Management Forecasts around the World

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Abstract

We examine firms' practice of providing forecasts using a comprehensive data set containing detailed attributes of management forecasts from 78 countries. We find that the incidence of management forecasts is (a) positively associated with country-level institutional characteristics related to the protection of private business, (b) negatively associated with country-level institutional characteristics related to investor protection, (c) negatively associated with the level of government involvement in the economy, and (d) positively associated with the quality of mandatory reporting. Various properties of management forecasts such as frequency, precision, horizon, attribution, and the type of news in the forecast are also systematically related to these country-level institutional characteristics. In examining whether management forecasts are informative to the stock market, we find that forecasts are informative in nearly all countries. Moreover, institutional characteristics related to protection of private business and investors, and the quality of the mandatory reporting systems appear to enhance the informativeness of management forecasts, and government involvement in the economy is negatively associated with the informativeness.

Management Forecasts around the World

1. Introduction

Corporate transparency has a significant impact on the efficiency of resource allocation and hence the growth of economy (Bushman, Piotroski, and Smith, 2004). An important component of corporate transparency is management forecasts that convey management's expectation on firms' future financial performance to the capital market. While most prior research on management forecasts focuses on the U.S. firms,[1] with increased globalization of world economies and integration of capital markets it is important to understand the institutional factors associated with management forecasts in an international setting. Motivated by the insight of Ball (2001) and Hirst, Koonce, and Venkataraman (2008) that a country's accounting and disclosure practices are influenced by its business, legal and political environment, we examine the relationship between country-level institutional characteristics and properties of management forecasts across a broad spectrum of countries.

To examine whether the incidence of management forecasts is related to country-level institutional characteristics, we consider an extensive set of 18 country-level variables that have been shown by prior studies to be associated with corporate transparency. Some of these country-level variables are highly correlated with each other and each variable also likely captures multiple conceptual constructs of disclosure theories. Hence, instead of subjectively classifying these variables, we take an agnostic approach and perform a factor analysis. The factor analysis shows that these 18 variables fall into four categories that can be portrayed as, 1) *Business protection* as manifested by the strength of (physical, financial and intellectual) property rights protection and enforcement, 2) *Investor protection* as manifested by liability

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[1] Two exceptions are Baginski, Hassell, and Kimbrough (2002) who compare management forecasts between the U.S. and Canadian firms, and Kato, Skinner, and Kunimura (2009) who examine management forecasts in Japan.

standards and securities law enforcement, 3) *Political economy* reflecting the role of government in the economy, and 4) the quality of the *Mandatory disclosure* systems as in Frost, Gordon, and Hayes (2006) that captures the reporting requirements of a country's main stock exchanges.

Our sample consists of management forecasts from 78 countries covered by Compustat CapitalIQ during the period 2004-2009. The sample contains 11,294 unique firms (29,932 firm-years) issuing 70,255 forecasts. We find that *Business protection* is positively associated with the likelihood of the occurrence of management forecasts. To the extent that better protection of private business mitigates firms' concerns of disclosing information for proprietary cost-related reasons, the evidence is consistent with the proprietary cost hypothesis in disclosure theories. Note that prior studies mainly use measures of market share to proxy for proprietary costs and obtain mixed results (see Beyer et al., 2010; Berger, 2011). However, disclosure theories relate proprietary cost to a much broader construct and characterize it as any effect of information disclosure that would reduce the disclosing firms' value by triggering regulatory actions, attracting bureaucrats' expropriation, or ceding competitive advantage to the current or potential competitors, and so on (Verrecchia, 1983; Dye, 1985). The rich context and wide variation of institutions related to property rights protection in the international setting allow us to examine a more primitive construct of proprietary information costs and generate new insights.

When the U.S. is excluded from the sample, *Investor protection* is negatively associated with the likelihood of the incidence of management forecasts. *Investor protection* captures the disclosure requirement of officers' and directors' self-dealings, liability standards for misstatements, effectiveness of private and public enforcement, and legal origin. As such, this factor measures the theoretical construct of expected legal liability for officers and directors

arising from corporate malfeasance and misstatements. Since management forecasts by definition are forward looking and unintentional forecast errors can be construed as misstatements, the results suggest that higher expected legal liability is associated with fewer management forecasts. In a similar vein, Baginski et al. (2002) find that compared to U.S. firms, Canadian firms, which they argue face a less litigious environment, issue more management forecasts.[2] Our finding extends their inference to a more general setting. Nonetheless, when U.S. firms are included in the sample, *Investor protection* turns insignificant.[3]

In addition, *Political economy* is negatively associated with the incidence of management forecasts. This finding is consistent with Bushman et al.'s (2004) argument that greater political involvement in the economy is likely to hinder corporate transparency because bureaucrats have incentives to suppress information disclosure to hide their expropriation of the firm. Our finding extends Bushman et al.'s (2004) finding to a setting of voluntary disclosure because their finding is based on CIFAR scores which combine both voluntary and mandatory disclosures.[4]

Finally, we find that *Mandatory disclosure* is positively associated with the occurrence of management forecasts, supporting the notion in Ball (2001), Beyer et al. (2010), and Ball, Jayaraman, and Shivakumar (2011) that voluntary and mandatory disclosures are likely to be complements because a higher quality mandatory disclosure system provides a higher quality verification mechanism for the forecasts and hence, enhances the credibility of the forecasts.

