduce the perceived reluctance of U.S. investors to hold foreign shares. While extant studies focus on the quality of firms' mandatory reporting environment and find that improved mandatory disclosures are beneficial for cross-listed firms, they provide little evidence on whether voluntary disclosure could also help firms attract foreign investors. This question is particularly important because, presumably, firms have little control over the disclosure mandated by the home countries or exchanges, but have more discretion over their voluntary disclosure. We examine these questions and find that firms provide more voluntary disclosure – measured by the likelihood and frequency of management forecasts – in anticipation of a higher level of information disadvantage faced by foreign investors. More importantly, we find that firms with more voluntary disclosure are awarded by higher foreign institutional ownership. Therefore, our study provides important insights to corporate managers around the world in making cross-listing decisions by suggesting that higher level of voluntary disclosure is an important strategy to reduce the concern and cost associated with a lack of accounting proximity between a firm's home country and its cross-listing target country.

The remainder of our paper is structured as follows. In the next section, we review the related literature and develop our hypotheses. We discuss our research design in Section III and explain our data and sample in Section IV. The empirical results of our main and additional analyses are presented in Sections V and VI, respectively. Finally, we conclude in Section VII.

II. HYPOTHESIS DEVELOPMENT

As international capital markets become more integrated, firms increasingly turn to foreign capital markets for financing (Leuz et al. 2009; Giannetti and Koskinen 2010). However, foreign investors generally tend to be at an information disadvantage vis-à-vis their domestic counterparts because they are likely to be less familiar with domestic firm, industry, and economic conditions (Brennan and Cao 1997).⁶ For example, in examining the linguistic opacity in non-U.S. firms' conference calls, Brochet et al. (2016) suggest that even the language barriers between speakers (i.e. foreign firms) and listeners (i.e. U.S. investors) could contribute to the inefficient communication a between firms and their foreign investors. As a result, previous studies argue and show that foreign investors' concerns regarding the high information costs which they are facing reduce their incentives for investing in cross-listing firms (Kang and Stulz 1997; Ahearne et al. 2004; Sarkissian and Schill 2004; Leuz et al. 2009).

Theory suggests that managers could commit to disclosing more information voluntarily than mandated by regulations in order to reduce information asymmetry with their investors (e.g., Diamond and Verrecchia 1991; Balakrishnan et al. 2013). As a result, voluntary disclosure such as management forecasts represents an important channel through which firms could use to

⁶ Consistent with this view, prior research suggests that various proximities between a firm's home and cross-listing target country play an important role in influencing firms' cross-listing decisions (such as, accounting, geographic, economic, cultural, and industrial proximities) (Sarkissian and Schill 2004; Chen et al. 2015). The general finding in these studies is that, the less proximate the home country and target country, the higher the costs associated with the cross-listings.

improve their information environment (Hirst et al. 2008), to convey value relevant information to investors (Patell 1976, Penman 1980) and to alleviate information asymmetry surrounding firms (Coller and Yohn 1997).⁷

More recent research suggests that managers are strategic with their disclosures and these choices help with cross-listings. For example, Lundholm et al. (2014) find that foreign firms cross-listed in the U.S. have easier-to-read annual reports and press releases, especially when these firms are located farther from the U.S. or are from home countries with accounting and investor protection standards more different from those of the U.S. They also find that the readability of these cross-listed firms' textual disclosures is positively associated with their U.S. institutional ownership, consistent with cross-listed firms' desire to overcome the U.S. home bias by lowering the information disadvantage perceived by the U.S. investors and reducing the psychological distance between foreign firms and their U.S. investors.

Given the role which voluntary disclosure could play in reducing information asymmetries between firms and their investors, in this paper, we examine whether firms change their voluntary disclosure behavior around cross-listings given the anticipated higher level of information asymmetries faced by foreign investors. To the extent that the information asymmetry between firms and their foreign investors is a major obstacle to firms' cross-listing decisions and voluntary disclosure reduces such concern, we predict that firms choosing to cross-list will issue more voluntary disclosure around cross-listings. Our first hypothesis is thus stated as follows:

Hypothesis 1 – Cross-listed firms provide more voluntary disclosure than non-cross-listed firms.

⁷ Beyer et al. (2010) argue and show that management forecasts could be considered as a more important information source to investors than other information channels such as mandatory disclosure, earnings announcements, and analyst forecasts.

Previous studies argue that the considerable accounting diversity across countries exacerbates the information asymmetry between a firm and its foreign investors (Kang and Stulz 1997), which in turn increases the need for firms to disclose additional information to reduce this information asymmetry when cross-listing (Stulz 1999; Leuz and Verrecchia 2000; Chen et al. 2015). As such, following this argument, we predict that cross-listed firms would provide more voluntary disclosure to overcome the potentially higher information asymmetry when their cross-listing target countries have more different accounting standards from their home countries. Thus our second hypothesis is formally stated as follows:

Hypothesis 2 – Cross-listed firms are more likely to provide voluntary disclosure when their cross-listing target countries have more different accounting standards from their home countries.

Prior study suggests that cross-listing in a foreign stock exchange is one of the most important methods for firms to access to foreign capital market (Ammer et al. 2012). An important benefit that firms could receive from cross-listings is to expand their potential investor base, which, in turn, increases stock liquidity and valuation (Merton 1987; Amihud et al. 1999). A recent study by Fang et al. (2015) shows that foreign institutional investors serve as a powerful market force in affecting the global convergence of financial reporting practices suggesting that foreign institutional investors consider corporate disclosure practices to be of greater importance. To the extent that additional disclosure could effectively reduce the information asymmetries faced by foreign investors (Covrig et al. 2007; Yu and Wahid 2014), especially for firms cross-listed in target countries with little proximities to their home countries, we predict a more positive relation between management forecasts and foreign institutional ownership for such firms. Thus, our last hypothesis is stated as the following.

Hypothesis 3 – There is a more positive association between cross-listed firms’ voluntary disclosure and foreign institutional ownership for firms cross-listed in target countries with a higher difference of accounting standards from their home countries.

III. RESEARCH DESIGN

Test of the Effect of Cross-listing on Management Forecast

To test hypothesis 1 on the difference in voluntary disclosure between cross-listed and non-cross-listed firms, we estimate the following model using panel data of firm-year observations (with firm and year subscripts omitted for parsimony):

$$VD = \alpha + \beta_1 CL + \beta_2 SIZE + \beta_3 MB + \beta_4 LEVERAGE + \beta_5 ACCRUALS + \beta_6 ANALYSTS + \beta_7 NEWS + \beta_8 LOSS + \beta_9 SEGMENT + \beta_{10} OPTION + \beta_{11} SEO + \beta_{12} COMPETITION + \beta_{13} BIG4 + \beta_{14} REVVOL + \beta_{15} FIO + \beta_{16} RL + \beta_{17} EQUACC + \beta_{18} MCAP + Industry Dummies + Year Dummies + \epsilon \quad (1)$$

We measure a firm’s voluntary disclosures VD using two proxies: (1) MF_OCCR , which is an indicator variable equal to one if a firm issued a management forecast during a given year and zero otherwise; and (2) MF_FREQ , which is measured by the total number of management forecasts issued by a firm during a given year. Our main interest variable CL is an indicator variable equal to one if a firm has at least one secondary security actively listed and traded in a foreign country in a given year and zero otherwise. The coefficient on CL , β_1 captures the relation between a firm’s cross-listing status and its likelihood (frequency) of issuing management forecasts. We use logistic (Poisson) regressions to estimate equation (1) when the dependent variable is MF_OCCR (MF_FREQ). All regressions include industry and year fixed effects and report t-statistics calculated with standard errors clustered by both country and year.

We include a number of firm-, industry-, and country-level variables in equation (1) to control for possible determinants of voluntary disclosure as identified in prior literature (e.g., Brochet et al., 2016; Li and Yang, 2016). In particular, we expect firms to issue more management

forecasts when they are larger in size (*SIZE*), more complex (*SEGMENT*), and with greater information demands from internal or external parties (*LEVERAGE*, *ANALYST*, *FIO*) or with greater financing activities (*OPTION*, *SEO*). The association between management forecasts and firm growth (*MB*) or volatility (*REVVOL*) is ambiguous since uncertainty about a firm's future could indicate either higher information asymmetry and thus higher demand for voluntary disclosure, or less available information and thus less supply of voluntary disclosure (Li and Yang, 2016). We also include several proxies for financial reporting quality (*ACCRUALS*, *BIG4*) and firm performance (*NEWS*, *LOSS*) to control for the general information environment of a firm. *SIZE* is measured as the natural log of a firm's book value of total assets; *MB* is the ratio of a firm's market value of equity to book value of equity; *LEVERAGE* is the ratio of a firm's total debt to total assets; *ACCRUALS* are the country-, industry-, and year-adjusted total scaled accruals based on Bhattacharya et al. (2003); *ANALYSTS* is the total number of analysts following a firm based on IBES; *NEWS* (*LOSS*) is an indicator variable equal to one if a firm reports no-less-than previous period (negative) total income during the current period and zero otherwise; *SEGMENT* is the number of operating segments reported by a firm during the year; *OPTION* (*SEO*) is an indicator variable equal to one if a firm grants stock options to its officers (issues a seasoned equity offering) during the year and zero otherwise; *BIG4* is an indicator variable equal to one if a firm is audited by a big 4 auditor during the year and zero otherwise; *REVVOL* is sales volatility estimated as the standard deviation of sales over previous five-years scaled by average total assets; and *FIO* is the percentage of a firm's equity held by foreign institutional investors in the year.

