Language FTR and Earnings Management: International Evidence

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Abstract

We study whether a particular aspect of language structure, the future-time reference (FTR) of a language, explains variation in corporate earnings management behaviors around the world. Based on the Sapir-Whorf hypothesis (Whorf 1956), we predict that grammatically referencing the future, which induces humans to perceive the future more sharply distinct from the present, induces myopic management behavior. In support of this idea, we find that firms headquartered in strong-FTR language countries are more likely to engage in accrual and real activities earnings management to meet short-term earning benchmarks.

Keywords: Accrual-based Earnings Management, Real Earnings Management, Future-Time-Reference, Language, Myopia, Short-Termism

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1. Introduction

The Sapir-Whorf hypothesis (Whorf 1956) posits that the structure of a language systematically shapes the ways its speakers conceptualize the world, affecting their thoughts and behaviors. Consistent with this idea, Wittgenstein (1922) argues that language is the means by which people picture and reason about reality. In contrast, others claim that all human languages are constrained by a "universal grammar" (Chomsky 1957) and that there is no compelling evidence that languages dramatically shape their speakers' way of thinking (Pinker 1994). To date, this remains an unresolved issue in humanities and social science, and evidence in the context of economic decision making is even more limited, with the exception of Chen (2013). Not surprisingly, the issue is severely understudied in corporate settings. To fill this void in the literature and to enhance our understanding on this issue, we study whether the dominant business language in a society explains an important corporate decision, i.e., corporate earnings management behavior.

One major difference in language structure is the future-time reference (FTR), i.e., the way of grammatically encoding the future events (Dahl 1985). If a language requires its speakers to explicitly use future tense to mark prospective events, then the language is regarded as having strong-FTR. If it does not have such a requirement, it is said to be a weak-FTR language. In this paper, we investigate the effects of future-time reference (FTR) of language on corporate earnings management. The motivation of our paper is twofold. First, prior economics and finance literature has found that language FTR affects the economic behaviors across individual (e.g., individual savings, Chen 2013), as well as firm behaviors, e.g., corporate social responsibility, (Liang et al.

2014) and corporate cash holdings (Chen et al. 2015). However, there is little evidence on whether the language feature explains corporate financial reporting behavior. Second, international evidence on earnings management shows that corporate earnings management varies with country-level legal, economic and cultural institutions (e.g., Leuz et al. 2003; Han et al. 2010). Despite the potential pervasive effect on human behavior and various institutions (Whorf et al. 1956; Liang et al. 2014), however, there is no direct evidence that links the structure of the dominant business language in the economy to the prevailing corporate reporting behavior.

We address this issue by testing whether firms headquartered in strong-FTR language countries, where the economic agents have been shown to demonstrate more myopic behavior, manage earnings more. Earnings management through accounting accruals or real operations to meet short-term capital market benchmarks is often characterized as being myopic, as the decision tends to reverse in the future (Healy and Wahlen 1999). If, as linguistics and economics theories predict, strong-FTR language, by requiring grammatically separating the future from the present, leads its speakers to feel less pressure from the future and, thus, fosters short-term oriented behavior, managers in jurisdictions where the dominant business language is more future oriented are more likely to engage in earnings management.

Next, we examine how language FTR interacts with investor protection in affecting earnings management. *A priori*, the interaction between language FTR and investor protection is not obvious. On the one hand, given that public accounting information is more extensively used in managerial

contracting in strong investor protection countries (Han et al. 2010), it is possible that myopic strong-FTR managers are more incentivized to engage in earnings manipulation in countries with strong investor protection to meet short-term capital market benchmarks. On the other hand, however, since investor protection limits the ability of managers to acquire private control benefits and mask firm performance (Leuz et al. 2003), the tendency for managers to engage in earnings management harbored by strong language FTR should be curbed.

We empirically examine the above predictions about the effects of language FTR on earnings management across 37 countries during the period 1994-2013. Following Liang et al. (2014) and Chen et al. (2015), we categorize the FTR of the official language (strong versus weak) in each country based on the classification of Chen (2013). We examine three types of earnings management behaviors: accrual-based earnings management, earnings management through real economic decisions (real earnings management) and earnings benchmark meeting/beating. We document a significantly positive association between strong language FTR and earnings management (both accrual-based and real activities) after accounting for firm, industry, country level controls. Furthermore, this association decreases with the strength of investor protection, consistent with investor protection acting as a governance mechanism in mitigating earnings manipulation.

This study makes important contributions to several strands of literature. First, it extends the accounting, finance, and international business literature that documents institutional influence on corporate earnings management behavior. Specifically, we identify language as a relevant human

institution that explains such behavior, in addition to legal and cultural institutions (e.g., Leuz et al. 2003; Han et al. 2010). Second, this study contributes to corporate finance literature on managerial myopia by identifying strong-FTR languages as a driver of such behavior in corporate decisions. Third, it contributes to the broader economics literature by providing evidence in support of the Sapir-Whorf hypothesis (1956). Our findings complement recent studies that provided support to this hypothesis using individual and household data (Chen 2013) by documenting evidence from corporate behavior.

The remainder of this article is organized as follows. In section 2, we review related literature, and develop our hypotheses. In section 3, we describe our key variables and model specifications. In section 4, we present and interpret the main results. In section 5, we perform sensitivity analyses and robustness checks. And finally in section 6, we make our conclusions.

2. Literature Review and Hypothesis Development

2.1 Linguistic relativity, Future-Time Reference of Language and Economic Behavior

One stream of research in linguistics, known as linguistic relativity (or Sapir-Whorf hypothesis), argues that the structure of a language systematically shapes the ways its speakers conceptualize the world, affects their thoughts and behaviors, and even influences their cognitive processes and national culture (Sapir 1951; Whorf et al. 1956; Chen 2013). For instance, Slobin (1987) posits that language affects thoughts because speakers are required to grammatically attend to and encode various aspects of situations when they speak. Cognitive science research lends support to this

argument by showing that variation in grammatical systems influences speakers' cognitive representation of the reality (e.g., Evans and Levinson 2009).

Recent studies in economics and finance have started to link heterogeneity in language structure with differences in both individual and corporate economic behaviors.

In particular, these studies relies on a stream of linguistics literature showing that languages differ widely in terms of grammatically marking the future time of events (e.g., Dahl 1985). In some languages (i.e., strong-FTR languages), e.g., English, the use of grammaticalized future-time reference is "explicitly required in (main clause) prediction-based contexts" (Dahl 2000), whereas in other languages (i.e., weak-FTR languages), e.g., Mandarin, the future tense is not required. To illustrate, when talking about the future, English forces its speaker to put constructs such as "will", "shall", or "be going to" in the sentence to refer to the future. However, since Mandarin does not differentiate between the future and the present tenses, a Mandarin speaker tends to omit any equivalent of "will" in English. Below is an example of how an English speaker and a Mandarin speaker describe what they are going to do for tomorrow:

English: I will go to school.

Mandarin (original): Wo qù shàngxúe.

Mandarin (translated): I go to school.

As can be seen from the example, a future tense (or "will" in this case) is mandated in English, but not in Mandarin. Linguistics literature has documented that this grammatical difference is

widespread among languages across countries.

By building on this notion, Chen (2013) finds that weak-FTR language speakers tend to have more savings, consistent with weak-FTR leading to more future-oriented human behaviors. Tested at the corporate level, weak-FTR language is found to be associated with greater firm future-oriented activities, such as higher precautionary cash holdings (Chen et al. 2015), and more corporate social responsibility (CSR) (Liang et al. 2014).

2.2 Earnings Management

Earnings management is defined as occurring when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers (see Healy and Wahlen 1999).

Previous studies found the existence of two main types of earnings management: accrual-based earnings management and management of real economic activities. For accruals management, managers "borrow" earnings from past or future periods to improve earnings reported in the current period (see Healy and Whalen 1999). For real activities management, managers time revenues or adjust discretionary expenses to meet current earnings targets (see Bushee 1998; Roychowdhury 2006). While earnings management is usually seen in the light of the Agency Theory, where managers with more information can achieve benefits at the expenses of the shareholders, Brochet et al (2014) suggest that it is a short-term oriented practice, as firms are often found to manipulate

earnings in order to meet short-term capital market benchmarks.

2.3 Linguistic Hypotheses in Earnings Management

Based on the linguistic relativity literature and prior evidence on the connection between language FTR and economic behaviors, we focus on one type of corporate behavior – earnings management, which is to a large extent influenced by managerial short termism and thus very likely to be affected by such a language structure difference.

Linguistic relativity posits that language influences people's decision-making process through its grammatical future-time reference. More specifically, Chen (2013) identifies two mechanisms (perception of future distance and timing uncertainty) connecting language FTR to short termism.

First (perception of future distance), weak-FTR language speakers, who refer to future events as they were happening now, should perceive future events as less distant. Therefore, they are more long-term oriented than strong-FTR language speakers.

Second (timing uncertainty), to repeatedly refer to the future should lead to a sharper distinction between the present and the future and to a clearer classification of future as a different category. This lower (higher) timing uncertainty leads strong (weak) FTR language speakers being more short (long) term oriented (see Chen, 2013).