Our findings relating the institutional characteristics and some properties of management

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[2] However, in our sample period, which is more recent than that (i.e., 1993-1996) of Baginski et al. (2002), U.S. firms are significantly more likely than Canadian firms to issue forecasts. See Section 3 for more detail.
[3] While the U.S. ranks very high on investor protection, the SEC instituted rules, including the 1973 safe harbor rule and the 1996 Private Securities Litigation Reform Act, to specifically encourage management forecasts, which likely counteracts the effect of investor protection on litigation risk.
[4] To the best of our knowledge, Japan is the only country that effectively mandates management forecasts (see Kato et al. (2009) for more details). We exclude Japan from our sample. We further perform multiple robustness checks (including excluding all pre-announcement type of forecasts from the sample) to ensure our inferences for voluntary disclosure are robust. See Section 6 for more detail.

forecasts can be summarized as follows. Firms in countries with greater *Business protection* issue more frequent and more quantitative forecasts. Supporting our reasoning that *Investor protection* captures expected litigation costs, firms in countries with stronger *Investor protection* provide less frequent forecasts; and the forecasts also have shorter horizons and are more likely to provide explanations for their forecasts, where the explanations generally point to factors beyond the firms' control. These firms are also more likely to make more bad news forecast revisions than good news forecast revision. Further, firms in countries with more political involvement in the economy (i.e., *Political economy*) issue forecasts with shorter horizons and these forecasts are more likely to contain explanations with the explanations pointing to factors external to the firm; these firms are also less likely to revise forecasts upwards. Lastly, firms from countries with better quality of *Mandatory disclosure* systems issue more frequent forecasts and the forecasts are more likely to be quantitative. These firms are more likely to issue downward forecast revisions.

Regarding stock market reaction to management forecasts, we find that the two-day (0, +1) unsigned abnormal returns surrounding the issuance of management forecasts are statistically significant in most countries. Further, the stock market reaction is positively associated with *Business protection*, *Investor protection*, and *Mandatory disclosure*, and negatively associated with *Political economy*. These findings are consistent with the rationale that proprietary costs and government involvement/intervention in the private enterprise lowers the credibility of voluntary disclosure, while expected legal liability and mandatory disclosure quality enhances it. The results remain similar if we use signed abnormal returns or abnormal trading volume to measure the informativeness of management forecasts.

The results are robust to a battery of sensitivity tests: (a) exclusion of U.S. firms, (b)

exclusion of management forecasts made for large actual earnings surprises (such that the forecasts are more likely to be purely voluntary rather than required due to materiality criteria), (c) exclusion of cross-listed firms, (d) exclusion of confounding earnings announcements in the stock price informativeness tests, (e) exclusion of forecasts made in the IPO year and the year of seasoned equity offerings (SEO), (f) exclusion of pre-announcements of earnings (i.e., forecasts made after the end of the target fiscal period), (g) removal of firms issuing options, (h) use of weighted OLS or weighted logistic regressions, and (i) an alternative way of clustering by firm and year instead of by country in the calculation of standard errors. Overall, the above findings suggest that a country's institutional characteristics are related to both the incidence and informativeness of voluntary disclosure.

Our study contributes to the broad literature on cross-country determinants of corporate transparency (Alford et al. 1993; Ali and Hwang, 2000; Ball, Kothari, and Robin, 2000; Jaggi and Low, 2000; Ball, Robin, and Wu, 2003; Land and Lang, 2002; Bhattacharya, Daouk, and Welker, 2003; Leuz, Nanda, and Wysocki, 2003; DeFond, Hung, and Trezevant, 2007; Chaney, Faccio, and Parsley, 2010). Most extant research on corporate transparency in the international setting either focuses on mandatorily reported information or studies general information disclosure without distinguishing between voluntary and mandatory disclosures. Our study is the first to examine voluntary disclosure in the form of management forecasts employing a large cross-section of countries; and the findings are likely to spawn future empirical and analytical research.

The study also contributes to the literature on management forecasts. Prior research on management forecasts primarily focuses on U.S. firms. We know little about the prevalence of this form of disclosure in other countries, whether it is informative to investors, and whether and

how it is related to country-level institutional characteristics. The international setting provides a rich context to examine the relationship between country-level institutional characteristics and management forecasts and enables us to provide insights that cannot be obtained from within-country studies.

Next, in Section 2 we introduce various country-level variables that potentially affect management forecasts and perform a factor analysis to categorize them into broad factor groups as related to disclosure theories. Section 3 describes the sample, data, and the empirical models. Our findings are presented in Sections 4 and 5. Section 6 reports robustness tests and Section 7 concludes.