In addition, we include *COMPETITION*, the opposite of the Herfindahl index to control for industry competition as product market competition affects a firm's incentive to issue management forecasts (Li 2010). Last, to control for home country-level legal and stock market

environment, we include *RL*, an indicator variable equal to one if a firm is in a country with a rule of law index greater than the median value of all countries in the year and zero otherwise; *EQUACC*, an index measure ranging from 0 to 10 denoting the extent to which local stock markets provide adequate financing to companies in the year based on “World Competitiveness Yearbook” executive survey by International Institute for Management Development (IMD); and *MCAP*, the market capitalization of listed companies as a percentage of GDP in the year. We include detailed variable definitions in Appendix.

Test of the Effect of Cross-listing Home-Target Accounting Standards Difference on Management Forecast

To test hypothesis 2, we restrict our test to the subsample of firms that are cross-listed during our sample period and estimate the difference in voluntary disclosure for firms cross-listed in target countries with accounting standards that are more versus less different from their home countries with the following model:

$$VD = \alpha + \beta_1 R_ACCTDIF + \beta_2 SIZE + \beta_3 MB + \beta_4 LEVERAGE + \beta_5 ACCRUALS + \beta_6 STKEXCH + \beta_7 ANALYSTS + \beta_8 NEWS + \beta_9 LOSS + \beta_{10} SEGMENT + \beta_{11} OPTION + \beta_{12} SEO + \beta_{13} COMPETITION + \beta_{14} BIG4 + \beta_{15} REVVOL + \beta_{16} FIO + \beta_{17} RL + \beta_{18} EQUACC + \beta_{19} MCAP + Industry Dummies + Year Dummies + \epsilon \quad (2)$$

where *VD* is estimated using *MF_OCCR* or *MF_FREQ*, as defined in equation (1). We estimate *R_ACCTDIF* using two measures. First, *R_ACCTDIF* is an indicator variable equal to one if the difference in accounting standards between a firm’s home and target countries is larger than the sample median among all cross-listed firms and zero otherwise. Second, we estimate *R_ACCTDIF1* in the same way as *R_ACCTDIF*, but adjust for changes in accounting standards brought about by IFRS adoption. The coefficient β_1 captures the relation between whether a firm is cross-listed in a target country more different from their home country and the likelihood (frequency) of its voluntary disclosure. Control variables are the same as in equation (1) except

that we add an additional control for *STKEXCH*⁸, i.e., the total number of stock exchanges in a country where the firm is listed, to capture the potentially different disclosure incentives for firms with multiple foreign cross-listings. Detailed variable definitions are listed in Appendix.

Test of the Effects of Management Forecast and Cross-listing Home-Target Accounting Standards Difference on Target Country Foreign Institutional Ownership

Hypothesis 3 addresses the question whether voluntary disclosures help firms to overcome the informational disadvantage they face with foreign investors during cross-listings. To test this hypothesis, we adopt difference-in-differences analyses and estimate the following regression model on the subsample of cross-listed firms:

$$\begin{aligned}
 CL_FIO = & \alpha + \beta_1 VD + \beta_2 R_ACCTDIF + \beta_3 VD \times R_ACCTDIF + \\
 & \beta_4 SIZE + \beta_5 MB + \beta_6 LEVERAGE + \beta_7 ACCRUALS + \beta_8 STKEXCH + \beta_9 ANALYSTS + \\
 & \beta_{10} NEWS + \beta_{11} LOSS + \beta_{12} SEGMENT + \beta_{13} OPTION + \beta_{14} SEO + \beta_{15} COMPETITION + \\
 & \beta_{16} BIG4 + \beta_{17} REVVOL + \beta_{18} RL + \beta_{19} EQUACC + \beta_{20} MCAP + \beta_{21} DISCREQ + \\
 & \beta_{22} INVPRO + Industry\ Dummies + Year\ Dummies + \epsilon
 \end{aligned} \tag{3}$$

where *CL_FIO* is a firm's foreign institutional ownership in the cross-listing target country, while all variables are the same as those in equation (1) except that we remove the general *FIO* variable and add in target country-level controls for disclosure regulation (*DISCREQ*) and investor protection (*INVPRO*). The coefficient on *VD*, β_1 , captures the main effect of voluntary disclosure on target country foreign institutional ownership; the coefficient on *R_ACCTDIF*, β_2 , captures the effect of differences between a firm's home and target country accounting standards on foreign institutional ownership. The interaction term *VD*×*R_ACCTDIF* is the main variable of interest in our difference-in-differences research design, and the coefficient β_3 captures how voluntary disclosure helps firms overcome the information disadvantage faced by foreign institutional

⁸ We do not include *STKEXCH* in model (1) as all non-cross-listed firms (*CL*=0) have zero cross-listing stock exchanges (*STKEXCH*=0).

investors when the cross-listing home and target countries differ more, which in turn attracts foreign institutional ownership in the cross-listing target country. Detailed variable definitions are provided in Appendix.

IV. DATA AND SAMPLE

Sample Selection

We collect cross-listings and management forecasts data from the S&P Capital IQ database. Starting with all publicly traded firms covered by Capital IQ between 2004 and 2011, we eliminate firms without primary identifier codes, firms that are investment funds or trusts, firms listed in tax havens, and firms that list over the counter (OTC). We define a firm-year to be “cross-listed” if the firm has at least one secondary security listed and traded in a country different from its primary listing country in a given year.⁹ After imposing the data availability criteria for other control variables, our unmatched full sample to test model (1) consists of 174,874 firm-year observations, among which 14,112 firm-year observations are cross-listed, representing 1,964 firms.

To alleviate concerns regarding potential endogeneity in firms’ choice to cross-list, we also construct a matched sample, where we match each cross-listed firm with a non-cross-listed firm with replacement. In particular, we first identify each cross-listed firm in our sample. Then, we match each of these cross-listed firms with a firm that did not cross-list in the cross-listing year, but was from the same country, same industry, and same year, with the closest value of total assets and leverage. We then retain all firm-year observations for such cross-listed and non-cross-listed firms, which results in a slightly unbalanced panel due to missing data for certain years. This

⁹ We define a firm’s home country based on its primary stock exchange listing, as a firm’s disclosure is affected mainly by the exchange on which the firm is primarily listed. To ensure that our results are not sensitive to varying definitions of a cross-listed firm’s home country, we redefine it based on the location of the firm’s headquarters or its incorporation country rather than its primary listing country, and repeat all of our analyses. The results are robust to this alternative definition of home country (untabulated).

matched full sample includes 19,932 firm-year observations, with 9,961 firm-year observations (1,369 unique firms¹⁰) of cross-listed firms.

Summary Statistics

Panel A, Table 1 tabulates descriptive statistics of management forecasts and other major firm and industry characteristics of cross-listed vs. non-cross-listed firms in both unmatched and matched full samples. In the unmatched full samples, cross-listed firms are relatively large and report total assets of \$901.4 million and a market-to-book ratio of 3.98. An average cross-listed firm in the unmatched sample is followed by 9.2 analysts and 72.6% of sample cross-listed firms are audited by big 4 auditors. On average, the total foreign institutional ownership of a cross-listed firm represents 14.9% of a cross-listed firm's total outstanding equity. For voluntary disclosure, an average cross-listed firm in the unmatched sample issues 1.31 management forecasts per year, and about 42.4% of cross-listed firm-years in the unmatched sample issue at least one management forecast in our sample. In general, almost all variables are significantly different between cross-listed and non-cross-listed firms before the matching. For the matched full sample, in addition to our matching variables (*SIZE* and *LEVERAGE*) which are no longer different, the magnitude of differences between cross-listed and non-cross-listed samples reduce for all the remaining variables except *MB*.

[Insert Table 1- Panel A about here]

Panel B of Table 1 presents the before- and after-matching cross-listing distributions by home country for all the 61 countries from the unmatched full sample. Seven countries are dropped from the matched sample since all cross-listed firms in those countries have no matching non-cross-listed firms. The evidence indicates that an average country in our unmatched sample has

¹⁰ The number of unique cross-listed firms drops from 1,964 to 1,369 since some cross-listed firms cannot be matched to any non-cross-listed firms based on our matching method, and thus have to be deleted.

8.1% of firm-year observations that belong to the cross-listed group, where Malaysia and Latvia have the smallest and largest cross-listing percentage, i.e. 0.2% and 95.6, respectively. For the absolute number of cross-listed firm-year observations, the United States, Canada, and Germany are among the top three either before or after the matching (e.g., after matching: 2,147, 1,123, and 893 respectively).

[Insert Table 1- Panel B about here]

Panel C of Table 1 reports the sample distribution by year both before and after the sample matching. In general, for both samples the total number of observations slightly increased throughout the sample period with a dip in 2011, while the yearly cross-listing percentage decreased slowly since 2004 and caught up in 2010 and 2011.

[Insert Table 1- Panel C about here]

Table 2 presents the Pearson (Spearman) correlation matrix above (below) the diagonal for our variables of interest and all firm- and industry-level controls across three models in the matched full sample. As Table 2 suggests, cross-listed firms are more likely to issue management forecasts and issue them more frequently. All control variables are significantly correlated with both proxies for management forecasts in at least one of the two correlation matrixes, and all control variables except the two matching variables (*SIZE* and *LEVERAGE*) also have significant correlation with the cross-listing variable, both suggesting the importance of controlling for these variables in our multivariate analyses.

[Insert Table 2 about here]

V. EMPIRICAL RESULTS

Test of Hypothesis 1: Cross-listings and Voluntary Disclosure

Table 3 reports our estimates of equation (1), which tests the effect of cross-listings on voluntary disclosure (hypothesis 1). Most control variables exhibit a relationship with management forecast variables in a way consistent with prior studies and our expectation. As for the main variable of interest, whether voluntary disclosure is measured as likelihood (*MF_OCCR*) or frequency (*MF_FREQ*) of management forecasts, we do not find a significant relation between voluntary disclosure and cross-listings in the unmatched full sample (*MF_OCCR*: coef.= 0.064, $t= 0.69$; *MF_FREQ*: coef.= -0.011, $t= -0.22$), which rejects hypothesis 1. However, after cross-listed firms and non-cross-listed firms are matched as described in Section IV, the coefficient on *CL* is 0.196 ($t= 2.23$) and 0.103 ($t= 2.29$) when voluntary disclosure is proxied by *MF_OCCR* and *MF_FREQ*, respectively, which provides support for hypothesis 1.