Hence, strong-FTR language speakers would feel less pressure from the future, and their behaviors tend to be more short-term oriented (Liang et al. 2014). Prior theories and evidence in accounting indicate that managers placing a greater weight on the short term are more likely to manipulate

current-period earnings (either through accounting choices or real actions) in order to obtain the benefits of short-term positive earnings surprises or to avoid adverse equity market consequences, probably at the expense of future earnings and long-term value creation (Stein 1989; Brochet et al. 2014). Based on the above arguments, we hypothesize that strong-FTR language induces managers to be more short-term oriented. And such managerial myopia increases the likelihood for managers to engage in earnings management to meet short-term earnings benchmarks.

H1: Managers in strong-FTR language countries manage earnings more

In addition, we examine the interaction between language FTR and investor protection in affecting earnings management. On the one hand, legal institutions such as investor protection may reinforce the effect of language FTR on earnings management. For example, Han et al. (2010) argue that public accounting information is more extensively used in managerial contracting in strong investor protection countries than in weak investor protection countries. Supporting this argument, DeFond et al. (2007) find that earnings are more highly correlated with stock prices in strong investor protection countries. If this is the case, we would expect short-term oriented strong-FTR managers to have more incentives to engage in earnings management to meet short-term earnings benchmarks in strong investor protection environments. On the other hand, investor protection may mitigate the effect of language FTR on earnings management. This is premised on the idea that strong investor protection limits the ability of the managers to acquire private control benefits, reducing their incentives to mask corporate performance (Leuz et al. 2003). Thus, investor protection may act as a governance mechanism to curb myopic managers that are exposed to the influences of strong-FTR language environments from indulging themselves in earnings manipulation. Taken together, *a*

priori, it is unclear how language FTR and investor protection interact with each other to affect earnings management. Therefore, our second hypothesis, stated in null form, is:

H2: The interaction between language FTR and investor protection in affecting earnings management is undeterminable.

3. Research Design and Sample

3.1 Measure of Future-Time Reference of Language

To categorize the FTR of the official language (strong versus weak) in each country, we use the three measures in Chen (2013) and one aggregate measure developed using the principal component analysis (PCA) . The first measure is $strongFTR_{it}$, a dummy variable that takes the value of one for firms headquartered in strong-FTR language countries, and zero otherwise. This categorization mirrors Thieroff's (2000) classification of neutral language for "futureless" language. The second measure is SR_{it} , which calculates the proportion of sentences containing a grammatical future-marker when referring to the future in a language, while the third is VR_{it} measuring the ratio of the number of grammatically future-marked verbs to the total number of future-referring verb in a language. These two measures are continuous variables and capture the frequency of a language grammatically marking the future time. Finally, to capture the common dimension in the three individual measures, we employ the PCA to construct an overall summary measure of the intensity of the use of language FTR ($pcFTR_{it}$) for each country.

3.2 Measures of Earnings Management

The accounting literature generally documents two types of earnings management strategies:

accrual-based earnings management and real activities manipulation. Following Kothari et al. (2005), we proxy for accrual-based earnings management (AM_{it}) by performance-matched discretionary accruals. In the first step, we use the modified Jones (1991) model to obtain discretionary accruals, which are computed as the difference between firms' actual accruals and normal accruals, estimated for each country-industry-year using Equation (1). We require at least 8 observations to run each regression. We then subtract from the modified Jones model discretionary accruals of firm i [i.e., the residuals from Equation (1)] those of another firm in the same country-industry-year with the closest ROA, and the difference is the performance-matched discretionary accruals for firm i.

$$\frac{\Delta Accruals_{it}}{Assets_{it-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{it-1}} + \beta_2 \frac{\Delta Sales_{it} - \Delta Rec_{it}}{Assets_{it-1}} + \beta_3 \frac{PPE_{it}}{Assets_{it-1}} + \varepsilon_{it} \quad (1)$$

where $\Delta Accruals_{it}$ is the earnings before extraordinary items and discontinued operations minus operating cash flows in year t (Zang 2012); $Assets_{it-1}$ is the total assets beginning in year t; $\Delta Sales_{it}$ is the change in sales from year t-1 to year t; ΔRec_{it} is the change in net receivables from year t-1 to year t; and PPE_{it} is the gross property, plant, and equipment in year t.

Following Roychowdhury (2006) and Cohen and Zarowin (2010), we use the abnormal level of production cost ($AbnormalPROD_{it}$), the abnormal level of cash flow from operations ($AbnormalCFO_{it}$), and the abnormal level of discretionary expenses ($AbnormalDISX_{it}$) to capture the extent of real activities manipulation. They are calculated as the differences between actual values and the fitted values predicted by equations (2), (3) and (4). Like previously, the models are

estimated for each country-industry-year, and at least 8 observations are needed to run each regression.

$$\frac{PROD_{it}}{Assets_{it-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{it-1}} + \beta_2 \frac{Sales_{it}}{Assets_{it-1}} + \beta_3 \frac{\Delta Sales_{it}}{Assets_{it-1}} + \beta_3 \frac{\Delta Sales_{it-1}}{Assets_{it-1}} + \varepsilon_{it} \quad (2)$$

$$\frac{CFO_{it}}{Assets_{it-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{it-1}} + \beta_2 \frac{Sales_{it}}{Assets_{it-1}} + \beta_3 \frac{\Delta Sales_{it}}{Assets_{it-1}} + \varepsilon_{it} \quad (3)$$

$$\frac{DISX_{it}}{Assets_{it-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{it-1}} + \beta_2 \frac{Sales_{it-1}}{Assets_{it-1}} + \varepsilon_{it} \quad (4)$$

where $PROD_{it}$ is the production cost, defined as the sum of costs of goods sold in year t and change in inventories from t-1 to t; CFO_{it} is the cash flow from operations appearing in the statement of cash flows in year t; $DISX_{it}$ is the discretionary expenses defined as the sum of R&D, advertising, and selling, general, and administrative (SG&A) expenditures in year t; and $Sales_{it}$ is the sales in year t. Similar to Cohen and Zarowin (2010) and Zang (2012), we multiply $AbnormalCFO_{it}$ and $AbnormalDISX_{it}$ by -1 so that greater amounts indicate that firms are more likely to increase reported earnings. We then combine the three individual measures into one aggregate measure as the real earnings management proxy, RM_{it}, by taking their sum.

In addition to the accrual-based and real earnings management strategies, prior research shows that firms manipulate earnings to report positive profits, and to meet analysts' expectations (Degeorge et al. 1999). Therefore, we also use loss avoidance (LA_{it}) and small positive earnings surprises ($SPES_{it}$)

to proxy for corporate earnings management. We define LA_{it} as a dummy variable that equals one if a firm reports 0 to 0.01 earnings per share (EPS_{it}), and zero otherwise. $SPES_{it}$ is defined as a dummy variable that equals one if a firm reports actual EPS_{it} 0 to 0.01 higher than consensus earnings forecast, and zero otherwise[1].

3.3 Model Specifications

3.3.1 Test of Hypothesis 1

To test Hypothesis 1 on the relationship between language FTR and earnings management, we estimate the following multivariate models, where Equation (5) is estimated using OLS regression and Equation (6) using Logit regression.

$$|AM_{it}|(or\ |RM_{it}|) = \alpha_0 + \alpha_1 FTR_{it} + \sum Controls_{it} + IndustryFE + YearFE + \varepsilon_i \quad (5)$$

$$Pr(LA_{it})[or\ Pr(SPES_{it})] = \beta_0 + \beta_1 FTR_{it} + \sum Controls_{it} + IndustryFE + YearFE + \varepsilon_i \quad (6)$$

where $|AM_{it}|$ and $|RM_{it}|$ are the absolute values of accrual-based (AM_{it}) and real (RM_{it}) earnings management, respectively. FTR_{it} represents the four measures of language FTR ($strongFTR_{it}$, SR_{it}, VR_{it}, or $pcFTR_{it}$). $Controls_{it}$ is an array of firm- and country-level control variables that are expected to be associated with earnings management. The first set of variables included in $Controls_{it}$ are country-level variables: Hofstede's (2001) cultural dimensions including power

[1] Consensus earnings forecast is the arithmetic average of I/B/E/S estimates for a company for the fiscal period indicated.

distance (PD_{it}), individualism ($INDIV_{it}$), masculinity (MA_{it}), uncertainty avoidance (UA_{it}), and long-term orientation (LTO_{it}), and indulgence ($INDUL_{it}$); investor protection score ($INVPRO_{it}$) based on anti-director index from Djankov et al. (2008); annual GDP growth rate per country ($GGROWTH_{it}$). One thing to mention on cultural values (e.g., Hofstede's cultural dimensions) is that prior literature has shown that language intertwines with culture and even shapes culture. Thus, inclusion of these cultural variables may subsume the relationship between language FTR and earnings management. But any documented significance of FTR_{it} would enhance the confidence in the effect of language FTR on earnings management.