2. Country-level Institutional Characteristics

We consider 18 institutional characteristics that are related to a country's legal and political environment. These variables are primarily drawn from Bushman et al. (2004) and Bushman and Piotroski (2006) and a number of other related studies (e.g., Ali and Hwang, 2000; Ball et al. 2003; Leuz et al. 2003). These studies show that the 18 country-level institutional characteristics are associated with corporate transparency, measured as the quality of mandatorily reported information such as earnings or a blend of both mandatory and voluntary disclosure as reflected in the CIFAR ranking scores. Appendix I contains the detailed definitions and data sources of the 18 country-level variables; and Appendix II provides the variable values by country. Since many of these variables are highly correlated, we employ a factor analysis to identify the common underlying constructs of these variables and then link these constructs to factors affecting firm disclosure decisions.

2.1 Factor analysis

Table 1 presents the factor pattern of the 18 country-level variables. There are four principal factors with eigenvalues greater than one. We discuss each of these factors below.

2.1.1 Business protection

The first principal factor, Factor 1, captures the common variation in 9 out of the 18 variables. Specifically, Factor 1 comprises the following variables:

a) An index of property rights protection (*PROT_PPT*) measuring how executives rate the protection of the rights of property, including financial assets, in each country.

b) An index of the protection of intellectual property rights (*PROT_IPPT*), including anti-counterfeiting measures, in each country as rated by corporate executives.

c) An index measuring the strength of patent protection (*PATENT*).

d) An index of judicial independence (*JUD_IND*) measuring the degree of independence of a country's judiciary system from political influences of members of government, citizens, or firms.

e) A measure of judicial impartiality (*IMP_CRT*) assessing the extent to which a trusted legal framework exists for private businesses to challenge the legality of governmental actions or regulation.

f) An index of the efficiency of the judicial system (*EFF_JUD*).

g) An index of rule of law (*RULE_LAW*) which measures the extent to which survey participants including corporate executives and citizens have confidence in and abide by the rules of society. The index incorporates perceptions of the incidence of both violent and non-violent crimes, the effectiveness and predictability of the judiciary system, and the enforceability of contracts. It assesses the efficiency and integrity of the legal environment as it affects business, particularly foreign firms.

h) An index of the risk of expropriation (*RISK_EXP*), which measures the risk of confiscation of firms' wealth or forced nationalization by the state.

i) An index of the cost of entry into the country's market (*COST_ENTRY*), which measures the number of procedures or steps required to start a business and obtain legal status, time it takes to become operational, and total costs of becoming operational as a share of per capital GNP. This index reflects the power of the government in controlling private enterprise and the level of bureaucracy.

A common construct underlying these variables is how country-level institutions help protect private enterprises, both ex ante and ex post. Ex ante protections are captured by the existence of laws that protect physical, financial and intellectual properties; while ex post protections are captured by the enforcement of such laws. This construct is consistent with Ball et al. (2000) and Ball's (2002) argument that in addition to the existence of laws, enforcement itself is important. We label this factor *Business protection* and observe that it captures a broad concept of proprietary costs. For instance, under the broad concept of proprietary cost, if business protection is weak then disclosure of information could trigger adverse consequences such as expropriation by bureaucrats or exploitation by existing or potential competitors because they could mimic the disclosing firm's competitive strategies or products.

Theoretical models of voluntary disclosure consider proprietary information as information that will enable other parties to expropriate benefits from the disclosing firm and predict voluntary disclosure to be negatively related to proprietary costs. Intuitively, in a product market context, potential entrants may be attracted to (kept away from) the industry if a firm discloses good (bad) news, which in turn could exert a downward (upward) pressure on the discloser's

future margins (see Darrough and Stoughton, 1990).[5] Better protection of property rights can reduce proprietary costs because such protection helps mitigate potential expropriation by government, competitors, or employees, and thus should foster voluntary disclosure. Based on insights from theories of voluntary disclosure (Verrecchia, 1983; Dye, 1986), we predict Factor 1 (*Business protection*) to be positively associated with the likelihood of management forecasts.

It is worth noting that prior research relating proprietary costs and voluntary disclosures mainly uses various measures of market shares as a proxy for proprietary costs. Beyer et al. (2010) and Berger (2011) provide a review of the mixed evidence relating proprietary costs to voluntary disclosures. For example, while Bamber and Cheon (1998) find a negative relationship between industry concentration and management earnings forecasts, Verrecchia and Weber (2006) find a positive one. Ali et al. (2009) show how using different industry definitions to compute the market share or concentration ratios could affect the empirical results. The international setting allows us to examine the relationship between proprietary costs and voluntary disclosures by side-stepping the measurement issue of product market competition and looking at a more primitive construct of proprietary costs.[6]

2.1.2 Investor protection

The second principal factor, i.e., Factor 2 in Table 1, captures the common variation in 5 out of the 18 variables. Specifically, factor 2 comprises the following variables:

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[5] Although management forecasts reveal information that will eventually be disclosed in formal filings, early disclosure of such information can give competitors or other interested parties significant timing advantage. A number of studies (e.g., Bamber and Cheon, 1998; Rogers and Stocken, 2005; Wang, 2007) find that in the U.S., firm characteristics such as R&D expenditures and growth opportunities, which are used to proxy for proprietary information costs, are systematically related to properties of management forecasts.