[Insert Table 3 about here]

Test of Hypothesis 2: Cross-listing Home-Target Country Differences and Voluntary Disclosure

To further examine the cross-sectional variation in the effect of cross-listing on management forecast, we add the dimension of differences in accounting standards between cross-listing home and target countries. In particular, we estimate equation (2) to examine whether firms cross-listed in countries with accounting standards that differ more from the accounting standards of their home countries provide more management forecasts, as these firms' need to overcome information asymmetry may be greater. We measure *R_ACCTDIF* as the difference in accounting standards between the home and cross-listing target countries in a given year.¹¹ These regression

¹¹ We also use an alternative measure of post-IFRS accounting standards difference (*R_ACCTDIF1*) to replace *R_ACCTDIF*. This robustness test is discussed in Section VI.

estimates are tabulated in Table 4. In general, we find that firms that are cross-listed in countries with accounting standards which differ more from their home country's accounting standards are more likely to issue management forecasts (coef.= 0.396, t= 4.77) and issue more of them (coef.= 0.196, t= 3.46) than firms with more proximate accounting standards in their cross-listing home and target countries. These results provide strong support to the prediction that firms issue more voluntary disclosure to reduce the information disadvantage caused by the accounting difference between their cross-listing home and target countries, and thus support hypothesis 2.

[Insert Table 4 about here]

Test of Hypothesis 3: Voluntary Disclosure, Accounting Difference, and Foreign Institutional Ownership

Presumably, cross-listed firms will increase voluntary disclosure when they have stronger incentives to overcome information asymmetry faced by their foreign investors. Such an incentive could be even greater when the difference in accounting standards between cross-listed firms' home and target countries is larger. Also as a result, cross-listing firms that provide more voluntary disclosures, especially when the accounting difference between their home and target country is high, might realize greater benefits such as higher investment by institutional investors in the cross-listing target country. We formally test this hypothesis based on equation (3) and present the results in Table 5.

In Table 5, we find a generally positive and significant relationship between the likelihood of management forecast *MF_OCCR* and target country foreign institutional ownership *CL_FIO* (coef.= 0.264, t-stat= 1.73), indicating that voluntary disclosure helps companies attract foreign investment in their cross-listing target country. Although the relationship between the difference in accounting standards *R_ACCTDIF* and *CL_FIO* is not significant in this model, untabulated

result show such a relation is negative and significant in a baseline model without adding *VD* and *VD*R_ACCTDIF*. This latter result thus provides some evidence that the differences in accounting standards between cross-listing home and target countries indeed deter target countries' institutional investors from investing in those cross-listed firms.

More importantly, we find a positive and significant coefficient on the interaction term *VD×R_ACCTDIF* when *VD* is measured by either *MF_OCCR* (coef.= 0.654, t= 2.36) or *MF_FREQ* (coef.= 0.297, t= 3.19). The positive interaction term suggests an attenuation effect of voluntary disclosures on attracting institutional ownership from a cross-listing target country with a large difference in accounting standards from its home country. Taken together, our results suggest that cross-country differences in accounting standards deter institutional investors from investing in foreign cross-listed firms, but voluntary disclosure by cross-listed firms can mitigate these concerns and help firms attract foreign investors in the cross-listing target countries, which provide strong evidence to support hypothesis 3.

[Insert Table 5 about here]

VI. ADDITIONAL ANALYSIS

The Timing of Voluntary Disclosure Changes: Prior to Cross-listings

Our primary analyses provide evidence that firms provide more voluntary disclosure when they are cross-listed in countries with accounting standards that differ more from their home country's accounting standards, but the timing of such increased voluntary disclosure remains unknown. Understanding the timing of voluntary disclosure changes is important because an alternative explanation of our previous finding could be that the increases in management forecasts are simply resulted by the increased disclosure requirement from the cross-listing target countries.

Lang and Lundholm (2000) examine corporate disclosures prior to seasoned equity offers and find that firms increase disclosure activity beginning six months before the offering. In the same vein, we examine the timing of such changes in voluntary disclosure made by cross-listed firms. We compare the effect on firms' cross-listing decisions of preceding voluntary disclosure practices over three periods: one year, two years, and three years prior to the year of a firm's cross-listing. Specifically, we regress the indicator for whether a firm has new cross-listed securities in a year on management forecast occurrence/frequency during the three preceding periods, including other previously identified determinants of cross-listings.

These results are tabulated in Table 6. We separately test the relationship between prior years' voluntary disclosure and cross-listings in all countries (Panel A) and in countries with accounting standards that differ more from cross-listed firms' home countries (Panel B). Results in Panel A of Table 6 indicate that there is no difference in the likelihood of a new cross-listing when preceding voluntary disclosure varies; that is, firms that provide more voluntary disclosure over the past one, two, or three years are not more likely to cross-list.

However, results in Panel B show that preceding voluntary disclosure occurrence and frequency levels are important determinants of firms' subsequent choice to cross-list in target countries with more different accounting standards from their home countries. Furthermore, we find that voluntary disclosure issued over the past three years are only weakly associated with subsequent cross-listings in the occurrence test (coef.= 0.499, t= 1.76), but not in the frequency test (coef.= 0.085, t= 1.01). However, voluntary disclosure over a shorter period, i.e., one year (*MF_OCCR*: coef.= 0.650, t= 3.44; *MF_FREQ*: coef.= 0.127, t= 2.18) or two years (*MF_OCCR*: coef.= 0.747, t= 3.22; *MF_FREQ*: coef.= 0.156, t= 2.32), is more strongly associated with the propensity to cross-list in countries with different accounting standards. The positive relation

between prior voluntary disclosure and cross-listing in countries with larger accounting differences suggest that firms provide additional voluntary disclosure in the lead up to when they intend to cross-list. This result is consistent with firms proactively addressing the potential information asymmetry concerns that investors from foreign countries might exhibit.

[Insert Table 6 about here]

The Timing of Voluntary Disclosure Changes: After Cross-listings

In this section, we further examine whether the increases in firms' voluntary disclosure around cross-listings are permanent or transitory and present the results in Table 7. Panel A of Table 7 include results on the entire sample (i.e., comparing the change in voluntary disclosures of cross-listed firms versus non-cross-listed firms), while the Panel B present results on the cross-listing sub-sample (i.e., comparing the change in voluntary disclosures by firms cross-listed in countries with accounting standards more different versus less different from their home countries).

As in our test of the changes in pre-cross-listing voluntary disclosure, we separately examine whether voluntary disclosure after cross-listings changes over three time periods: one-year, two-years, and three-years. Results in Table 7 suggest that the post-cross-listing changes in voluntary disclosure do not differ between cross-listed firms and non-cross-listed firms (Panel A), and nor do they differ when firms cross-listed in target countries with more or less different accounting standards from their home countries (Panel B). Our results are robust to measuring voluntary disclosure with either likelihood or frequency of management forecasts and different time intervals. Overall, our analyses of the timing of voluntary disclosure in both panels of Table 7 suggest that our main finding of increased voluntary disclosure for cross-listed firms is more likely a preemptive choice by managers of firms that seek to cross-list, rather than an increase in demand for voluntary disclosure following cross-listing.

[Insert Table 7 about here]

Alternative Measure of Difference in Accounting Standards

Since accounting difference is measured before IFRS adoption, it could be possible that this measure may obscure the actual difference in accounting standards between two countries after IFRS adoption. To test the robustness of our results, we also construct an alternative measure of post-IFRS accounting difference, $R_ACCTDIF1$, which is measured in the same way as $R_ACCTDIF$ except that we update accounting standard score for all country-years that have adopted IFRS and then use the updated scores to calculate the accounting difference measure. The result using the alternative accounting difference to test model (2) is reported in the right panel of Table 4. This robustness result suggests that, even after controlling for the changes in accounting standards brought about by IFRS adoption during the sample period, the effect of accounting difference on management forecast is still positive and statistically significant (MF_OCCR : coef.= 0.386, t= 2.79; MF_FREQ : coef.= 0.092, t= 1.30). Untabulated results testing hypothesis 3 and the timing effect are also generally consistent with those reported in Table 5 and Panel B of Table 7.

VII. CONCLUSION

In this paper, we examine the changes in voluntary disclosure around cross-listings. Using an international setting, we examine and find some difference in voluntary disclosure between cross-listed and non-cross-listed firms in general when firms are matched on industry, country, year, and size. In addition, we find that firms cross-listed in target countries with accounting standards that differ more from the accounting standards of their home countries are more likely to issue, and issue more management forecasts. These results are consistent with firms' desire to provide voluntary disclosure to alleviate the information disadvantage faced by foreign investors.

To better understand cross-listed firms' incentives to provide more voluntary disclosure, we examine institutional ownership in firms' cross-listing target countries as a possible capital market consequence. We find that the difference in accounting standards between cross-listing home and target countries indeed deter institutional investors from investing in cross-listed foreign stocks, but voluntary disclosure enables cross-listed firms to overcome this hurdle.

Finally, we examine the timing of changes in voluntary disclosure and find that both the likelihood and frequency of management forecasts appear to increase most significantly during the one or two years prior to cross-listings. Furthermore, we find that changes in management forecasts after a firm is cross-listed do not seem to differ from the control group of non-cross-listed firms. Taken together, our findings indicate that managers preemptively increase their voluntary disclosure when they plan to pursue a cross-listing in the near future.