The second set of controls are firm-level variables: firm size ($LNSIZE_{it}$); book-to-market ratio (BTM_{it}); leverage ratio (LEV_{it}); return on assets (ROA_{it}); an indicator variable for equity issuance ($ISSUE_{it}$); an indicator variable for loss firms ($LOSS_{it}$); an indicator variable for meeting or beating analyst earnings forecast ($MEET_{it}$). $IndustryFE$ and $YearFE$ are indicator variables controlling for industry (based on 3-digit SIC codes) and year fixed effects, with standard errors clustered at the firm level. Based on Hypothesis 1, strong-FTR language is predicted to be associated with greater earnings management and, thus, we expect both α_1 and β_1 to be positive.

3.3.2 Test of Hypothesis 2

To test Hypothesis 2 on the interaction between language FTR and investor protection, we extend the previous regression models by adding a variable that interacts FTR_{it} with $INVPRO_{it}$. The models estimated are as follows:

$$|AM_{it}|(or\ |RM_{it}|) = \alpha_0 + \alpha_1 FTR_{it} + \alpha_2 FTR_{it} * INVPRO_{it} + \sum Controls_{it} + IndustryFE + YearFE + \varepsilon_i \quad (7)$$

$$Pr(LA_{it})[or\ Pr(SPES_{it})] = \beta_0 + \beta_1 FTR_{it} + \beta_2 FTR_{it} * INVPRO_{it} + \sum Controls_{it} + IndustryFE + YearFE + \varepsilon_i \quad (8)$$

Based on Hypothesis 2, the signs of α_2 or β_2 are indeterminable.

3.4 Sample Selection

We test our hypothesis using a global panel data set of publicly listed companies during the period 1994-2013. Financial companies (SIC codes 6000-6999) and firms that lack relevant accounting information data to construct variables are excluded from the sample. Our primary data source for firms' financial performance is Compustat North America and Compustat Global. All continuous financial variables are winsorized at the 1% and 99% of the distributions to reduce the influence of outliers. Data related with analyst forecast are obtained from I/B/E/S. We then identify official language FTR available from Chen (2013) to match the country-level FTR measures with firm-level financial variables. Other country-level legal and cultural indices are hand-collected from the relevant previous papers and relevant website, as discussed in Section 3. Detailed description of all variables is provided in the Appendix. Following the above procedures, we finally obtain 74606

firm-year observations (with 15248 distinct firms) in 37 countries.

4. Results

4.1 Descriptive Statistics

Table 1 reports the country coverage and the FTR measures of the official languages for each country. Among the 37 countries, U.S. constitutes the largest number of observations. Table 2 provides the descriptive statistics on our main regression variables. The mean (median) values for $|AM_{it}|$ and $|RM_{it}|$ are 0.630 (0.101) and 0.662 (0.277), while the mean (median) for LA_{it} and $SPES_{it}$ are 0.009 (0) and 0.094 (0), respectively. $strongFTR_{it}$ is right skewed with mean (median) of 0.628 (1), consistent with Table 1 that there are more firm-year observations for strong-FTR language countries than for weak-FTR language countries.

[Insert Table 1 and 2 Here]

Table 3 presents the pairwise correlations between the four language FTR measures and various measures of earnings management. Generally, there is a significant and positive association between $strongFTR_{it}$, SR_{it}, VR_{it}, or $pcFTR_{it}$ and $|AM_{it}|$, $|RM_{it}|$, LA_{it} or $SPES_{it}$. In other words, firms in strong-FTR countries have a higher level of both accrual-based and real earnings management on average, and display a greater propensity to avoid losses and negative earnings surprises. All correlations are statistically significant at 0.01 or 0.05 level.

[Insert Table 3 Here]

4.2 Univariate Comparison

Table 4 compares the mean (median) values of each earnings management measure between firms in strong-FTR language countries ($strongFTR_{it} = 1$) and those in weak-FTR language countries ($strongFTR_{it} = 0$). The magnitudes of all earnings management measures are greater for firms headquartered in strong-FTR countries, and the differences between the two types of earnings management are consistently significant, indicating that strong-FTR firms are more likely to engage in earnings manipulation. But, given the above comparison is univariate, we shall turn to multivariate regressions

[Insert Table 4 Here]

4.3 Multivariate Regressions

4.3.1 Test of Hypothesis 1

Table 5 reports the regression results for the hypothesis on the relationship between language FTR and the absolute magnitudes of accrual-based and real earnings management as well as the likelihood of reporting small positive income and earnings surprises. All columns include industry and year fixed effects to control for the heterogeneity in earnings management of firms in different industries and different years. And Panel A shows that $strongFTR_{it}$, SR_{it}, VR_{it}, and $pcFTR_{it}$ are significantly positively associated with $|AM_{it}|$ and $|RM_{it}|$ all at the 0.01 level. These results indicate that firms headquartered in a strong-FTR country, on average, report 0.424 more accrual-based and 0.210 more real earnings management than their counterparts in a weak-FTR country. This effect is economically sizable, given that the mean values of absolute discretionary

accruals and real activities manipulation are 0.630 and 0.662. Inspection of Panel B suggests that the odds of firms avoiding reporting losses, and of meeting analysts' earnings forecasts in a strong-FTR language country are 2.075 ($e^{0.730}$) and 2.098 ($e^{0.741}$) times the odds of firms in a weak-FTR language country[2]. These results are consistent with strong-FTR language inducing managers to behave myopically to meet short-term benchmarks. Note that all the significance is after controlling for cultural traits. Thus, it seems that language FTR is a fundamental source of managerial myopia and, hence, corporate earnings management, and its influence is above and beyond conventionally recognized cultural proxies. Indeed, Liang et al. (2014) argue that language is a key determinant because it acts as a "specific underlying mechanism that carries culture".

[Insert Table 5 Here]

Turning our attention to control variables, we find that $INVPRO_{it}$ is significantly negatively associated with $|AM_{it}|$, $|RM_{it}|$, LA_{it} and $SPES_{it}$ (at the 0.01 level), indicating that the effectiveness of legal protection can reduce firms' earnings management. $INDIV_{it}$ and LTO_{it} are also generally negatively associated with these earnings management measures consistent with prior research that managers in cultures with low levels of individualism are less likely to manipulate earnings since they intend to protect the collective welfare of corporate stakeholders, and that long-term oriented societies are less inclined to manipulate earnings due to its long-run perspective (Doupnik 2008). On the contrary, MAS_{it} is generally positively associated with earnings management, supporting the view that managers are more motivated to manage earnings to achieve

[2] These results are robust to all the additional analyses discussed in Section 5.

financial goals in masculine societies.

4.3.2 Test of Hypothesis 2

Hypothesis 2 suggests that investor protection may influence the effects of language FTR on firms' earnings manipulation pattern. The multivariate regression results of test of the second hypothesis are provided in Table 6. Specifically, the estimated coefficients on the four interaction terms are generally negatively significantly related with the four earnings management measures, suggesting that the formal institution of investor protection acts as a governance mechanism in mitigating earnings manipulation.

[Insert Table 6 Here]

Overall, our findings generally support the correlation between language FTR and earnings management as predicted. This is consistent with the hypotheses that strong language FTR affects managerial decision making process, and formal legal institution such as investor protection may have an impact on such a process.

5. Additional Analyses

5.1 Additional Controls

Prior literature shows that religiosity is negatively associated with incidences of financial reporting irregularities (McGuire et al. 2012). To the extent that religiosity is an integrated measure of cultural

values, one may be worried that our results are driven by differences in religiosities across countries. To mitigate this concern, we include the variable $RELIGC_{it}$, which measures the percentage of Christianity (Protestant plus Catholic) religious beliefs in the country. Besides, recent emerging evidence suggests that social trust increases investors' demand for corporate information and induces firms' information production, thereby increasing financial reporting transparency (Nanda and Wysocki 2013). We measure the level of social trust ($TRUST_{it}$) in a country based on the response of the World Values Survey to the question "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" In addition, we further include an alternative measure of investor protection, i.e., the public enforcement index ($PENF_{it}$) documented by Djankov et al. (2008). Untabulated results show that, after adding these additional variables, all our main regression results hold.

These results are particularly important because they exclude the possibility that language FTR is not causing earnings management but it is rather simply reflecting legal, regulatory or cultural differences. Chen (2013) shows, both theoretically and empirically, that language and culture are two different constructs. Our analysis extends this notion to companies, showing that the effect of language FTR is not subsumed by any additional legal, regulatory and cultural institutions.

5.2 Dropping observations

Given that U.S. constitutes the largest number of observations (both in the general sample and in the strong-FTR subsample), we repeat the tests after dropping the U.S. firms to assess the sensitivity of the results to the U.S. exclusion. All earnings management measures continue to have a similar

association with language FTR as in the reported main results, except that $pcFTR_{it}$ is now insignificant for $|RM_{it}|$. Hence, other than this single real activities manipulation measure, the inferences on the impact of language FTR on earnings management are not heavily affected by U.S. firms. We also rerun the analysis by removing Japanese and Chinese firms, as they represent 55% of the weak-FTR language subsample. The main results relative to both Hypothesis 1 and 2 hold, and this allows us ruling out the possibility that results are driven by omitted country-level effects.

In addition, some countries have both strong and weak FTR populations. Belgium, Switzerland, Hong Kong, Singapore, Nigeria and the Netherlands are either identified as "multilingual countries" by Chen (2013) or have both strong FTR and weak FTR official languages. In order to get a cleaner setting to test our hypotheses, we drop these six countries to check where our main findings still hold. In untabulated results, the coefficients of language FTR are comparable to those reported using the full dataset for Hypothesis 1, but not for Hypothesis 2.