[6] Institutional characteristics related to property rights protection are a primitive construct compared to measures of market shares because country-level institutional characteristics impact the entry/exit of firms and as such determine the degree of competitive intensity, i.e., market share measures.

a) An index of investor protection (*INV_PRO1*) which measures disclosure requirements on corporate governance such as ownership structure and related-party transactions;[7] the level of difficulty for investors to recover losses from directors, share distributors, and accountants due to misstatements in the prospectus; and the strength of mechanisms designed to protect minority shareholders' interests (La Porta, Lopez-de-Silanes, and Shleifer, 2006).

b) A measure of investor protection (*INV_PRO2*) from The World Bank that assesses the strength of minority shareholder protection against directors' and officers' misuse of corporate assets for personal gain and includes disclosure requirements for related-party transactions,[8] the liability for self-dealing by officers and directors, and shareholders' ability to sue officers and directors for misconduct.

c) An index of public enforcement of securities laws (*PUB_ENF*) which measures the enforcement authority of the country's stock exchange supervisor and includes the investigative and sanctioning powers of the supervisor.

d) An index labeled as private enforcement (*PRIV_ENF*) which measures the disclosure requirement and liability for misstatements (La Porta et al. 2006). As such, it contains a subset of information of *INV_PRO1*. We follow Bushman and Piotroski (2006) and include this index for completeness.

e) The origin of a country's legal environment, classified as code law or common law (*COMMON*). In general, countries with common law principles allow for precedents in courts to be deemed as law, and as such can more readily adapt to changing environments and social norms. As such, compared to code law, common law countries are more likely to minimize the gap between contracting needs and the letter of law; it follows that common law countries

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[7] Because this component is labeled as "disclosure", in sensitivity tests we remove it from the index and find our results not qualitatively changed.
[8] Removing this component does not change our conclusion.

are more likely to protect property rights of individuals including investors than code law

countries (Bushman et al. 2004).

Overall, the standards for disclosure of self-dealings and misstatements along with the efficacy

of enforcement provide a measure of legal liability exposure, i.e., expected legal liability cost.

Because, the common construct underlying these variables is how country-level institutions

foster mechanisms that protect investors' interest, we label this factor as *Investor protection*.

Evidence based on the U.S. firms shows that although higher expected legal liability can

prompt management to issue more bad news-related forecasts to lower the magnitude of

damages/settlement amounts (Skinner, 1997), the overall effect of higher expected legal liability

is to reduce the incidence of management forecasts (Rogers and Van Buskirk, 2009). Accordingly,

we predict that Factor 2 (*Investor Protection*) is negatively associated with the likelihood of

management forecasts.

To date there is little research on the relationship of legal liability exposure and voluntary

disclosure in international settings. In particular, we know little about whether a country's legal

institutions have an effect on its firms' inclination to issue management forecasts. We examine

this issue in a broad cross-section of countries.

2.1.3 Political Economy

The third principal factor, Factor 3 in Table 1, captures the common variation in 3 out of the

18 variables. Specifically, factor 3 comprises the following variables:

a) A measure of the general closeness of political institutions (*AUTOCRACY*).

b) State ownership (*STATE_ENT*), measured as the government enterprises and investment as

a percentage of GDP.

c) State ownership in the banking industry (*STATE_BANK*), which is the share of the assets of the top ten banks in a country owned by the government of that country.

Even though ownership of the state in the banking industry (*STATE_BANK*) does not load onto this factor, given the similarity of this variable to that of *STATE_ENT* we include it in this category.[9] Countries where governments have concentrated power tend to suppress the freedom of press, which in turn is likely to lead to lower corporate transparency (Bushman et al. 2004). More specifically, since bureaucrats in state-dominated countries are more likely to expropriate firms' assets, they are more likely to promote opaque disclosure and reporting systems to enable firms to hide such expropriations. In addition, firms in state-dominated countries have incentives to refrain from disclosing information to avoid expropriation which is also a form of proprietary costs. Moreover, investors in the state-dominated countries are less protected and have less power in influencing corporate disclosure policies (Chaney, Faccio, and Parsley, 2010). The underlying construct of these measures reflect the status of the country's political economy (Bushman et al., 2004). We therefore label this factor as *Political economy*. Overall, greater political involvement in the economy is likely to be associated with greater financial opaqueness, and thus we predict that *Political economy* is negatively associated with the incidence of management forecasts.