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Appendix: Variable Definition

Variable	Definition
Voluntary Disclosure Variables	
<i>MF_OCCR</i>	An indicator variable set equal to one if a firm issues a management forecast during the year and zero otherwise.
<i>MF_FREQ</i>	A count variable set equal to the number of management forecasts issued by a firm during the year.
Cross-listing Variables	
<i>CL</i>	An indicator variable set equal to one if a firm is cross-listed during the year and zero otherwise.
<i>R_ACCTDIF</i>	An indicator variable set equal to one if <i>ACCTDIF</i> is above the median <i>ACCTDIF</i> value and zero otherwise, where <i>ACCTDIF</i> is measured as the absolute value of the difference between a cross-listed firm's home and target countries' accounting standards based on Bae, Tan, and Welker (2008).
<i>R_ACCTDIF1</i>	An indicator variable set equal to one if <i>ACCTDIF1</i> is above the median <i>ACCTDIF1</i> value and zero otherwise, where <i>ACCTDIF1</i> is measured as the absolute value of the difference between a cross-listed firm's home and target countries' accounting standards based on Bae, Tan, and Welker (2008), adjusted for IFRS adoption.
<i>CL_FIO</i>	The percentage of a firm's shares held by foreign institutional investors in the target country in which a firm is cross-listed.
Firm and Industry Level Variables	
<i>ACCRUALS</i>	A measure of firm-year-level financial opacity measured by country-, industry- and year-adjusted total scaled accruals based on Bhattacharya et al. (2003). Scaled accruals are computed using balance sheet and income statement information: $ACCRUAL = (\Delta CA - \Delta CL - \Delta CASH + \Delta STD - DEP + \Delta TP) / \text{lag}(TA)$, where ΔCA is the change in total current assets from the prior year; ΔCL is the change in total current liabilities from the prior year; $\Delta CASH$ is the change in cash from the prior year; ΔSTD is the change in the current portion of long-term debt included in total current liabilities from the prior year; DEP is depreciation and amortization expense in a given year; ΔTP is the change in income taxes payable from the prior year; and $\text{lag}(TA)$ is total assets at the end of the prior year.
<i>ANALYST</i>	Total number of analysts following a firm in a given year from IBES.
<i>BIG4</i>	An indicator variable set equal to one if a firm's auditor in a given year is a Big 4 auditor and 0 otherwise.
<i>COMPETITION</i>	The Herfindahl index multiplied by (-1), where the Herfindahl index is calculated as the sum of the squares of fractional market shares of firms within each two-digit SIC industry for each country-year.
<i>FIO</i>	The percentage of a firm's investors who are foreign institutional owners.
<i>LEVERAGE</i>	The ratio of a firm's total debt to total assets.
<i>LOSS</i>	An indicator variable set equal to one if the firm reports a loss in a given year and zero otherwise.
<i>MB</i>	The ratio of market value to book value of common equity.
<i>NEWS</i>	An indicator variable set equal to one if the current-period total income is greater than or equal to the previous-period total income
<i>OPTION</i>	An indicator variable set equal to one if the firm grants stock options to its officers and directors in a given year and zero otherwise.

<i>REVVOL</i>	Volatility of sales; defined as the standard deviation of sales over the previous five-years scaled by average total assets.
<i>SEGMENT</i>	The total number of geographic segments reported by a firm in a given year.
<i>SEO</i>	An indicator variable set equal to one if a firm issues equity during the year and zero otherwise.
<i>SIZE</i>	The log of a firm's book value of total assets in millions of U.S. dollars.

Country Level Variables

<i>DISCREQ</i>	The measure of a country's disclosure requirement index.
<i>MCAP</i>	The market capitalization of listed companies as a percentage of GDP.
<i>RL</i>	The "Rule of law" index, calculated as the average of "Property Rights" and Freedom from Corruption".
<i>EQUACC</i>	An index measure from 0 to 10 denoting whether executives believe the local stock markets provide adequate financing to companies.
<i>INVPRO</i>	An index measure from 0 to 10 denoting the strength of investor protection in a country during a given year

Table 1: Descriptive Statistics

This table reports the descriptive statistics for our sample firms. Panel A reports the differences between our unmatched and matched samples. Our matched sample is created by selecting firms that cross-list during our sample period. During the year of cross-listing, we match the sample firm with another firm in the same industry, country, and year with the closest value of assets. These firms are then expanded to the full sample when data is available. Panel B reports our cross-listing and full sample observations by country. Panel C reports our cross-listing and full sample observations by year.

Panel A

	Unmatched Full Sample			Matched Full Sample		
	<i>CL</i> =0	<i>CL</i> =1		<i>CL</i> =0	<i>CL</i> =1	
No. of Observations						
=	160,762	14,112		9,971	9,961	
Variables	Mean	Mean	Diff	Mean	Mean	Diff
Management Forecast Variables						
<i>MF_OCCR</i>	0.167	0.424	0.256***	0.294	0.364	0.070***
<i>MF_FREQ</i>	0.360	1.313	0.771***	0.763	0.988	0.225***
Control Variables						
<i>SIZE</i>	4.534	6.804	2.270***	6.254	6.320	0.065
<i>MB</i>	4.099	3.979	-0.120	3.062	4.346	1.284**
<i>LEVERAGE</i>	0.276	0.237	-0.039***	0.214	0.216	0.002
<i>ACCRUALS</i>	0.077	0.186	0.109***	0.271	0.331	0.060**
<i>ANALYST</i>	1.468	9.242	7.774***	5.233	7.878	2.645***
<i>NEWS</i>	0.563	0.588	0.025***	0.571	0.591	0.019**
<i>LOSS</i>	0.315	0.262	-0.053***	0.282	0.323	0.042***
<i>SEGMENT</i>	0.544	1.672	1.128***	1.223	1.390	0.167***
<i>OPTION</i>	0.107	0.183	0.076***	0.183	0.225	0.042***
<i>SEO</i>	0.047	0.102	0.055***	0.067	0.119	0.052***
<i>COMPETITION</i>	-0.212	-0.329	-0.117***	-0.269	-0.256	0.013***
<i>BIG4</i>	0.430	0.726	0.296***	0.641	0.674	0.033***
<i>REVVOL</i>	16.131	106.477	90.346***	80.232	123.598	43.366***
<i>FIO</i>	6.006	14.887	8.881***	11.940	14.781	2.841***

(Table 1 continued)
Panel B - Cross-listing Distributions by Country

	Country Code	Country Name	Unmatched Full Sample			Matched Full Sample		
			CL=1	Total Obs.	CL %	CL=1	Total Obs.	CL %
1	ARE	United Arab Emirates	14	604	2.3%	14	30	46.7%
2	ARG	Argentina	68	495	13.7%	52	108	48.1%
3	AUS	Australia	461	7,054	6.5%	452	920	49.1%
4	AUT	Austria	221	432	51.2%	56	109	51.4%
5	BEL	Belgium	267	694	38.5%	84	168	50.0%
6	BGD	Bangladesh	8	426	1.9%	8	16	50.0%
7	BHR	Bahrain	36	193	18.7%	30	62	48.4%
8	BRA	Brazil	66	2,225	3.0%	66	133	49.6%
9	CAN	Canada	1,157	8,303	13.9%	1,123	2,220	50.6%
10	CHE	Switzerland	114	928	12.3%	61	122	50.0%
11	CHN	China	87	11,729	0.7%	77	148	52.0%
12	COL	Colombia	22	216	10.2%	15	29	51.7%
13	CYP	Cyprus	7	307	2.3%			
14	CZE	Czech Republic	39	84	46.4%			
15	DEU	Germany	1,181	4,576	25.8%	893	1,777	50.3%
16	DNK	Denmark	264	1,079	24.5%	108	216	50.0%
17	EGY	Egypt	28	204	13.7%	28	58	48.3%
18	ESP	Spain	417	863	48.3%	170	334	50.9%
19	FIN	Finland	325	784	41.5%	102	206	49.5%
20	FRA	France	985	3,681	26.8%	431	857	50.3%
21	GBR	United Kingdom	564	7,084	8.0%	513	1,064	48.2%
22	GRC	Greece	177	1,263	14.0%	83	163	50.9%
23	HKG	Hong Kong	509	5,674	9.0%	330	662	49.8%
24	HUN	Hungary	37	96	38.5%			
25	IDN	Indonesia	68	1,571	4.3%	60	122	49.2%
26	IND	India	957	12,251	7.8%	882	1,778	49.6%
27	IRL	Ireland	63	170	37.1%	55	115	47.8%
28	ISL	Iceland	8	29	27.6%	8	16	50.0%
29	ISR	Israel	58	1,666	3.5%	58	101	57.4%
30	ITA	Italy	451	814	55.4%	71	141	50.4%
31	JAM	Jamaica	37	154	24.0%	5	13	38.5%
32	JPN	Japan	98	15,024	0.7%	86	167	51.5%
33	KOR	Korea	73	7,400	1.0%	67	131	51.1%
34	KWT	Kuwait	47	710	6.6%	47	97	48.5%
35	LTU	Lithuania	182	227	80.2%	24	48	50.0%
36	LUX	Luxembourg	12	89	13.5%			
37	LVA	Latvia	109	114	95.6%			
38	MEX	Mexico	98	496	19.8%	54	104	51.9%

39	MYS	Malaysia	14	6,441	0.2%	14	28	50.0%
40	NGA	Nigeria	23	566	4.1%	23	44	52.3%
41	NLD	Netherlands	348	696	50.0%	199	390	51.0%
42	NOR	Norway	422	1,344	31.4%	313	628	49.8%
43	NZL	New Zealand	17	656	2.6%	17	41	41.5%
44	OMN	Oman	5	540	0.9%			
45	PAK	Pakistan	21	1,641	1.3%	21	52	40.4%
46	PER	Peru	13	628	2.1%	13	28	46.4%
47	POL	Poland	20	2,575	0.8%	14	34	41.2%
48	PRT	Portugal	131	285	46.0%	31	63	49.2%
49	QAT	Qatar	7	274	2.6%	7	15	46.7%
50	RUS	Russia	178	619	28.8%	103	196	52.6%
51	SGP	Singapore	310	3,962	7.8%	310	640	48.4%
52	SVN	Slovenia	8	153	5.2%			
53	SWE	Sweden	600	2,513	23.9%	220	433	50.8%
54	THA	Thailand	129	3,103	4.2%	89	184	48.4%
55	TTO	Trinidad and Tobago	16	117	13.7%	8	16	50.0%
56	TUN	Tunisia	4	245	1.6%	4	8	50.0%
57	TWN	Taiwan	234	10,340	2.3%	234	480	48.8%
58	USA	United States	2,203	35,942	6.1%	2,147	4,256	50.4%
59	VNM	Vietnam	4	998	0.4%	4	7	57.1%
60	ZAF	South Africa	82	1,447	5.7%	69	138	50.0%
61	ZMB	Zambia	8	80	10.0%	8	16	50.0%
			14,112	174,874	8.1%	9,961	19,932	50.0%