5.3 Country-Level Analysis

To mitigate the concern that the dependent earnings management variables are measured at the firm level while the independent language FTR variables do not vary across firms in a country, we perform a country-level analysis where $|AM_{it}|$ and $|RM_{it}|$ are calculated at their medians for each country-year, and LA_{it} and $SPES_{it}$ are dummy variables that take one if a country has the above median number of loss avoidance firms and small positive earnings surprises firms in a given year and zero otherwise. We then regress them on different measures of FTR_{it}, the interaction terms of

$FTR_{it} * INVPRO_{it}$, and country-level legal, cultural and economic institutions, while controlling for year fixed effects. This approach alleviates the concern of the regression results being influence by uneven number of observations across countries, while controlling for any time-series variation in the earnings management proxies driven by the other firm- and country-level factors. The evidence for the new country-year observation sample is consistent with (though weaker than) the firm-year observation sample, as almost all FTR_{it} measures and the interaction terms of $FTR_{it} * INVPRO_{it}$ load significantly for most of the equations and all with the predicted signs.

[Insert Table 7 Here]

In general, results in this section support the hypothesis on the important role that the official language FTR plays in shaping corporate earnings management. It turns out that language FTR is a statistically and economically significant determinant of earnings management, beyond the conventionally recognized cultural proxies. The results are robust to additional country-level controls, different sample compositions, and a country-level regression.

6. Conclusion

In this paper, we investigate the effect of variation in an important linguistic feature, i.e., the future time reference of a language, on international differences in earnings management. We identify grammatical FTR as an key determinant of managerial myopia. Repeatedly encoding the future time period induces strong-FTR language speakers to unconsciously separate the future from the present, and induces more short-term oriented behaviors. Controlling for firm-, industry- and country-level

determinants of earnings management, we document a significantly positive association between strong language FTR and the tendency (and intensity) to engage in real and accrual-based earnings manipulation to meet short-term earnings benchmarks. Furthermore, this association decreases with the strength of investor protection. These results are also robust to using multiple proxies for earnings management, additional controls and different potential research design issues. Overall, our results highlight the important role of a salient language feature in shaping corporate decision making.

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Appendix: Variable Definition

Dependent Variables:	
$\|AM_{it}\|$	Absolute value of accrual-based earnings management, i.e., the absolute value of the difference between the residuals estimated from Equation (1) for firm i and for its performance-matched firm (with the closest ROA and in the same country-industry-year), based on Kothari et al. (2005)
$\|RM_{it}\|$	Absolute value of real earnings management, i.e., absolute value of the sum of the residuals estimated from Equation (2), negative residuals estimated from Equation (3) and negative residuals estimated from Equation (4)
LA_{it}	A dummy variable that takes 1 for firm-year observations with annual EPS between 0 and 0.005, and 0 otherwise
$SPES_{it}$	A dummy variable that takes 1 for firm-year observations with the difference between actual annual EPS and consensus earnings forecast between 0 and 0.005, and 0 otherwise
Main Variables of Interest:	
$strongFTR_{it}$	A dummy variable that takes 1 for firm-year observations from countries where the official languages are classified as having strong FTR by Chen (2013), and 0 otherwise
SR_{it}	Sentence ratio calculated as the proportion of sentences containing a grammatical future-marker when referring to the future, as in Chen (2013)
VR_{it}	Verb ratio calculated as the ratio of the number of grammatically future-marked verbs to the total number of future-referring verb, as in Chen (2013)
$pcFTR_{it}$	Aggregate measure of language FTR developed using the principal component analysis (PCA) based on $strongFTR_{it}$, SR_{it}, and VR_{it}.
Country-level Controls:	
$INVPRO_{it}$	Investor protection score based on anti-director index from Djankov et al. (2008)
PD_{it}	Power distance index score based on Hofstede (2001) (data source: http://geert-hofstede.com/countries.html)
$INDIV_{it}$	Individualism/collectivism index score based on Hofstede (2001) (data source: http://geert-hofstede.com/countries.html)

MAS_{it}	Masculinity/femininity index score based on Hofstede (2001) (data source: http://geert-hofstede.com/countries.html)
UA_{it}	Uncertainty avoidance index score based on Hofstede (2001) (data source: http://geert-hofstede.com/countries.html)
LTO_{it}	Long-/short-term orientation index score based on Hofstede (2001) (data source: http://geert-hofstede.com/countries.html)
$GGROWTH_{it}$	Country GDP growth rate (data source: http://data.worldbank.org/indicator)
$RELIGC_{it}$	Christianity religious index score calculated as the ratio of [% Protestant + % (Roman) Catholic] based on the responses from the World Values Survey to the question "Do you belong to a religion or religious denomination? If yes, which one?"
$TRUST_{it}$	Social trust index score calculated as the ratio of (% Most people can be trusted) / (% Most people can be trusted + % Need to be careful) based on the responses from the World Values Survey to the question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?"
$PENF_{it}$	Public enforcement index score from Djankov et al. (2008)
Firm-level Controls:	
$SIZE_{it}$	Natural log of total assets adjusted for inflation rate
BTM_{it}	Book value of common equity divided by market value of equity
LEV_{it}	Short- and long-term debt divided by total assets
ROA_{it}	Income before extraordinary items divided by total assets
$ISSUE_{it}$	Dummy variable that takes one for firm-year observations with equity issuance, zero otherwise
$LOSS_{it}$	Dummy variable that takes one for firm-year observations with negative income before extraordinary items, zero other wise
$MEET_{it}$	Dummy variable that takes one for firm-year observations with actual annual EPS greater than or equal to consensus analyst earnings forecast, zero otherwise

Table 1 Language FTR by Country

Country	Firm-Years	$strongFTR_{it}$	SR_{it}	VR_{it}	$pcFTR_{it}$	Country	Firm-Years	$strongFTR_{it}$	SR_{it}	VR_{it}	$pcFTR_{it}$
Austria	107	0	0	0	-2.642692	Australia	3094	1	0.929	0.881	0.889672
Belgium	272	0	0	0	-2.642692	Canada	3522	1	0.875	0.769	0.661515
Brazil	210	0	0	0	-2.642692	Chile	44	1	0.741	0.716	0.552425
China	6857	0	0	0	-2.642692	Egypt	8	1	0.529	0.417	-0.05738
Denmark	201	0	0.125	0.1	-2.438186	France	1973	1	0.976	0.958	1.046632
Finland	530	0	0	0	-2.642692	Greece	137	1	1	0.974	1.079395
Germany	2063	0	0	0	-2.642692	India	1325	1	0.929	0.881	0.889672
Hong Kong	1479	0	0	0	-2.642692	Ireland	8	1	0.929	0.881	0.889672
Japan	11383	0	0	0	-2.642692	Italy	614	1	0.929	0.9	0.928282
Netherlands	239	0	0	0	-2.642692	Mexico	8	1	0.741	0.716	0.552425
Norway	575	0	0.209	0.153	-2.329614	New Zealand	123	1	0.929	0.881	0.889672
Sweden	1036	0	0.063	0.049	-2.542466	Nigeria	18	1	0.929	0.881	0.889672
Switzerland	391	0	0	0	-2.642692	Pakistan	49	1	0.929	0.881	0.889672
Taiwan	2420	0	0	0	-2.642692	Philippines	60	1	0.929	0.881	0.889672
						Poland	297	1	0.344	0.282	-0.33363
						Russia	180	1	80.8	0.722	1.3931
						Singapore	931	1	0.929	0.881	0.889672
						South Africa	322	1	0.929	0.881	0.889672
						South Korea	1566	1	0.808	0.722	0.565311
						Spain	112	1	0.741	0.716	0.552425
						United Kingdom	4191	1	0.929	0.881	0.889672
						United States	28261	1	0.875	0.769	0.661515

This table presents the country coverage and the FTR of official language of each country. Please note that, according to Chen (2013), although the official language in Brazil and Portugal is both Portuguese, the Portuguese (BR) is classified as weak-FTR language while Portuguese (EU) is classified as strong-FTR language. Also note that Belgium, Hong Kong, the Netherlands, Switzerland, Nigeria and Singapore are either identified as "multilingual countries" by Chen (2013) or have both strong and weak FTR official languages.

Based on Stulz and Williamson (2003) and Chen et al. (2015), we categorize Belgium, Hong Kong, the Netherlands and Switzerland's FTR as weak, and Nigeria and Singapore's FTR as strong. In an additional analysis, we drop these countries to test whether the results hold under a cleaner setting.