2.1.4 Mandatory disclosure

The fourth principal factor primarily loads on the variable measuring the quality of mandatory disclosure systems (*EXCH_DISC*). *EXCH_DISC* is Frost et al.'s (2006) overall score that captures the mandated disclosure rules by stock exchanges, covering listing/offering documents, annual reports as well as enforcement mechanisms and review of information prior to public

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[9] The highest loading of *STATE_BANK* is on Factor 2. However, this loading is relatively small compared to other components we identify for Factor 2. Moreover, the economic construct of *STATE_BANK* differs significantly from the construct of *Investor Protection*.

release. Frost et al. (2006) developed the measure on the basis of the 1998 Federation Internationale des Bourses de Valeurs (FIBV, renamed as World Federation of Exchanges in 2001) disclosure survey, stock exchange Web sites and press releases, supplemented by other public information sources.[10] Since *EXCH_DISC* measures the quality of mandated disclosures, we label this factor as *Mandatory disclosure*.

Mandatory reporting could be either a substitute for or a complement of voluntary disclosure. If a country has a well-developed mandatory reporting system which accommodates investors' need for information, investors are less likely to demand voluntary disclosure: mandatory and voluntary reporting are substitutes. However, using data of U.S. firms, Beyer et al., (2010) and Ball et al. (2011) find empirical evidence supporting the notion that mandatory and voluntary disclosures are complements, presumably because a more reliable and higher quality mandatory reporting system allows investors to verify management forecasts more effectively. Accordingly, we predict this factor to be positively associated with the likelihood of management forecasts to the extent that mandatory and voluntary disclosures are complements. Nonetheless, it is an empirical question whether the complementary relationship exists for country-level institutional characteristics.

Table 1 Panel B shows that the country variables within each factor group are highly correlated with each other, supporting the factor analysis results.

2.2 Ranking scores based on the factor grouping

While the factor analysis has the benefit of facilitating the identification of a few common constructs underlying numerous country-level variables, it requires that all country-level variables be non-missing. This requirement is met by 31 countries. We develop a rank scoring

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[10] As requested by Frost et al., we do not provide the detailed scores in the study. These scores are available from Frost et al. or the authors under the condition that they are not published to reveal the identity of the stock exchanges.

procedure based on the four factor groups identified above to help expand the number of countries in the sample.

For the rank scoring approach, we first require that the country have at least one non-missing country-level variable in each of the four (or three, when the quality of *mandatory disclosure* systems is excluded) factor groups. Then within each factor group, we rank all our sample countries by each country variable and normalize the rank scores to be between 0 and 1. Then for each factor group we take the average of the non-missing normalized rank scores as the value of that factor. Untabulated correlations show that the principal factors and the rank-based factors are highly correlated for the subsample of 31 countries when both measures are available. Specifically, the correlation (Pearson) coefficients between the principal factor and the rank score are 0.98, 0.96, 0.70, and 0.92 for *Business protection*, *Investor protection*, *Political economy*, and *Mandatory disclosure*, respectively.

By the ranking approach, we increase the number of countries to 78 when the mandatory disclosure quality is not considered, and 39 when it is. In effect, in the empirical analysis we consider three samples:

a) A sample of 31 countries for which all 18 variables are available, and thus both the principal factor measures and the rank measures are available. This sample includes 22 OECD countries, 3 non-OECD Latin American countries (Argentina, Brazil, and Peru), 5 non-OECD Asian countries (Hong Kong, Indonesia, Singapore, South Korea, and Thailand), and South Africa.

b) A sample of 39 countries including the above 31 countries and 8 additional countries comprising 5 OECD countries and 3 non-OECD countries (Malaysia, Philippines and Taiwan). For this sample, the rank measures for all four institutional-setting variables are

available.

c) A full sample of 78 countries reporting at least one management forecast, represented by all 32 OECD countries (with Japan (forecasts mandated) and Czech Republic (no forecast throughout the sample period) excluded) as well as 46 non-OECD countries: 25 from Asia, 6 from Latin America, 7 from Africa, and 1 from Europe. For analysis based on this sample, the rank measure for *Mandatory disclosure* is not available.

Compared to the full sample of 78 countries with OECD countries making up roughly 41%, the samples of 31 and 39 countries are represented by more OECD countries: 71% (i.e., 22 out of 31) and 70% (i.e., 27 out of 39), respectively.

Table 1, Panel C shows the mean ranks of *Business protection*, *Investor protection*, *Political economy*, and *Mandatory disclosure* for the U.S., the 30 additional countries in the 31-country sample, the 8 successively additional countries in the 39-country sample, and the successively 39 additional countries in the 78-country sample. The U.S. has a mean *Business protection* rank of 0.65, while the 30, 8 and 39 successively additional countries in the three samples have a mean rank of 0.59, 0.56 and 0.46, respectively. This evidence shows that as we move to samples consisting of more non-OECD countries, on average, *Business protection* becomes relatively weaker. *Investor protection* and *Mandatory disclosure* also exhibit a similar pattern, while *Political economy* exhibits the opposite pattern. As such, the full sample exhibits more variation in the country-level factors and hence is likely to have higher statistical power in the analysis.