(Table 1 continued)

Panel C - Cross-listing Distributions by Year

Year	Unmatched Full Sample			Matched Full Sample		
	CL=1	Total Obs.	CL %	CL=1	Total Obs.	CL %
2004	1,527	14,799	10.3%	1,032	2,105	49.0%
2005	1,629	18,625	8.7%	1,132	2,304	49.1%
2006	1,714	21,176	8.1%	1,212	2,443	49.6%
2007	1,773	23,581	7.5%	1,269	2,544	49.9%
2008	1,838	24,198	7.6%	1,305	2,611	50.0%
2009	1,861	25,054	7.4%	1,330	2,646	50.3%
2010	1,886	24,078	7.8%	1,345	2,671	50.4%
2011	1,884	23,363	8.1%	1,336	2,608	51.2%
	14,112	174,874	8.1%	9,961	19,932	50.0%

Table 2: Correlation Matrix

This table reports the correlations between the variables of interest among our sample firms. The Pearson (Spearman) correlations are reported above (below) the 45 degree line. Correlations with a statistical significance at better than the 10-percent level are reported in bold font.

Pearson (above) and Spearman (below) Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>1. MF_OCCR</i>		0.827	0.074	0.459	0.404	-0.009	0.025	-0.010	-0.009	-0.185	0.310	0.140	0.092	0.248	0.239	0.002	0.324	0.081
<i>2. MF_FREQ</i>	0.976		0.075	0.510	0.407	-0.008	0.057	-0.009	-0.002	-0.168	0.327	0.184	0.114	0.245	0.274	-0.008	0.365	0.085
<i>3. CL</i>	0.074	0.078		0.136	0.014	0.004	0.012	0.010	0.020	0.045	0.042	0.052	0.092	0.034	0.070	0.089	0.064	0.833
<i>4. ANALYST</i>	0.508	0.535	0.132		0.614	-0.008	0.059	-0.010	0.002	-0.222	0.414	0.185	0.063	0.313	0.404	-0.006	0.443	0.195
<i>5. SIZE</i>	0.409	0.428	0.005	0.621		-0.027	-0.034	-0.013	-0.001	-0.434	0.359	0.055	-0.079	0.456	0.477	-0.020	0.389	0.088
<i>6. LEVERAGE</i>	0.094	0.091	-0.006	0.134	0.306		0.004	0.009	0.005	0.018	-0.008	-0.007	-0.005	-0.012	-0.004	-0.005	-0.008	-0.002
<i>7. COMPETITION</i>	0.050	0.076	0.019	0.070	-0.029	0.014		0.002	0.010	0.014	0.024	0.118	0.117	-0.067	0.021	0.010	0.088	0.012
<i>8. MB</i>	0.046	0.060	0.136	0.130	-0.150	-0.134	0.050		-0.011	0.002	-0.010	0.010	-0.004	0.003	-0.003	-0.005	-0.009	0.006
<i>9. NEWS</i>	-0.009	-0.007	0.020	-0.005	-0.005	-0.039	0.001	0.061		-0.226	-0.004	-0.015	-0.011	-0.010	0.018	-0.003	-0.018	0.017
<i>10. LOSS</i>	-0.185	-0.186	0.045	-0.252	-0.435	-0.131	0.036	0.058	-0.226		-0.177	0.153	0.047	-0.161	-0.146	0.141	-0.130	0.062
<i>11. SEGMENT</i>	0.333	0.354	0.001	0.421	0.393	0.083	0.049	0.039	-0.004	-0.197		0.074	0.101	0.243	0.207	-0.056	0.280	0.044
<i>12. OPTION</i>	0.140	0.163	0.052	0.176	0.048	-0.103	0.211	0.088	-0.015	0.153	0.076		0.015	0.115	0.090	0.099	0.255	0.080
<i>13. HITECH</i>	0.092	0.105	0.092	0.074	-0.083	-0.069	0.232	0.121	-0.011	0.047	0.090	0.015		0.021	-0.021	-0.008	0.016	0.047
<i>14. BIG4</i>	0.248	0.257	0.034	0.363	0.461	0.069	-0.112	0.009	-0.010	-0.161	0.263	0.115	0.021		0.173	0.005	0.261	0.103
<i>15. REVVOL</i>	0.424	0.443	0.062	0.604	0.839	0.300	0.008	-0.014	0.015	-0.436	0.415	0.022	-0.031	0.401		-0.022	0.234	0.106
<i>16. SEO</i>	0.002	-0.002	0.089	0.032	-0.028	-0.042	0.004	-0.018	-0.003	0.141	-0.061	0.099	-0.008	0.005	-0.062		0.023	0.112
<i>17. FIO</i>	0.317	0.332	0.102	0.487	0.429	0.057	0.059	0.065	-0.035	-0.157	0.332	0.148	0.038	0.285	0.402	0.022		0.088
<i>18. STKEXCH</i>	0.084	0.089	0.935	0.163	0.045	-0.016	0.002	0.151	0.019	0.062	0.000	0.078	0.067	0.079	0.098	0.108	0.118	

Table 3: Regression Estimates of Cross-listed Firms and Management Forecasts

This table reports regression estimates based on equation (1): $VD = \alpha + \beta_1 CL + \beta_2 SIZE + \beta_3 MB + \beta_4 LEVERAGE + \beta_5 ACCRUALS + \beta_6 ANALYSTS + \beta_7 NEWS + \beta_8 LOSS + \beta_9 SEGMENT + \beta_{10} OPTION + \beta_{11} SEO + \beta_{12} COMPETITION + \beta_{13} BIG4 + \beta_{14} REVVOL + \beta_{15} FIO + \beta_{16} RL + \beta_{17} EQUACC + \beta_{18} MCAP + Industry Dummies + Year Dummies + \epsilon$. VD is estimated with MF_OCCR , an indicator variable set equal to one if a firm issued a management forecast during a given year and zero otherwise, or MF_FREQ , the total number of management forecasts issued by a firm during a given year. Models with MF_OCCR (MF_FREQ) as the dependent variable are estimated with logistic (poisson) regressions. CL is an indicator variable set equal to one if a firm is cross-listed during a given year and zero otherwise. All regressions include industry and year fixed effects. T-statistics (in parentheses) are calculated with standard errors clustered by both country and year. All other variable definitions are included in the appendix.

DEP.VAR.	Unmatched Full Sample		Matched Full Sample	
	MF_OCCR	MF_FREQ	MF_OCCR	MF_FREQ
<i>CL</i>	0.064 (0.69)	-0.011 (-0.22)	0.196** (2.23)	0.103** (2.29)
<i>SIZE</i>	0.390*** (17.85)	0.315*** (20.91)	0.331*** (10.68)	0.243*** (11.71)
<i>MB</i>	-0.000 (-0.30)	-0.001 (-0.79)	-0.001 (-0.22)	0.002 (0.85)
<i>LEVERAGE</i>	-0.242*** (-5.33)	-0.315*** (-8.02)	-0.424*** (-2.79)	-0.299*** (-3.03)
<i>ACCRUALS</i>	0.011 (1.01)	0.000 (0.06)	0.061** (2.29)	0.023*** (2.72)
<i>ANALYST</i>	0.062*** (13.32)	0.014*** (5.20)	0.046*** (6.74)	0.014*** (4.15)
<i>NEWS</i>	-0.039* (-1.76)	-0.028*** (-3.02)	-0.055 (-1.05)	-0.032* (-1.76)
<i>LOSS</i>	-0.118*** (-3.70)	-0.104*** (-4.01)	-0.233*** (-3.04)	-0.141*** (-3.14)
<i>SEGMENT</i>	0.050*** (6.27)	0.023*** (4.34)	0.026 (1.58)	0.008 (0.98)
<i>OPTION</i>	0.353*** (7.32)	0.146*** (3.37)	0.403*** (3.48)	0.143*** (2.61)
<i>SEO</i>	0.299*** (5.18)	0.282*** (8.49)	0.259*** (3.38)	0.191*** (3.63)
<i>COMPETITION</i>	0.103 (1.27)	0.040 (0.51)	-0.005 (-0.02)	0.282** (2.06)
<i>BIG4</i>	0.052* (1.67)	0.177*** (6.35)	0.085 (0.71)	0.177** (2.28)
<i>REVVOL</i>	-0.000* (-1.72)	-0.001*** (-8.82)	-0.000** (-2.07)	-0.000*** (-5.22)
<i>FIO</i>	0.010*** (4.39)	0.007*** (9.18)	0.010*** (2.93)	0.007*** (5.85)
<i>RL</i>	-0.115*** (-3.84)	-0.054*** (-3.60)	0.024*** (7.56)	0.019*** (7.85)
<i>EQUACC</i>	-0.130 (-1.63)	-0.113*** (-2.74)	-0.200*** (-2.91)	-0.053 (-0.92)

<i>MCAP</i>	0.001 (0.51)	0.001 (0.61)	-0.004*** (-6.64)	-0.004*** (-5.86)
Constant	2.230** (2.02)	-0.140 (-0.22)	-4.864*** (-5.80)	-3.524*** (-4.32)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Adjusted R-squared	0.30	0.34	0.30	0.30
Observations	174,874	174,874	19,932	19,932