Table 2 Descriptive Statistics

Variable	N	Mean	Std Dev	25%	Median	75%
$\|AM_{it}\|$	74606	0.630	2.091	0.039	0.101	0.292
$\|RM_{it}\|$	74606	0.662	1.151	0.113	0.277	0.656
LA_{it}	74606	0.009	0.094	0.000	0.000	0.000
$SPES_{it}$	74606	0.094	0.292	0.000	0.000	0.000
$strongFTR_{it}$	74606	0.628	0.483	0.000	1.000	1.000
SR_{it}	74606	0.752	3.960	0.000	0.875	0.875
VR_{it}	74606	0.503	0.388	0.000	0.769	0.769
$pcFTR_{it}$	74606	-0.524	1.627	-2.643	0.662	0.662
$INVPRO_{it}$	74606	3.429	1.080	3.000	3.000	4.500
PD_{it}	74606	48.827	14.883	40.000	40.000	54.000
$INDIV_{it}$	74606	66.909	27.572	46.000	80.000	91.000
MAS_{it}	74606	63.509	17.323	61.000	62.000	66.000
UA_{it}	74606	54.434	21.434	46.000	46.000	69.000
LTO_{it}	74606	52.565	27.851	26.000	45.000	87.000
$INDUL_{it}$	74606	54.554	17.296	42.000	68.000	68.000
$GGROWTH_{it}$	74606	2.928	3.141	1.539	2.507	4.091
$SIZE_{it}$	74606	5.368	1.976	3.958	5.235	6.679
BTM_{it}	74606	0.786	0.891	0.311	0.549	0.941
LEV_{it}	74606	0.205	0.187	0.029	0.175	0.324
ROA_{it}	74606	0.013	0.150	0.004	0.038	0.076
$ISSUE_{it}$	74606	0.822	0.383	1.000	1.000	1.000
$MEET_{it}$	74606	0.520	0.500	0.000	1.000	1.000
$LOSS_{it}$	74606	0.126	0.332	0.000	0.000	0.000

This table provides the descriptive statistics of the key variables used in this study.

Table 3 Pearson Correlations

	$\|AM_{it}\|$	$\|RM_{it}\|$	LA_{it}	$SPES_{it}$	$strongFTR_{it}$	SR_{it}	VR_{it}
$\|RM_{it}\|$	0.271***	1					
LA_{it}	-0.002	-0.001	1				
$SPES_{it}$	0.037***	0.062***	0.040***	1			
$strongFTR_{it}$	0.199***	0.276***	0.026***	0.123***	1		
SR_{it}	0.008**	0.014***	0.087***	0.023***	0.145***	1	
VR_{it}	0.179***	0.249***	0.028***	0.119***	0.988***	0.135***	1
$pcFTR_{it}$	0.190***	0.263***	0.029***	0.121***	0.997***	0.165***	0.996***

This table provides the Pearson correlation matrix of earnings management measures and language FTR measures. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 4 Univariate Comparison

	$strongFTR_{it} = 1$	$strongFTR_{it} = 0$	Difference	Test of Difference
	(1)	(2)	(3)	(4)
$\|AM_{it}\|$	0.951	0.088	0.863	55.61***
	(0.173)	(0.053)	(0.173)	113.67***
$\|RM_{it}\|$	0.906	0.250	0.656	78.35***
	(0.413)	(0.163)	(0.250)	98.01***
LA_{it}	0.011	0.006	0.005	7.10***
	(0.000)	(0.000)	(0.000)	7.10***
$SPES_{it}$	0.093	0.048	0.045	33.74***
	(0.000)	(0.000)	(0.000)	33.49***

This table compares the differences in the mean (median in parentheses) values of earnings management measures between firms in strong-FTR language countries and weak-FTR language countries. Differences in the mean and median are tested by t-test and Wilcoxon-test, with t-statistic and z-statistic reported in column (4), respectively.

Table 5 Multivariate Regressions – Test of Hypothesis 1

Panel A

	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	0.424***				0.210***			
	(19.66)				(14.29)			
SR_{it}		0.007***				0.010***		
		(11.88)				(12.73)		
VR_{it}			0.342***				0.138***	
			(11.05)				(6.79)	
$pcFTR_{it}$				0.108***				0.051***
				(15.59)				(11.11)
$INVPRO_{it}$	-0.264***	-0.224***	-0.257***	-0.263***	-0.167***	-0.149***	-0.161***	-0.166***
	(-31.63)	(-30.46)	(-29.95)	(-30.96)	(-30.51)	(-30.05)	(-28.95)	(-29.94)
PD_{it}	-0.004***	0.003***	-0.002*	-0.003***	-0.002***	0.001	-0.001	-0.002***
	(-4.51)	(4.61)	(-1.79)	(-3.56)	(-3.60)	(1.01)	(-0.87)	(-2.76)
$INDIV_{it}$	-0.008***	-0.003***	-0.007***	-0.008***	-0.003***	-0.001***	-0.002***	-0.003***
	(-11.94)	(-5.59)	(-9.42)	(-11.07)	(-6.70)	(-3.14)	(-4.33)	(-6.03)
MAS_{it}	0.010***	0.009***	0.010***	0.010***	0.005***	0.005***	0.005***	0.005***
	(30.47)	(21.34)	(27.76)	(29.62)	(21.48)	(18.37)	(19.46)	(20.97)
UA_{it}	-0.004***	-0.004***	-0.004***	-0.004***	-0.002***	-0.002***	-0.002***	-0.002***
	(-12.45)	(-11.71)	(-11.37)	(-11.99)	(-6.93)	(-7.49)	(-6.31)	(-6.63)
LTO_{it}	-0.015***	-0.018***	-0.017***	-0.016***	-0.009***	-0.010***	-0.010***	-0.009***
	(-27.22)	(-33.36)	(-30.19)	(-28.63)	(-21.43)	(-26.69)	(-24.30)	(-22.77)
$INDUL_{it}$	0.005***	0.007***	0.005***	0.005***	0.002***	0.004***	0.003***	0.003***
	(5.98)	(10.02)	(6.62)	(6.16)	(4.56)	(7.21)	(5.39)	(4.80)
$GGROWTH_{it}$	-0.079***	-0.074***	-0.077***	-0.078***	-0.016***	-0.014***	-0.015***	-0.016***
	(-24.62)	(-22.92)	(-23.88)	(-24.24)	(-9.87)	(-8.43)	(-9.26)	(-9.61)
$SIZE_{it}$	0.038***	0.032***	0.037***	0.038***	-0.002	-0.005	-0.003	-0.002
	(8.51)	(7.09)	(8.08)	(8.36)	(-0.53)	(-1.60)	(-0.88)	(-0.64)
BTM_{it}	-0.012**	-0.010	-0.008	-0.011*	-0.045***	-0.050***	-0.042***	-0.044***
	(-1.98)	(-1.49)	(-1.26)	(-1.83)	(-10.53)	(-11.83)	(-9.82)	(-10.38)
LEV_{it}	0.083*	0.117***	0.091**	0.086*	-0.093***	-0.072**	-0.087***	-0.091***
	(1.87)	(2.64)	(2.05)	(1.95)	(-3.19)	(-2.46)	(-2.98)	(-3.11)
ROA_{it}	0.195***	0.242***	0.223***	0.208***	0.177***	0.198***	0.192***	0.184***
	(3.13)	(3.90)	(3.58)	(3.35)	(4.01)	(4.51)	(4.36)	(4.18)
$ISSUE_{it}$	-0.022	-0.006	-0.013	-0.017	0.167***	0.174***	0.172***	0.169***
	(-0.80)	(-0.22)	(-0.47)	(-0.63)	(11.19)	(11.65)	(11.50)	(11.34)
$MEET_{it}$	0.056***	0.062***	0.059***	0.057***	0.042***	0.045***	0.044***	0.043***
	(3.92)	(4.31)	(4.12)	(4.01)	(5.28)	(5.59)	(5.49)	(5.37)
$LOSS_{it}$	0.232***	0.258***	0.252***	0.242***	0.272***	0.284***	0.283***	0.278***

	(6.30)	(7.06)	(6.89)	(6.61)	(12.99)	(13.62)	(13.55)	(13.28)
Constant	2.568***	2.385***	2.608***	2.913***	1.380***	1.362***	1.372***	1.539***
	(20.29)	(17.67)	(19.04)	(20.83)	(15.74)	(15.48)	(15.19)	(16.69)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	74606	74606	74606	74606	74606	74606	74606	74606
Adj. / Pseudo R-squared	0.128	0.126	0.127	0.128	0.206	0.205	0.205	0.205

Panel A of this table presents the multivariate regression results of the effects of various language FTR measures on the magnitude of accrual-based and real earnings management. The t-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 5 Multivariate Regressions – Test of Hypothesis 1