3. Data, Sample, and Empirical Models

3.1 Data and sample

We obtain the data for management forecasts from CapitalIQ COMPUSTAT (CapitalIQ

hereafter), which provides the original text of management forecasts for firms across about 90 countries/regions starting from 2004.[11]   According to CapitalIQ, the raw text forecasts are extracted from various sources such as newspapers, filings, subscriptions and announcements of transactions. CapitalIQ translates all forecasts published in non-English language into English.[12] We start with countries with at least one management forecast which would indicate that the country is followed by CapitalIQ. We exclude countries/regions that lack most of the country-level variables. We also exclude Japan because management forecasts in Japan are de facto mandatory (Kato et al. 2009). We identify the domicile of the firm by its country of primary listing. Our final sample consists of 78 countries with at least one management forecast during our sample period, 2004-2009, representing 11,294 unique firms issuing a total of 70,255 individual management forecasts in 29,932 firm-years. Nearly all forecasts contain predictions about either sales or earnings, or both. Note that other than requiring at least one forecast to ensure the country is followed by CapitalIQ, we do not exclude countries with too few forecasts. Because one of our research objectives is to examine the relationship between country institutions and forecast incidences, lack of forecasts is itself informative for our research purpose.

In addition to the incidence of management forecasts, following prior work (Hirst et al. 2008), we also examine the properties of management forecasts. Forecast frequency (*FFREQ*) is the total number of forecasts issued by the firm in a given year. Forecast precision (*FPREC*)

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[11]According to our correspondence with CapitalIQ, which established international management forecast data in January 2002, the data coverage is not complete until after 2004. We verify the completeness of the coverage for the U.S. firms using First Call. We find that after 2004, the CapitalIQ coverage is slightly higher than that of First Call, and includes all of First Call firms. Baginski, Hassell, and Kimbrough (2002) document that about 2.4% Canadian firms (estimated through dividing 219 forecasts by 9,075 firm-years and firm-quarters, page 32) provided management forecasts in the period 1993-1996. In our sample period roughly 5.53% of Canadian firms issue management forecasts, which suggests that Canadian firms likely have significantly increased forecasts in recent years.

[12]   We compared the original text and the translated version for a random sample of forecasts in Chinese and found the translation accurate.

measures how precise or quantitatively specific the forecast is. A score of 1, 2, 3, or 4 is assigned

to the forecast if it is a qualitative estimate, an estimate with a minimum or maximum value (i.e.,

open-range forecasts), a closed-range estimate, or a point forecast, respectively. When there are

multiple forecasts in a given firm-year, we use the mean score of individual forecasts for that

firm-year. Forecast horizon (*FHORI*) is a categorical variable that takes the value of 1, 2, and 3 if

the forecast is a quarterly, semi-annual, or annual forecast, respectively. In constructing firm-year

observations, we take the average of horizon scores of individual forecasts made in the year.[13]

   Forecast attribution (*FATTR*) is an indicator variable that takes the value of 1 if management

provides explanations for the forecast and 0 otherwise. We manually code this variable by

reading through CapitalIQ's original text forecasts. Again, if there are multiple forecasts in a

given year ,we code it as 1 if at least one forecast contains explanations. We further classify

forecast attributions into external attributions and internal attributions depending on whether the

primary reason given by management is external to the firm.[14] We create an indicator variable

FATTR_EX that takes the value of 1 if management uses external reasons and 0 for internal

reasons. Some examples of external reasons include weather changes, fluctuations of exchange

rates, shocks to industry demand, change of the labor market, etc. Examples of internal reasons

include acquisitions, increase or decrease of departmental profit contribution and change of

operation models.

   Table 2 Panel A presents the distribution of management forecasts and their properties by

country. Finland, Denmark, Lithuania, Romania and Austria have the highest percentage of

firm-years with at least one management forecast (see column III). The percentage of unique

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[13] In robustness tests, we also use the minimum value when there are multiple forecasts in the year with the
assumption that forecasts with shorter horizons are preferred.
[14] We delete forecasts that cite both internal and external reasons with equal emphasis, which account for less than
10% of the total forecasts containing explanations.

firms that issued at least one management forecasts in our sample period (column VI) provides a

forecast distribution largely consistent with that in column III.

Table 2 Panel B shows the incidence of management forecasts and their properties for the

U.S., the 30 additional countries in the 31-country sample; the 8 successively additional

countries in the 39- country sample, and the 39 successively additional countries in the 78-

country sample. In terms of percentage of firm-years with forecasts within each country, the U.S.

has 27.55% compared to 14.87%, 10.66% and 6.94% for the 30, 8 and 39 additional countries in

the three subsamples. On average, the U.S. exhibits a higher forecast frequency and precision

and a shorter forecast horizon than other countries. This is likely because U.S. firms forecast

quarterly earnings more often than firms in other countries. In sensitivity tests, we conduct our

empirical analysis for the three samples after excluding the U.S. firms, and discuss the results if

they are different.[15]

3.2 Empirical models

To examine the relationship between the occurrence of management forecasts and

country-level institutional characteristics, we estimate the following regression models:

$FOCR = f$ (*country-level institutional characteristics*) +*control variables* +ε (1),

where *%FORECAST* is the percentage of firm-years with management forecasts in each country,

FOCR (forecast occurrence) is an indicator variable that takes the value of 1 if the firm issues at

least one management forecast in a given year and 0 otherwise.