Table 4: Regression estimates of the relation between cross-listing country differences and management forecasts

This table reports regression estimates based on equation (2): $VD = \alpha + \beta_1 R_ACCTDIF + \beta_2 SIZE + \beta_3 MB + \beta_4 LEVERAGE + \beta_5 ACCRUALS + \beta_6 STKEXCH + \beta_7 ANALYSTS + \beta_8 NEWS + \beta_9 LOSS + \beta_{10} SEGMENT + \beta_{11} OPTION + \beta_{12} SEO + \beta_{13} COMPETITION + \beta_{14} BIG4 + \beta_{15} REVVOL + \beta_{16} FIO + \beta_{17} RL + \beta_{18} EQUACC + \beta_{19} MCAP + Industry\ Dummies + Year\ Dummies + \epsilon$. VD is estimated with MF_OCCR , an indicator variable set equal to one if a firm issued a management forecast during a given year and zero otherwise, or MF_FREQ , the total number of management forecasts issued by a firm during a given year. Models with MF_OCCR (MF_FREQ) as the dependent variable are estimated with logistic (poisson) regressions. $R_ACCTDIF$ ($R_ACCTDIF1$) is an indicator variable set equal to one if the difference in accounting standards between a firm's home and target countries is larger than the sample median among all cross-listed firms (adjusted for IFRS adoption). All regressions include industry and year fixed effects. T-statistics (in parentheses) are calculated with standard errors clustered by both country and year. All other variable definitions are included in the appendix.

DEP.VAR.	<i>R_ACCTDIF</i>		<i>R_ACCTDIF1</i>	
	<i>MF_OCCR</i>	<i>MF_FREQ</i>	<i>MF_OCCR</i>	<i>MF_FREQ</i>
<i>R_ACCTDIF</i>	0.396*** (4.77)	0.196*** (3.46)	0.386*** (2.79)	0.092 (1.30)
<i>SIZE</i>	0.360*** (11.82)	0.232*** (12.81)	0.365*** (12.18)	0.234*** (12.76)
<i>MB</i>	0.000 (0.08)	0.002 (0.78)	0.001 (0.17)	0.002 (0.76)
<i>LEVERAGE</i>	-0.924*** (-4.43)	-0.509*** (-4.45)	-0.907*** (-4.37)	-0.491*** (-4.32)
<i>ACCRUALS</i>	0.060* (1.75)	0.036** (2.40)	0.048 (1.33)	0.030* (1.95)
<i>STKEXCH</i>	-0.117** (-2.54)	-0.047* (-1.85)	-0.112** (-2.46)	-0.042* (-1.67)
<i>ANALYST</i>	0.032*** (6.97)	0.007*** (3.10)	0.036*** (7.38)	0.008*** (3.34)
<i>NEWS</i>	0.042 (0.95)	0.011 (0.78)	0.044 (0.92)	0.010 (0.70)
<i>LOSS</i>	-0.250*** (-2.72)	-0.146** (-2.52)	-0.265*** (-3.00)	-0.157*** (-2.84)
<i>SEGMENT</i>	0.007 (0.45)	0.005 (0.79)	0.011 (0.72)	0.007 (1.12)
<i>OPTION</i>	0.250*** (2.70)	0.053 (1.11)	0.187** (2.10)	0.022 (0.50)
<i>SEO</i>	0.090 (0.86)	0.048 (0.86)	0.079 (0.77)	0.047 (0.84)
<i>COMPETITION</i>	0.013 (0.06)	0.252** (2.43)	-0.087 (-0.43)	0.208** (2.04)
<i>BIG4</i>	0.091 (0.92)	0.086* (1.67)	0.075 (0.77)	0.080 (1.55)
<i>REVVOL</i>	-0.000 (-1.28)	-0.000*** (-3.79)	-0.000* (-1.88)	-0.000*** (-4.40)
<i>FIO</i>	0.013*** (4.91)	0.008*** (6.33)	0.013*** (4.44)	0.007*** (6.66)

<i>RL</i>	0.009** (2.37)	0.009*** (3.32)	0.013*** (2.99)	0.011*** (4.01)
<i>EQUACC</i>	0.030 (0.49)	0.065* (1.66)	-0.012 (-0.16)	0.031 (0.69)
<i>MCAP</i>	-0.005*** (-5.72)	-0.004*** (-4.78)	-0.005*** (-5.85)	-0.005*** (-5.01)
Constant	-3.545*** (-6.58)	-2.178*** (-6.95)	-3.587*** (-6.28)	-2.084*** (-6.21)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Pseudo R-Squared	0.29	0.25	0.29	0.25
Observations	12,663	12,663	12,663	12,663

Table 5: Regression estimates of the relation between management forecasts, proximity differences, and foreign institutional ownership

This table reports regression estimates of equation (3): $CL_FIO = \alpha + \beta_1 VD + \beta_2 R_ACCTDIF + \beta_3 VD \times R_ACCTDIF + \beta_4 SIZE + \beta_5 MB + \beta_6 LEVERAGE + \beta_7 ACCRUALS + \beta_8 STKEXCH + \beta_9 ANALYSTS + \beta_{10} NEWS + \beta_{11} LOSS + \beta_{12} SEGMENT + \beta_{13} OPTION + \beta_{14} SEO + \beta_{15} COMPETITION + \beta_{16} BIG4 + \beta_{17} REVVOL + \beta_{18} RL + \beta_{19} EQUACC + \beta_{20} MCAP + \beta_{21} DISCREQ + \beta_{22} INVPRO + Industry\ Dummies + Year\ Dummies + \epsilon$. CL_FIO is a firm's foreign institutional ownership in the cross-listing target country. VD is estimated with MF_OCCR , an indicator variable set equal to one if a firm issued a management forecast during a given year and zero otherwise, or MF_FREQ , the total number of management forecasts issued by a firm during a given year. Models with MF_OCCR (MF_FREQ) as the dependent variable are estimated with logistic (poisson) regressions. $R_ACCTDIF$ is an indicator variable set equal to one if the difference in accounting standards between a firm's home and target countries is larger than the sample median among all cross-listed firms. All regressions include industry and year fixed effects. T-statistics (in parentheses) are calculated with standard errors clustered by both country and year. All other variable definitions are included in the appendix.

DEP.VAR.=	<i>CL_FIO</i>	
<i>VD</i> =	<i>MF_OCCR</i>	<i>MF_FREQ</i>
<i>VD</i>	0.264* (1.73)	0.024 (0.63)
<i>R_ACCTDIF</i>	-0.173 (-1.09)	-0.173 (-1.07)
<i>VD×R_ACCTDIF</i>	0.654** (2.36)	0.297*** (3.19)
<i>SIZE</i>	0.030 (0.81)	0.040 (1.07)
<i>MB</i>	-0.009*** (-2.75)	-0.009*** (-2.74)
<i>LEVERAGE</i>	0.041 (0.15)	0.041 (0.15)
<i>ACCRUALS</i>	0.029 (0.77)	0.026 (0.74)
<i>STKEXCH</i>	0.072 (0.89)	0.074 (0.91)
<i>ANALYST</i>	0.024*** (2.88)	0.024*** (2.91)
<i>NEWS</i>	0.082 (1.24)	0.079*** (10.57)
<i>LOSS</i>	-0.401*** (-2.60)	-0.406*** (-2.63)
<i>SEGMENT</i>	-0.007 (-0.24)	-0.008 (-0.28)
<i>OPTION</i>	0.236 (1.22)	0.253 (1.29)
<i>SEO</i>	0.081 (0.52)	0.085 (0.56)
<i>COMPETITION</i>	0.346 (1.04)	0.325 (0.97)
<i>BIG4</i>	0.041	0.041

	(0.33)	(0.33)
<i>REVVOL</i>	-0.001***	-0.001***
	(-4.59)	(-4.64)
<i>RL</i>	0.024***	0.023***
	(3.40)	(3.40)
<i>EQUACC</i>	-0.131	-0.142*
	(-1.62)	(-1.71)
<i>MCAP</i>	-0.004***	-0.004***
	(-4.32)	(-4.54)
<i>DISCREQ</i>	0.901	1.060
	(1.00)	(1.17)
<i>INVPRO</i>	2.911***	2.811***
	(4.51)	(4.42)
Constant	-3.525***	-3.535***
	(-3.99)	(-3.97)
<hr/>		
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
R-squared	0.21	0.21
Observations	12,663	12,663
<hr/>		

Table 6: Regression estimates of the relation between prior management forecasts and cross-listings

This table reports regression estimates of the timing of voluntary disclosure changes prior to cross-listings. Panel A compares firms that cross-list in any target country with their matched firms. In Panel A, *CL* is an indicator variable set equal to one if a firm is cross-listed during a given year and zero otherwise. Panel B only includes the subsample of cross-listing firms that cross-list in countries where the difference between the firm's home and target country accounting standards difference is greater than the median cross-listing accounting standards difference, and their matched un-cross-listed firms. In Panel B, *CLACCT* is an indicator variable set equal to one if a firm is cross-listed in a country where the country-pair accounting difference is greater than the median cross-listing country-pair accounting difference in our sample of cross-listings. All regressions include industry and year fixed effects. T-statistics (in parentheses) are calculated with standard errors clustered by both country and year. All other variable definitions are included in the appendix.