Panel B

	LA_{it}	LA_{it}	LA_{it}	LA_{it}	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	0.730***				0.741***			
	(3.73)				(8.28)			
SR_{it}		0.056***				0.056***		
		(6.96)				(11.61)		
VR_{it}			0.830***				1.080***	
			(3.11)				(9.39)	
$pcFTR_{it}$				0.271***				0.256***
				(4.32)				(9.38)
$INVPRO_{it}$	-0.276***	-0.240***	-0.287***	-0.314***	-0.289***	-0.229***	-0.329***	-0.315***
	(-4.88)	(-4.45)	(-4.71)	(-5.29)	(-13.04)	(-11.57)	(-14.03)	(-13.86)
PD_{it}	-0.004	-0.023***	-0.003	-0.009	-0.035***	-0.027***	-0.037***	-0.037***
	(-0.43)	(-2.66)	(-0.31)	(-1.06)	(-6.78)	(-6.32)	(-7.35)	(-7.53)
$INDIV_{it}$	-0.015**	-0.033***	-0.016**	-0.018***	-0.032***	-0.030***	-0.034***	-0.034***
	(-2.41)	(-4.34)	(-2.44)	(-2.89)	(-9.19)	(-9.09)	(-9.94)	(-9.95)
MAS_{it}	-0.011***	0.008*	-0.010**	-0.011***	0.009***	0.015***	0.009***	0.009***
	(-2.67)	(1.76)	(-2.51)	(-2.58)	(4.03)	(7.26)	(4.36)	(4.17)
UA_{it}	-0.011***	-0.021***	-0.011***	-0.012***	-0.023***	-0.026***	-0.023***	-0.023***
	(-3.35)	(-5.63)	(-3.09)	(-3.51)	(-13.91)	(-15.54)	(-13.79)	(-14.02)
LTO_{it}	-0.012**	-0.026***	-0.014***	-0.012**	-0.035***	-0.042***	-0.035***	-0.035***
	(-2.57)	(-4.93)	(-3.02)	(-2.55)	(-15.52)	(-19.02)	(-16.29)	(-15.67)
$INDUL_{it}$	-0.011	-0.005	-0.011	-0.013**	-0.015***	-0.006*	-0.017***	-0.017***
	(-1.63)	(-0.63)	(-1.58)	(-1.97)	(-4.72)	(-1.87)	(-5.40)	(-5.28)
$GGROWTH_{it}$	-0.052**	-0.053*	-0.054**	-0.051**	0.039***	0.043***	0.033***	0.036***
	(-2.25)	(-1.93)	(-2.35)	(-2.23)	(3.62)	(3.93)	(3.15)	(3.39)
$SIZE_{it}$	-0.400***	-0.436***	-0.397***	-0.396***	-0.053***	-0.062***	-0.048***	-0.050***
	(-11.72)	(-13.14)	(-11.60)	(-11.58)	(-4.68)	(-5.50)	(-4.23)	(-4.42)
BTM_{it}	0.280***	0.187***	0.284***	0.275***	-0.076***	-0.108***	-0.078***	-0.078***
	(8.94)	(5.29)	(8.94)	(8.84)	(-2.71)	(-4.26)	(-2.78)	(-2.80)
LEV_{it}	0.617**	0.925***	0.605**	0.605**	-0.652***	-0.591***	-0.675***	-0.666***
	(2.46)	(3.99)	(2.41)	(2.40)	(-6.95)	(-6.35)	(-7.18)	(-7.09)
ROA_{it}	0.557***	0.693***	0.558***	0.548***	1.039***	1.088***	1.056***	1.042***
	(3.09)	(4.02)	(3.10)	(3.04)	(7.73)	(8.16)	(7.86)	(7.76)
$ISSUE_{it}$	0.111	0.175	0.119	0.102	0.319***	0.340***	0.319***	0.316***
	(0.72)	(1.04)	(0.77)	(0.66)	(5.67)	(5.90)	(5.66)	(5.62)
$MEET_{it}$	-0.266***	-0.267***	-0.265***	-0.269***				
	(-3.02)	(-3.07)	(-2.99)	(-3.05)				
$LOSS_{it}$					-0.425***	-0.405***	-0.404***	-0.416***

					(-8.03)	(-7.64)	(-7.64)	(-7.88)
Constant	1.558	3.730***	1.549	2.793**	5.158***	4.505***	5.541***	6.165***
	(1.33)	(3.19)	(1.28)	(2.37)	(8.71)	(8.69)	(9.31)	(10.01)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	74375	74375	74375	74375	74559	74559	74559	74559
Adj. / Pseudo R-squared	0.093	0.103	0.092	0.094	0.094	0.096	0.095	0.095

Panel B of this table presents the multivariate regression results of the effects of various language FTR measures on the propensity of loss avoidance and reporting small positive earnings surprises. The t-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 6 Multivariate Regressions – Test of Hypothesis 2

Panel A

	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	3.461***				2.373***			
	(34.98)				(31.01)			
$strongFTR_{it} * INVPRO_{it}$	-0.766***				-0.545***			
	(-34.44)				(-29.94)			
SR_{it}		3.449***				2.332***		
		(35.17)				(30.00)		
$SR_{it} * INVPRO_{it}$		-0.860***				-0.581***		
		(-35.08)				(-29.88)		
VR_{it}			3.744***				2.430***	
			(28.57)				(26.30)	
$VR_{it} * INVPRO_{it}$			-0.855***				-0.576***	
			(-30.38)				(-26.99)	
$pcFTR_{it}$				1.000***				0.668***
				(31.55)				(28.87)
$pcFTR_{it} * INVPRO_{it}$				-0.223***				-0.154***
				(-32.21)				(-28.65)
$INVPRO_{it}$	0.092***	0.127***	0.067***	-0.502***	0.085***	0.088***	0.057***	-0.332***
	(9.36)	(13.29)	(7.10)	(-34.72)	(11.09)	(12.34)	(7.89)	(-32.88)
PD_{it}	-0.001	0.006***	0.001	-0.001	-0.000	0.002***	0.001**	0.000
	(-1.22)	(10.70)	(1.15)	(-0.67)	(-0.14)	(4.80)	(2.04)	(0.24)
$INDIV_{it}$	-0.004***	-0.000	-0.004***	-0.004***	-0.000	0.001**	-0.000	-0.001
	(-6.84)	(-0.11)	(-5.15)	(-6.51)	(-1.03)	(1.98)	(-0.07)	(-1.18)
MAS_{it}	0.008***	0.007***	0.009***	0.008***	0.004***	0.004***	0.004***	0.004***
	(24.59)	(18.09)	(25.17)	(25.48)	(14.94)	(14.83)	(16.38)	(16.23)
UA_{it}	-0.014***	-0.014***	-0.013***	-0.014***	-0.009***	-0.008***	-0.008***	-0.008***
	(-32.62)	(-33.76)	(-31.78)	(-32.39)	(-24.02)	(-24.73)	(-22.58)	(-23.76)
LTO_{it}	0.002***	-0.002***	-0.002***	0.001	0.004***	0.001*	0.000	0.003***
	(2.96)	(-3.10)	(-3.41)	(0.81)	(6.67)	(1.93)	(0.73)	(4.56)
$INDUL_{it}$	0.013***	0.014***	0.012***	0.013***	0.008***	0.009***	0.008***	0.008***
	(14.59)	(18.38)	(13.81)	(14.26)	(13.34)	(15.24)	(12.53)	(12.94)
$GGROWTH_{it}$	-0.029***	-0.023***	-0.031***	-0.028***	0.019***	0.020***	0.016***	0.019***
	(-10.16)	(-8.21)	(-10.80)	(-9.96)	(11.55)	(12.62)	(10.04)	(11.34)
$SIZE_{it}$	0.012***	0.004	0.011**	0.011**	-0.020***	-0.024***	-0.020***	-0.021***
	(2.71)	(0.79)	(2.44)	(2.46)	(-6.28)	(-7.48)	(-6.12)	(-6.30)
BTM_{it}	-0.005	-0.002	0.000	-0.003	-0.039***	-0.044***	-0.037***	-0.039***
	(-0.75)	(-0.27)	(0.05)	(-0.54)	(-9.34)	(-10.75)	(-8.61)	(-9.18)
LEV_{it}	0.139***	0.171***	0.142***	0.141***	-0.053*	-0.036	-0.053*	-0.053*

	(3.19)	(3.90)	(3.23)	(3.22)	(-1.85)	(-1.25)	(-1.84)	(-1.85)
ROA_{it}	0.144**	0.196***	0.185***	0.161***	0.141***	0.167***	0.167***	0.151***
	(2.34)	(3.18)	(3.00)	(2.62)	(3.26)	(3.87)	(3.85)	(3.50)
$ISSUE_{it}$	-0.094***	-0.078***	-0.077***	-0.088***	0.115***	0.126***	0.129***	0.120***
	(-3.45)	(-2.85)	(-2.81)	(-3.24)	(8.04)	(8.72)	(8.90)	(8.34)
$MEET_{it}$	0.044***	0.050***	0.050***	0.046***	0.034***	0.037***	0.038***	0.035***
	(3.13)	(3.53)	(3.49)	(3.26)	(4.30)	(4.68)	(4.76)	(4.47)
$LOSS_{it}$	0.126***	0.145***	0.154***	0.135***	0.197***	0.208***	0.216***	0.204***
	(3.40)	(3.94)	(4.16)	(3.66)	(9.35)	(9.91)	(10.28)	(9.68)
Constant	0.019	-0.130	0.293**	2.756***	-0.435***	-0.335***	-0.188**	1.430***
	(0.17)	(-1.13)	(2.44)	(20.20)	(-4.53)	(-3.71)	(-2.00)	(15.13)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	74606	74606	74606	74606	74606	74606	74606	74606
Adj. / Pseudo R-squared	0.136	0.135	0.134	0.136	0.220	0.218	0.216	0.218

Panel A of this table presents the multivariate regression results of the interaction of various language FTR measures and investor protection in explaining the magnitude of accrual-based and real earnings management. The t-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 6 Multivariate Regressions – Test of Hypothesis 2