We primarily follow Ajinkya, Bhojraj, and Sengupta (2005) and Karamanou and Vafeas

(2005) to control for the following factors (see the Appendix I for detailed definitions), subject to

data availability. All control variables are extracted from CapitalIQ, except that information on

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[15] Untabulated analysis shows that over the sample period, there is only a slight increase in the number of firms issuing forecasts in both the U.S. and other countries. The forecast properties are relatively stable across years. As such, it is not likely that the scope of data coverage drives the results.

analysts is from IBES, and measured in U.S. dollars using historical exchange rates. Specifically, we include firm size, as measured by the logarithm value of total assets (*LNASSETS*). Kasznik and Lev (1995) show that firm size is positively associated with the incidence of management forecasts, likely because larger firms face a greater demand to be more transparent. We include the number of analysts following the firm (*ANALYST*) and the firm's institutional ownership (*INSTITUTION*) because prior research shows that the presence of financial analysts and institutional investors provides incentives for firms to be more transparent (Lang and Lundholm, 1993, 1996; Karamanou and Vafeas, 2005, respectively). We include an indicator (*BIG4*) for the Big 4 auditors because firms employing Big 4 auditors likely have better quality of financial information than firms using smaller auditors (Lang and Lundholm, 1993), and hence they could be more forthright in voluntary disclosure.

Firms in High-Tech industries (*HITECH*) have higher operating risk and are more likely to be involved in litigations than traditional industries, and as such would have less incentive to issue forecasts. However, to the extent management forecasts improve transparency and lower cost of capital, High-Tech firms are more likely to provide forecasts because they normally grow fast and need external funds (Kasznik and Lev, 1995).

We include an indicator variable, *NEWS* which takes the value of one for earnings declines relative to the prior year because Skinner (1994) shows evidence consistent with managers' incentives to reduce legal liability exposure when they expect bad news. We also include an indicator *LOSS* for loss firms because Hayn (1995) shows that earnings are less correlated with stock returns for loss-making firms and managers would then have lower incentive to issue forecasts through which to influence stock prices.

To control for proprietary costs of disclosure, we use three conventional measures, including

the industry-level Herfindahl index (*HERF*) measuring the intensity of industry competition, the book-to-market ratio (*BM*) following Ajinkya et al. (2005), and the industry-level (median) R&D expenditure as a percentage of total assets (*RD*) using the U.S. data following Wang (2007) and Klapper, Laeven, and Rajan (2006). However, we note that the book-to-market ratio and R&D expenditure could also capture firms' growth opportunity set and hence the need for external capital, which would drive firms to be more transparent to lower cost of capital.

We use two measures to capture the information uncertainty and forecasting difficulty: earnings volatility (*EARNVOL*) and the number of business segments (*SEGMENT*). When a firm's operation and future performance have greater uncertainty, it will face greater pressure for issuing forward-looking information. On the other hand, greater operating uncertainty makes it more difficult for management to forecast accurately and hence results in a larger litigation exposure.

Bhattacharya et al. (2003) argue that accruals capture firms' aggressiveness in reporting earnings and hence serve as a measure of financial opacity. When earnings are more opaque, investors are likely to demand voluntary disclosure. We hence include country-, industry-, and year-adjusted accruals (*ACCRUAL*) in the model.

We include insider ownership (*INSIDER*) because Karamanou and Vafeas (2005) find that insider ownership is negatively associated with the incidence of management forecasts in the U.S. When firms are listed on more stock exchanges, they are subject to more disclosure requirements and thus are likely to have an incentive to be more transparent. We therefore include the number of stock exchanges the firm's stock is listed in the year (*STKEXCH*). Moreover, we include an indicator *OPTGRANT* that equals one in the year of option grants, and zero otherwise because

managers might be required or incentivized to provide forecasts in the year of option grants.[16]

Finally, we include a proxy for firms' external dependence on finance (*EXTFIN*) to control for firms' incentives to issue forecasts to improve transparency and reduce cost of capital (Frankel, McNichols, and Wilson, 1995). We follow Rajan and Zingales (1998) and Klapper et al. (2006) and define *EXTFIN* as the U.S. industry median of the ratio of capital expenditure minus cash flow from operations scaled by capital expenditure. In all regressions, we include industry and year fixed effects and cluster by country when calculating standard errors.