Panel A: Cross-listings in all countries

DEP. VAR.	Average	Average	Average	Average	Average	Average
	Prior 1 Year	Prior 2 Years	Prior 3 Years	Prior 1 Year	Prior 2 Years	Prior 3 Years
	<i>CL</i>			<i>CL</i>		
<i>MF_OCCR</i>	0.030	0.138	0.107			
	(0.28)	(1.01)	(0.63)			
<i>MF_FREQ</i>				-0.005	0.024	-0.034
				(-0.13)	(0.54)	(-0.64)
<i>SIZE</i>	0.233***	0.246***	0.275***	0.234***	0.248***	0.283**
	(6.54)	(6.50)	(6.23)	(6.57)	(6.55)	(6.42)
<i>ROA</i>	-0.010**	-0.011**	-0.007	-0.010**	-0.011**	-0.007
	(-2.00)	(-2.05)	(-1.26)	(-2.00)	(-2.06)	(-1.25)
<i>ACCRUALS</i>	-0.004	-0.023	0.002	-0.004	-0.023	0.002
	(-0.11)	(-0.57)	(0.15)	(-0.11)	(-0.57)	(0.16)
<i>ANALYST</i>	0.057***	0.055***	0.055***	0.057***	0.056***	0.057**
	(7.87)	(7.33)	(6.45)	(7.90)	(7.41)	(6.68)
<i>BIG4</i>	-0.060	-0.037	-0.136	-0.060	-0.036	-0.140
	(-0.53)	(-0.32)	(-1.04)	(-0.53)	(-0.30)	(-1.06)
<i>SEGMENT</i>	0.013	0.008	0.005	0.013	0.009	0.006
	(0.60)	(0.38)	(0.20)	(0.62)	(0.42)	(0.26)
<i>SALESGROWTH</i>	0.081**	0.139***	0.143***	0.080**	0.138***	0.139**
	(2.26)	(3.12)	(2.76)	(2.24)	(3.09)	(2.69)
<i>CAPEXP</i>	3.391***	4.078***	4.671***	3.389***	4.058***	4.639**
	(5.08)	(5.33)	(5.09)	(5.07)	(5.31)	(5.06)
<i>LEVERAGE</i>	-0.461	-0.695**	-0.657*	-0.460	-0.690**	-0.638*
	(-1.61)	(-2.28)	(-1.89)	(-1.61)	(-2.27)	(-1.84)
<i>INTEREST</i>	0.960**	1.313***	1.534***	0.955**	1.300***	1.495**
	(2.45)	(2.66)	(2.65)	(2.44)	(2.64)	(2.59)
<i>CASH</i>	1.694***	1.459***	1.414***	1.689***	1.451***	1.402**
	(5.00)	(4.07)	(3.55)	(4.99)	(4.05)	(3.52)
<i>MB</i>	0.055***	0.056***	0.065***	0.055***	0.056***	0.065**
	(4.05)	(3.74)	(3.71)	(4.05)	(3.75)	(3.73)
<i>INSTITUTION</i>	0.009***	0.007***	0.007**	0.009***	0.007***	0.007**
	(3.77)	(3.08)	(2.51)	(3.78)	(3.09)	(2.61)
<i>INSIDERS</i>	0.007	0.008*	0.010**	0.007	0.008*	0.009*

	(1.59)	(1.76)	(1.96)	(1.60)	(1.76)	(1.92)
<i>COMPETITION</i>	0.062	-0.052	-0.272	0.067	-0.054	-0.269
	(0.20)	(-0.16)	(-0.73)	(0.21)	(-0.17)	(-0.73)
<i>HIGHTECH</i>	0.215	0.199	0.454**	0.221	0.204	0.482**
	(1.17)	(1.05)	(2.14)	(1.20)	(1.07)	(2.27)
<i>W_COMPETITIO</i>	-0.017	-0.021	-0.026	-0.017	-0.021	-0.026
	(-0.76)	(-0.91)	(-1.02)	(-0.76)	(-0.90)	(-1.01)
<i>RL</i>	0.011	0.008	-0.011	0.010	0.007	-0.012
	(0.28)	(0.18)	(-0.21)	(0.27)	(0.17)	(-0.23)
<i>EQACC</i>	-0.025	-0.042	-0.113	-0.025	-0.043	-0.109
	(-0.18)	(-0.26)	(-0.59)	(-0.18)	(-0.26)	(-0.57)
<i>MCAP</i>	-0.000	-0.001	-0.002	-0.001	-0.001	-0.002
	(-0.21)	(-0.33)	(-0.69)	(-0.22)	(-0.35)	(-0.75)
Constant	-1.702	-2.189	-2.178	-1.694	-2.185	-2.182
	(-1.15)	(-1.41)	(-1.13)	(-1.15)	(-1.41)	(-1.14)
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-Squared	0.10	0.10	0.10	0.09	0.09	0.08
Observations	2,740	2,534	2,040	2,740	2,534	2,040

(Table 6 continued)

Panel B: Cross-listings in countries with proximity differences

DEP. VAR.	Average Prior 1 Year	Average Prior 2 Years	Average Prior 3 Years	Average Prior 1 Year	Average Prior 2 Years	Average Prior 3 Years
	<i>CLACCT</i>			<i>CLACCT</i>		
<i>MF_OCCR</i>	0.650*** (3.44)	0.747*** (3.22)	0.499* (1.76)			
<i>MF_FREQ</i>				0.127** (2.18)	0.156** (2.32)	0.085 (1.01)
<i>SIZE</i>	0.051 (0.77)	0.067 (0.96)	-0.010 (-0.12)	0.204*** (3.48)	0.202*** (3.29)	0.108 (1.50)
<i>ROA</i>	0.008 (0.85)	0.012 (1.25)	0.008 (0.75)	-0.015** (-2.05)	-0.010 (-1.23)	-0.012 (-1.29)
<i>ACCRUALS</i>	-0.387*** (-4.92)	-0.406*** (-4.88)	-0.329*** (-4.13)	0.067 (1.14)	0.059 (0.99)	0.090 (1.43)
<i>ANALYST</i>	0.050*** (4.54)	0.049*** (4.13)	0.031** (2.14)	0.043*** (4.33)	0.041*** (3.95)	0.047*** (3.53)
<i>BIG4</i>	0.132 (0.64)	0.144 (0.66)	-0.171 (-0.68)	-0.191 (-1.02)	-0.235 (-1.20)	-0.279 (-1.21)
<i>SEGMENT</i>	0.024 (0.68)	0.021 (0.57)	0.013 (0.34)	0.033 (1.02)	0.028 (0.85)	0.020 (0.55)
<i>SALESGROWTH</i>	-0.115* (-1.70)	-0.072 (-1.06)	-0.109 (-1.42)	-0.059 (-1.08)	-0.001 (-0.02)	-0.008 (-0.13)
<i>CAPEXP</i>	1.373 (1.13)	1.406 (1.08)	2.117 (1.49)	-0.080 (-0.07)	0.349 (0.30)	0.324 (0.25)
<i>LEVERAGE</i>	-0.162 (-0.30)	-0.273 (-0.47)	-0.273 (-0.42)	-1.224** (-2.54)	-1.175** (-2.29)	-1.045* (-1.74)
<i>INTEREST</i>	1.179* (1.74)	1.449* (1.91)	1.021 (1.31)	1.052* (1.84)	1.309** (2.05)	0.248 (0.36)
<i>CASH</i>	-0.485 (-0.74)	-0.815 (-1.16)	-0.628 (-0.83)	-0.209 (-0.37)	-0.236 (-0.39)	-0.646 (-0.95)
<i>MB</i>	-0.019 (-0.75)	-0.017 (-0.63)	-0.030 (-1.04)	-0.028 (-1.47)	-0.036* (-1.79)	-0.046** (-2.00)
<i>INSTITUTION</i>	-0.009** (-2.18)	-0.008* (-1.82)	-0.007 (-1.49)	-0.003 (-0.70)	-0.000 (-0.11)	-0.003 (-0.55)
<i>INSIDERS</i>	-0.005 (-0.53)	-0.003 (-0.34)	-0.010 (-1.05)	0.016* (1.83)	0.014 (1.53)	0.010 (0.96)
<i>COMPETITION</i>	-1.240*** (-2.98)	-1.165*** (-2.67)	-1.285** (-2.55)	1.364*** (3.88)	1.546*** (4.21)	1.353*** (3.14)
<i>HIGHTECH</i>	0.104 (0.31)	0.123 (0.35)	0.211 (0.54)	-0.811** (-2.52)	-0.834** (-2.49)	-0.864** (-2.11)
<i>RL</i>	0.030*** (4.10)	0.034*** (4.36)	0.029*** (3.33)	0.054*** (7.62)	0.058*** (7.62)	0.069*** (7.68)
<i>EQACC</i>	-1.204*** (-8.54)	-1.259*** (-8.35)	-1.459*** (-7.64)	-1.048*** (-8.38)	-1.116*** (-8.28)	-1.339*** (-7.91)
<i>MCAP</i>	0.001 (0.80)	0.001 (0.63)	0.001 (0.71)	-0.001 (-1.08)	-0.001 (-0.96)	-0.003** (-1.99)
<i>DISCREQ</i>	-13.221***	-14.959***	-13.599***	2.557*	1.946	3.443**

	(-7.29)	(-7.42)	(-6.59)	(1.95)	(1.38)	(2.33)
<i>INVPRO</i>	8.950***	10.082***	8.438***	-0.863	-0.447	-2.581***
	(9.28)	(9.44)	(7.71)	(-1.23)	(-0.60)	(-3.19)
Constant	10.500***	11.066***	13.416***	1.501	1.821	3.257*
	(6.25)	(6.25)	(6.97)	(0.98)	(1.16)	(1.95)
Industry Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.39	0.40	0.40	0.39	0.40	0.40
Observations	1,365	1,279	1,026	1,365	1,279	1,026

Table 7: Regression estimates of cross-listings and subsequent management forecasts

This table reports regression estimates of voluntary disclosure changes after cross-listings. Panel A compares firms that cross-listing in all sample countries with their matched firms. In Panel A, *CL* is an indicator variable set equal to one if a firm is cross-listed during a given year and zero otherwise, and *Post* is an indicator variable set equal to one for all years after the firms' cross-listings. The interaction term *Post*CL*, captures the difference-in-differences in changes in voluntary disclosures across cross-listed and non-cross-listed firms. Panel B only includes the subsample of cross-listing firms that cross-list in countries where the difference between the firm's home and target country accounting standards difference is greater than the median cross-listing accounting standards difference, and their matched un-cross-listed firms. In Panel B, *R_ACCTDIF* is an indicator variable set equal to one if the difference in accounting standards between a firms' home and target countries is larger than the sample median among all cross-listed firms. All regressions include industry and year fixed effects. T-statistics (in parentheses) are calculated with standard errors clustered by both country and year. All other variable definitions are included in the appendix.