Panel B

	LA_{it}	LA_{it}	LA_{it}	LA_{it}	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	2.079***				1.577***			
	(2.95)				(5.75)			
$strongFTR_{it}$	-0.350**				-0.211***			
$* INVPRO_{it}$	(-2.13)				(-3.37)			
SR_{it}		1.775**				1.153***		
		(2.31)				(4.12)		
SR_{it}		-0.430**				-0.274***		
$* INVPRO_{it}$		(-2.24)				(-3.92)		
VR_{it}			2.995***				2.701***	
			(3.66)				(8.56)	
VR_{it}			-0.562***				-0.405***	
$* INVPRO_{it}$			(-3.01)				(-5.60)	
$pcFTR_{it}$				0.744***				0.594***
				(3.67)				(7.52)
$pcFTR_{it}$				-0.123***				-0.084***
$* INVPRO_{it}$				(-2.61)				(-4.66)
$INVPRO_{it}$	-0.107	-0.070	-0.060	-0.433***	-0.192***	-0.120***	-0.175***	-0.406***
	(-1.16)	(-0.77)	(-0.67)	(-5.86)	(-5.60)	(-3.61)	(-5.07)	(-13.24)
PD_{it}	-0.003	-0.023**	-0.001	-0.008	-0.035***	-0.027***	-0.038***	-0.038***
	(-0.35)	(-2.56)	(-0.12)	(-0.90)	(-6.77)	(-6.26)	(-7.27)	(-7.53)
$INDIV_{it}$	-0.014**	-0.031***	-0.014**	-0.016***	-0.032***	-0.030***	-0.033***	-0.033***
	(-2.14)	(-4.00)	(-2.10)	(-2.60)	(-9.00)	(-8.82)	(-9.62)	(-9.72)
MAS_{it}	-0.011***	0.008	-0.010**	-0.011***	0.008***	0.014***	0.009***	0.008***
	(-2.81)	(1.61)	(-2.58)	(-2.68)	(3.81)	(6.91)	(4.18)	(3.94)
UA_{it}	-0.015***	-0.024***	-0.015***	-0.016***	-0.025***	-0.027***	-0.026***	-0.025***
	(-3.65)	(-6.00)	(-3.75)	(-3.97)	(-13.55)	(-15.60)	(-13.95)	(-14.03)
LTO_{it}	-0.005	-0.018**	-0.005	-0.004	-0.030***	-0.036***	-0.028***	-0.029***
	(-0.82)	(-2.50)	(-0.89)	(-0.69)	(-10.95)	(-13.08)	(-11.10)	(-10.73)
$INDUL_{it}$	-0.009	-0.002	-0.007	-0.010*	-0.013***	-0.003	-0.014***	-0.014***
	(-1.40)	(-0.25)	(-1.22)	(-1.74)	(-4.18)	(-1.06)	(-4.62)	(-4.63)
$GGROWTH_{it}$	-0.026	-0.021	-0.018	-0.020	0.059***	0.066***	0.065***	0.063***
	(-1.17)	(-0.78)	(-0.80)	(-0.89)	(5.58)	(6.15)	(6.22)	(6.04)
$SIZE_{it}$	-0.418***	-0.459***	-0.424***	-0.419***	-0.061***	-0.073***	-0.061***	-0.061***
	(-11.95)	(-12.96)	(-12.01)	(-11.89)	(-5.25)	(-6.12)	(-5.19)	(-5.24)
BTM_{it}	0.284***	0.192***	0.290***	0.280***	-0.074***	-0.104***	-0.075***	-0.075***
	(9.08)	(5.39)	(9.13)	(9.01)	(-2.63)	(-4.13)	(-2.66)	(-2.70)
LEV_{it}	0.656***	0.963***	0.659***	0.649***	-0.635***	-0.570***	-0.651***	-0.645***

	(2.63)	(4.15)	(2.66)	(2.61)	(-6.77)	(-6.12)	(-6.94)	(-6.87)
ROA_{it}	0.593***	0.747***	0.617***	0.597***	1.025***	1.073***	1.038***	1.023***
	(3.28)	(4.25)	(3.40)	(3.29)	(7.63)	(8.06)	(7.74)	(7.63)
$ISSUE_{it}$	0.063	0.129	0.061	0.047	0.293***	0.313***	0.279***	0.282***
	(0.42)	(0.80)	(0.40)	(0.31)	(5.26)	(5.52)	(5.02)	(5.07)
$MEET_{it}$	-0.270***	-0.271***	-0.269***	-0.273***				
	(-3.05)	(-3.12)	(-3.04)	(-3.09)				
$LOSS_{it}$					-0.447***	-0.433***	-0.438***	-0.447***
					(-8.41)	(-8.11)	(-8.25)	(-8.41)
Constant	0.557	2.594**	0.179	2.843**	4.532***	3.747***	4.532***	6.208***
	(0.46)	(1.98)	(0.14)	(2.39)	(7.47)	(6.70)	(7.44)	(10.15)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	74375	74375	74375	74375	74559	74559	74559	74559
Adj. / Pseudo R-squared	0.093	0.104	0.094	0.095	0.094	0.096	0.096	0.095

Panel B of this table presents the multivariate regression results of the interaction of various language FTR measures and investor protection in explaining the propensity of loss avoidance and reporting small positive earnings surprises. The t-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 7 Multivariate Regressions – Country Level Analysis

Panel A

	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$	$\|AM_{it}\|$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	0.048***				0.224***			
	(3.67)				(2.71)			
$strongFTR_{it} * INVPRO_{it}$					-0.045**			
					(-2.41)			
SR_{it}		0.000				0.240**		
		(0.56)				(2.46)		
$SR_{it} * INVPRO_{it}$						-0.060**		
						(-2.46)		
VR_{it}			0.036***				0.222**	
			(2.69)				(2.31)	
$VR_{it} * INVPRO_{it}$							-0.049**	
							(-2.17)	
$pcFTR_{it}$				0.012***				0.063**
				(3.24)				(2.51)
$pcFTR_{it} * INVPRO_{it}$								-0.013**
								(-2.30)
$INVPRO_{it}$	-0.020***	-0.014**	-0.018**	-0.019***	0.001	0.009	0.001	-0.033***
	(-2.72)	(-2.20)	(-2.58)	(-2.67)	(0.15)	(0.97)	(0.11)	(-2.92)
PD_{it}	0.001	0.001***	0.001*	0.001	0.000	0.001**	0.001*	0.000
	(1.49)	(2.62)	(1.83)	(1.59)	(1.10)	(2.17)	(1.69)	(1.27)
$INDIV_{it}$	0.001**	0.001**	0.001**	0.001**	0.001*	0.001**	0.001**	0.001**
	(1.98)	(2.31)	(2.12)	(2.02)	(1.92)	(2.32)	(2.19)	(2.03)
MAS_{it}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(1.00)	(1.26)	(1.14)	(1.10)	(0.80)	(1.13)	(1.08)	(0.95)
UA_{it}	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(-3.01)	(-2.62)	(-2.74)	(-2.89)	(-3.32)	(-3.10)	(-3.07)	(-3.21)
LTO_{it}	-0.000	-0.001**	-0.001*	-0.001	0.000	-0.000	-0.000	0.000
	(-1.12)	(-2.18)	(-1.68)	(-1.42)	(0.50)	(-0.78)	(-0.65)	(0.06)
$INDUL_{it}$	0.001	0.000	0.001	0.001	0.001**	0.001*	0.001*	0.001**
	(1.41)	(1.18)	(1.23)	(1.33)	(2.18)	(1.91)	(1.79)	(2.03)
$GGROWTH_{it}$	-0.001	0.000	0.000	-0.000	0.002	0.004	0.003	0.003
	(-0.21)	(0.01)	(0.01)	(-0.09)	(0.78)	(1.23)	(1.00)	(0.97)
Constant	0.129***	0.100*	0.108**	0.144***	0.002	-0.029	0.010	0.151***
	(2.83)	(1.85)	(2.31)	(2.89)	(0.03)	(-0.41)	(0.17)	(2.83)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Effects								
Number of Observations	364	364	364	364	364	364	364	364
Adj. / Pseudo R-squared	0.071	0.053	0.060	0.065	0.084	0.073	0.071	0.078

Panel A of this table presents the multivariate regression results on accrual-based earnings management at the country-year level. The t-statistics, shown in parentheses, are based on White (1980) robust standard errors. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 7 Multivariate Regressions – Country Level Analysis

Panel B

	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$	$\|RM_{it}\|$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	0.053***				0.280***			
	(3.01)				(2.93)			
$strongFTR_{it} * INVPRO_{it}$					-0.058***			
					(-2.74)			
SR_{it}		0.001**				0.239**		
		(2.42)				(2.19)		
$SR_{it} * INVPRO_{it}$						-0.060**		
						(-2.18)		
VR_{it}			0.026				0.204*	
			(1.39)				(1.88)	
$VR_{it} * INVPRO_{it}$							-0.047*	
							(-1.85)	
$pcFTR_{it}$				0.011**				0.069**
				(2.31)				(2.37)
$pcFTR_{it} * INVPRO_{it}$								-0.015**
								(-2.26)
$INVPRO_{it}$	-0.011	-0.005	-0.007	-0.009	0.017**	0.018**	0.011*	-0.025*
	(-1.43)	(-0.73)	(-0.96)	(-1.24)	(2.51)	(2.26)	(1.65)	(-1.80)
PD_{it}	0.000	0.001	0.000	0.000	-0.000	0.000	0.000	0.000
	(0.34)	(1.35)	(0.99)	(0.60)	(-0.01)	(1.00)	(0.89)	(0.34)
$INDIV_{it}$	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***
	(4.75)	(5.04)	(5.05)	(4.86)	(4.54)	(4.81)	(4.84)	(4.66)
MAS_{it}	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.01)	(3.19)	(3.14)	(3.09)	(2.89)	(3.22)	(3.16)	(3.06)
UA_{it}	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(-3.79)	(-3.40)	(-3.43)	(-3.61)	(-3.98)	(-3.62)	(-3.49)	(-3.72)
LTO_{it}	-0.001	-0.001***	-0.001**	-0.001*	0.000	-0.001	-0.001	-0.000
	(-1.54)	(-2.61)	(-2.29)	(-1.93)	(0.43)	(-1.45)	(-1.43)	(-0.40)
$INDUL_{it}$	0.001	0.001	0.001	0.001	0.001**	0.001*	0.001*	0.001**
	(1.49)	(1.34)	(1.28)	(1.39)	(2.26)	(1.88)	(1.69)	(2.00)
$GGROWTH_{it}$	-0.001	0.000	0.000	-0.000	0.003	0.004	0.003	0.003
	(-0.19)	(0.03)	(0.03)	(-0.05)	(1.02)	(1.22)	(0.97)	(1.08)
Constant	0.196***	0.196***	0.192***	0.230***	0.033	0.047	0.078	0.238***
	(2.77)	(2.89)	(2.91)	(3.25)	(0.44)	(0.61)	(1.08)	(3.10)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Effects								
Number of Observations	364	364	364	364	364	364	364	364
Adj. / Pseudo R-squared	0.186	0.172	0.173	0.179	0.202	0.186	0.179	0.190

Panel B of this table presents the multivariate regression results on real earnings management at the country-year level. The t-statistics, shown in parentheses, are based on White (1980) robust standard errors. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 7 Multivariate Regressions – Country Level Analysis

Panel C

	LA_{it}	LA_{it}	LA_{it}	LA_{it}	LA_{it}	LA_{it}	LA_{it}	LA_{it}
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	1.262***				6.870***			
	(3.16)				(3.90)			
$strongFTR_{it} * INVPRO_{it}$					-1.411***			
					(-3.46)			
SR_{it}		1.119**				7.633***		
		(2.47)				(3.76)		
$SR_{it} * INVPRO_{it}$						-1.669***		
						(-3.56)		
VR_{it}			1.137**				7.527***	
			(2.47)				(3.69)	
$VR_{it} * INVPRO_{it}$							-1.650***	
							(-3.46)	
$pcFTR_{it}$				0.353***				2.169***
				(2.98)				(3.82)
$pcFTR_{it} * INVPRO_{it}$								-0.457***
								(-3.53)
$INVPRO_{it}$	-0.392**	-0.427***	-0.370**	-0.403**	0.226	0.186	0.210	-0.952***
	(-2.48)	(-2.65)	(-2.32)	(-2.48)	(1.15)	(0.97)	(1.12)	(-3.55)
PD_{it}	0.017	0.015	0.021*	0.017	0.015	0.015	0.021*	0.015
	(1.53)	(1.36)	(1.82)	(1.47)	(1.43)	(1.30)	(1.87)	(1.34)
$INDIV_{it}$	0.043***	0.040***	0.044***	0.042***	0.043***	0.044***	0.048***	0.045***
	(3.40)	(3.23)	(3.54)	(3.41)	(3.65)	(3.54)	(3.90)	(3.71)
MAS_{it}	0.014**	0.021***	0.016**	0.015**	0.013*	0.021***	0.016**	0.015**
	(2.16)	(3.08)	(2.54)	(2.34)	(1.94)	(3.05)	(2.49)	(2.16)
UA_{it}	-0.053***	-0.053***	-0.050***	-0.052***	-0.063***	-0.063***	-0.058***	-0.063***
	(-6.20)	(-6.22)	(-6.06)	(-6.14)	(-6.58)	(-6.33)	(-6.29)	(-6.17)
LTO_{it}	0.013	0.007	0.008	0.012	0.033***	0.023**	0.023**	0.032***
	(1.49)	(0.79)	(0.99)	(1.34)	(2.89)	(2.12)	(2.20)	(2.72)
$INDUL_{it}$	-0.041***	-0.039***	-0.042***	-0.042***	-0.027*	-0.030**	-0.035**	-0.031**
	(-2.74)	(-2.70)	(-2.87)	(-2.78)	(-1.88)	(-2.09)	(-2.38)	(-2.10)
$GGROWTH_{it}$	-0.135**	-0.137**	-0.127*	-0.131**	-0.047	-0.027	-0.024	-0.023
	(-2.08)	(-2.09)	(-1.93)	(-2.00)	(-0.68)	(-0.37)	(-0.33)	(-0.32)
Constant	1.621	2.033	1.486	2.656*	-1.843	-1.258	-1.571	3.864**
	(1.16)	(1.49)	(1.09)	(1.77)	(-1.10)	(-0.80)	(-1.02)	(2.26)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Effects								
Number of Observations	357	357	357	357	357	357	357	357
Adj. / Pseudo R-squared	0.238	0.251	0.229	0.237	0.267	0.283	0.258	0.270

Panel C of this table presents the multivariate regression results on the propensity of loss avoidance at the country-year level. The t-statistics, shown in parentheses, are based on White (1980) robust standard errors. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Table 7 Multivariate Regressions – Country Level Analysis

Panel D

	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$	$SPES_{it}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$strongFTR_{it}$	1.988***				9.587***			
	(5.55)				(5.35)			
$strongFTR_{it} * INVPRO_{it}$					-1.881***			
					(-4.68)			
SR_{it}		1.917***				9.191***		
		(4.70)				(5.01)		
$SR_{it} * INVPRO_{it}$						-1.845***		
						(-4.35)		
VR_{it}			1.958***				8.886***	
			(4.69)				(4.97)	
$VR_{it} * INVPRO_{it}$							-1.779***	
							(-4.23)	
$pcFTR_{it}$				0.566***				2.837***
				(5.31)				(5.43)
$pcFTR_{it} * INVPRO_{it}$								-0.564***
								(-4.81)
$INVPRO_{it}$	-0.623***	-0.650***	-0.598***	-0.643***	0.171	0.010	0.019	-1.348***
	(-4.02)	(-3.94)	(-3.71)	(-3.98)	(0.90)	(0.05)	(0.09)	(-5.75)
PD_{it}	-0.007	-0.009	-0.004	-0.008	-0.011	-0.013	-0.007	-0.013
	(-0.69)	(-0.92)	(-0.43)	(-0.80)	(-1.12)	(-1.30)	(-0.64)	(-1.31)
$INDIV_{it}$	0.034***	0.031***	0.035***	0.034***	0.036***	0.037***	0.041***	0.039***
	(3.11)	(2.92)	(3.29)	(3.13)	(3.29)	(3.27)	(3.63)	(3.40)
MAS_{it}	0.024***	0.028***	0.024***	0.024***	0.024***	0.030***	0.025***	0.025***
	(3.91)	(4.70)	(4.18)	(4.09)	(3.68)	(4.79)	(4.21)	(3.97)
UA_{it}	-0.060***	-0.057***	-0.054***	-0.058***	-0.076***	-0.069***	-0.064***	-0.074***
	(-7.23)	(-7.25)	(-7.09)	(-7.19)	(-7.43)	(-7.86)	(-7.93)	(-7.67)
LTO_{it}	0.032***	0.026***	0.026***	0.031***	0.060***	0.044***	0.042***	0.057***
	(3.79)	(3.10)	(3.31)	(3.68)	(4.63)	(3.98)	(4.13)	(4.63)
$INDUL_{it}$	-0.046***	-0.046***	-0.048***	-0.048***	-0.030**	-0.039***	-0.043***	-0.038***
	(-3.26)	(-3.23)	(-3.40)	(-3.32)	(-2.20)	(-2.73)	(-3.02)	(-2.65)
$GGROWTH_{it}$	-0.141**	-0.121*	-0.111*	-0.129*	-0.040	-0.007	-0.007	-0.011
	(-2.10)	(-1.80)	(-1.66)	(-1.91)	(-0.52)	(-0.09)	(-0.09)	(-0.13)
Constant	2.980**	3.356**	2.943**	4.683***	-1.329	-0.001	-0.145	6.556***
	(2.11)	(2.34)	(2.03)	(3.07)	(-0.71)	(-0.00)	(-0.08)	(4.02)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Effects								
Number of Observations	362	362	362	362	362	362	362	362
Adj. / Pseudo R-squared	0.249	0.255	0.232	0.246	0.294	0.291	0.264	0.292

Panel D of this table presents the multivariate regression results on the propensity of reporting small positive earnings surprises at the country-year level. The t-statistics, shown in parentheses, are based on White (1980) robust standard errors. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 level, respectively.