Panel A: All cross-listings

DEP. VAR.	POST1	POST2	POST3	POST1	POST2	POST3
	<i>MF_OCCR</i>	<i>MF_OCCR</i>	<i>MF_OCCR</i>	<i>MF_FREQ</i>	<i>MF_FREQ</i>	<i>MF_FREQ</i>
<i>POST</i>	-0.012 (-0.18)	-0.003 (-0.04)	-0.000 (-0.00)	-0.006 (-0.13)	-0.001 (-0.02)	0.004 (0.09)
<i>CL</i>	-0.032 (-0.18)	-0.037 (-0.21)	-0.043 (-0.26)	0.028 (0.38)	0.032 (0.43)	0.042 (0.61)
<i>POST*CL</i>	0.157 (0.67)	0.178 (0.86)	0.190 (1.01)	0.052 (0.46)	0.057 (0.53)	0.070 (0.72)
<i>SIZE</i>	0.300*** (8.30)	0.308*** (9.11)	0.306*** (9.37)	0.247*** (13.80)	0.244*** (14.83)	0.240*** (14.14)
<i>MB</i>	0.001 (0.36)	0.005 (1.17)	0.002 (0.50)	0.004 (1.21)	0.005 (1.37)	0.004 (1.12)
<i>LEVERAGE</i>	-0.155 (-0.52)	-0.215 (-0.90)	-0.215 (-0.95)	-0.251 (-1.63)	-0.232* (-1.71)	-0.266** (-2.41)
<i>ACCRUALS</i>	0.054*** (3.94)	0.045** (2.26)	0.056*** (2.78)	0.032*** (3.33)	0.043*** (2.88)	0.046*** (3.55)
<i>ANALYST</i>	0.045*** (5.93)	0.047*** (7.48)	0.049*** (7.43)	0.013*** (3.81)	0.014*** (5.20)	0.014*** (6.12)
<i>NEWS</i>	-0.084 (-1.03)	-0.086 (-1.13)	-0.079 (-1.01)	-0.052 (-1.54)	-0.054 (-1.52)	-0.036 (-1.11)
<i>LOSS</i>	-0.416*** (-4.46)	-0.364*** (-4.77)	-0.314*** (-3.15)	-0.208** (-2.57)	-0.189*** (-2.87)	-0.146* (-1.88)
<i>SEGMENT</i>	0.019 (0.89)	0.012 (0.52)	0.013 (0.56)	0.003 (0.26)	-0.001 (-0.14)	0.001 (0.07)
<i>OPTION</i>	0.283*** (3.22)	0.320*** (3.64)	0.351*** (4.55)	0.165** (2.46)	0.168** (2.31)	0.160*** (3.11)
<i>SEO</i>	0.219* (1.88)	0.182** (2.27)	0.192*** (3.44)	0.093 (1.12)	0.108* (1.80)	0.109*** (2.75)
<i>COMPETITION</i>	0.052 (0.15)	-0.014 (-0.05)	-0.083 (-0.28)	0.441** (2.04)	0.386* (1.87)	0.365* (1.86)
<i>BIG4</i>	0.006 (0.08)	-0.006 (-0.09)	0.073 (0.81)	0.035 (0.62)	0.062 (0.98)	0.102 (1.44)
<i>REVVOL</i>	-0.000 (-0.31)	-0.000 (-1.17)	-0.000 (-1.21)	-0.000*** (-3.47)	-0.000*** (-4.59)	-0.000*** (-5.24)

<i>FIO</i>	0.005 (1.04)	0.006 (1.30)	0.004 (0.78)	0.004 (1.40)	0.004 (1.36)	0.003 (0.86)
<i>RL</i>	0.027*** (6.19)	0.028*** (8.00)	0.028*** (8.93)	0.021*** (6.64)	0.022*** (8.58)	0.021*** (10.77)
<i>EQUACC</i>	-0.109 (-0.87)	-0.166 (-1.54)	-0.154 (-1.41)	-0.028 (-0.33)	-0.066 (-0.89)	-0.052 (-0.75)
<i>MCAP</i>	-0.004*** (-6.49)	-0.004*** (-6.53)	-0.004*** (-7.75)	-0.004*** (-4.62)	-0.003*** (-5.03)	-0.004*** (-5.41)
Constant	-4.272*** (-3.70)	-4.022*** (-4.39)	-3.943*** (-4.33)	-2.789*** (-4.03)	-2.603*** (-4.95)	-2.583*** (-4.95)
Industry Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-Squared	0.25	0.26	0.27	0.26	0.26	0.25
Observations	5,852	8,357	10,434	5,852	8,357	10,434

(Table 7 continued)

Panel B: Cross-listings in countries with proximity differences

DEP. VAR.	POST1 <i>MF_OCCR</i>	POST2 <i>MF_OCCR</i>	POST3 <i>MF_OCCR</i>	POST1 <i>MF_FREQ</i>	POST2 <i>MF_FREQ</i>	POST3 <i>MF_FREQ</i>
<i>POST</i>	0.136 (0.55)	0.213 (0.86)	0.277 (1.16)	0.023 (0.20)	0.030 (0.26)	0.067 (0.61)
<i>R_ACCTDIF</i>	0.493*** (3.13)	0.440** (2.54)	0.460*** (2.69)	0.234*** (2.87)	0.186** (2.00)	0.187** (2.14)
<i>POST*R_ACCTDIF</i>	-0.007 (-0.04)	-0.038 (-0.17)	-0.081 (-0.36)	0.015 (0.18)	0.038 (0.49)	0.014 (0.20)
<i>SIZE</i>	0.407*** (5.23)	0.397*** (6.63)	0.391*** (7.31)	0.286*** (8.84)	0.273*** (11.13)	0.255*** (10.64)
<i>MB</i>	0.000 (0.04)	0.002 (0.15)	0.002 (0.18)	0.006 (1.07)	0.006 (1.14)	0.006 (1.15)
<i>LEVERAGE</i>	-0.910* (-1.95)	-0.989*** (-3.06)	-1.032*** (-3.28)	-0.624*** (-2.63)	-0.635*** (-3.38)	-0.629*** (-3.52)
<i>ACCRUALS</i>	0.114*** (6.23)	0.088*** (2.76)	0.102*** (3.15)	0.031* (1.77)	0.042** (2.17)	0.060*** (4.31)
<i>STKEXCH</i>	-0.117* (-1.77)	-0.084 (-1.36)	-0.098* (-1.90)	-0.045 (-1.41)	-0.031 (-1.02)	-0.035 (-1.28)
<i>ANALYST</i>	0.024** (2.34)	0.026*** (2.79)	0.028*** (3.11)	0.006 (1.35)	0.007* (1.88)	0.007** (2.56)
<i>NEWS</i>	-0.030 (-0.34)	-0.038 (-0.62)	-0.007 (-0.11)	-0.023 (-0.47)	-0.005 (-0.10)	0.020 (0.46)
<i>LOSS</i>	-0.371** (-2.54)	-0.297*** (-2.86)	-0.201* (-1.71)	-0.198* (-1.79)	-0.137* (-1.71)	-0.108 (-1.48)
<i>SEGMENT</i>	0.018 (0.55)	0.032 (1.12)	0.015 (0.61)	-0.000 (-0.00)	0.004 (0.41)	0.004 (0.43)
<i>OPTION</i>	0.362*** (2.89)	0.318*** (2.73)	0.392*** (3.03)	0.179* (1.80)	0.141* (1.78)	0.145** (2.24)
<i>SEO</i>	0.119 (0.51)	0.163 (0.86)	0.204 (1.08)	-0.035 (-0.20)	0.033 (0.26)	0.052 (0.46)
<i>COMPETITION</i>	0.605 (1.51)	0.498 (1.35)	0.499 (1.30)	0.702*** (3.66)	0.643*** (3.24)	0.662*** (3.60)
<i>BIG4</i>	-0.071 (-0.74)	-0.009 (-0.09)	0.044 (0.38)	-0.050 (-0.90)	0.015 (0.26)	0.040 (0.71)
<i>REVVOL</i>	-0.000 (-0.71)	-0.000 (-1.24)	-0.000 (-0.57)	-0.000*** (-3.02)	-0.000*** (-3.36)	-0.000*** (-3.03)
<i>FIO</i>	0.003 (0.47)	0.002 (0.32)	0.001 (0.20)	0.003 (0.82)	0.002 (0.57)	0.002 (0.39)
<i>RL</i>	0.007 (1.53)	0.006* (1.84)	0.006 (1.60)	0.008** (2.37)	0.008*** (3.35)	0.009*** (4.35)
<i>EQUACC</i>	0.112** (2.34)	0.058 (1.18)	0.062 (0.95)	0.070 (1.41)	0.019 (0.41)	0.017 (0.39)
<i>MCAP</i>	-0.007*** (-3.02)	-0.005*** (-3.67)	-0.006*** (-4.72)	-0.006*** (-4.73)	-0.005*** (-4.53)	-0.005*** (-4.94)
Constant	-3.615*** (-4.00)	-3.376*** (-3.94)	-2.927*** (-3.48)	-1.936*** (-3.96)	-1.695*** (-4.23)	-1.517*** (-3.64)
Industry Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-Squared	0.26	0.26	0.26	0.23	0.22	0.22
Observations	3,894	5,633	7,149	3,894	5,633	7,149