4. Empirical Results

4.1 Descriptive statistics of control variables

Table 3 Panel A presents univariate comparison of the control variables of model (1) between forecasting firms (*FOCR*=1) and non-forecasting firms (*FOCR*=0). We present the evidence for the 39-countries sample because data are not available for a number of variables in the full sample.[17] Columns I to IV include all 39 countries for the analysis. Compared to non-forecasting firms, forecasting firms are significantly (a) larger in size (*LNASSET*: 6.391 vs. 3.634), (b) followed by more analysts (*ANALYST*: 10.836 vs. 1.983), (c) owned more by institutions (*INSTITUTION*: 36.1% vs. 24.3%), (d) audited by high quality auditors (*BIG4*: 73.6% vs. 41.8%), (e) more likely to belong to high-tech industries (*HITECH*: 22.9% vs. 17.3%), (f) more likely to possess bad news measured by earnings change (*NEWS*: 0.450 vs. 0.518), and (g) less likely to report losses (*LOSS*: 0.247 vs. 0.398). The evidence is similar to that in studies using U.S. data.

For the three variables used by prior studies to proxy for proprietary costs of disclosure, we find that compared to non-forecasting firms, forecasting firms face lower competition (*HERF*:

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[16] Aboody and Kasznik (2000) suggest that managers accelerate bad news through voluntary disclosure to maximize the option value for executives.

[17] In the analysis covering 39 countries, only option grants (*OPTGRANT*) is missing for all firms in Argentina, Mexico, Philippines, Slovenia, and Thailand. We set *OPTGRANT* to zero for these countries. However, excluding these five countries does not change the tenor of our findings. Other variables are available for all 39 countries.

-0.231 vs. -0.223), have significantly lower book-to-market ratio (*BM*: 0.644 vs. 0.763), and have

greater R&D expenditures (*RD*: 0.042 vs. 0.038). Hence, while the univariate evidence on *HERF*

is consistent with the proprietary cost argument (Verrecchia and Weber, 2006), the univariate

evidence on *BM* and *RD* is more consistent with capturing the needs for external financing and

capital market competition than proprietary costs arguments.

Compared to non-forecasting firms, forecasting firms have more business segments

(*SEGMENT*: 3.044 vs. 2.009), suggesting management's incentives to reduce information

asymmetry. Meanwhile, forecasting firms' earnings are less volatile (*EARNVOL*: 0.462 vs. 0.914),

probably because these firms can make more accurate forecasts and suffer lower litigation risk.

We find that firms are more likely to issue management forecasts when (country-, year-, and

industry-adjusted) accruals are higher (*ACCRUAL*: 0.034 vs. -0.008), which indicates a

substitutive relationship between firm-level quality of mandatory disclosure and voluntary

disclosures. In addition, consistent with the notion that insider ownership weakens corporate

governance and lowers corporate transparency, we find that forecasting firms have lower insider

ownership than non-forecasting firms (*INSIDER*: 12.75% vs. 16.75%). Firms are also more

likely to issue forecasts when they are listed on more stock exchanges (*STKEXCH*: 1.773 vs.

1.196), possibly because they face greater pressure from investors. Management is more likely to

issue forecasts in the year when the firm grants options (*OPTGRANT*: 0.296 vs. 0.116). Finally,

forecasting firms have higher dependence on external finance for capital expenditures than

non-forecasting firms (*EXTFIN*: -2.276 vs. -2.335).

Because U.S. firms constitute a significant portion of the sample, to examine the sensitivity of

our results to sample composition, in columns V to VIII we exclude U.S. firms. The results are

similar except the difference on *EXTFIN* flip the direction of the sign and *ACCRUAL* becomes

insignificant.[18]

To sum up, in general, the firm-level and industry-level variables vary with the presence of management forecasts in ways as predicted by voluntary disclosure theories. Furthermore, these empirical regularities for non-U.S. firms are similar to those documented for U.S. firms and suggest that a substantial portion of management forecasts in our sample are voluntarily provided. If management forecasts in our sample are primarily driven by mandatory requirements, we would not observe systematic differences in the characteristics of disclosing and non-disclosing firms.

4.2 Forecast likelihood regressions

Table 3 Panel B exhibits results for the logistic regressions estimating whether forecast likelihood is associated with individual country-level institutional variables in their raw values, while controlling for other firm and industry level factors discussed above. We perform this analysis because many of the country-level variables are not available for all 78 countries. This analysis will provide a certain degree of confidence that the ranking procedure which ignores the missing variables does not by itself drive the results.

All individual country variables in the factor group *Business protection* (except *RISK_EXP* and *COST_ENTRY*) are significantly positively associated with the likelihood of *FOCR* = 1. Note that risk of expropriation (*RISK_EXP*) and cost of entry (*COST_ENTRY*) are inverse measures of business protection. As such, their negative coefficients are consistent with our prediction that *Business protection* is positively associated with the incidence of management forecasts. The results are similar whether we include U.S. firms in the analysis.

In the second factor group *Investor protection*, none of the five institutional variables is

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[18] Due to data availability, we follow Rajan and Zingales (1998) and use the data of U.S. firms to measure *EXTFIN* for firms in all other countries, the inconsistent results could be due to the potentially large measurement error.

significant. However, when we exclude U.S. firms from the sample, *INV_PRO1*, *INV_PRO2*, and *PRI_ENF* (which is a component of *INV_PRO1*) become significantly negative. This change of results is very likely caused by U.S. firms' relatively higher tendency to forecast (Table 2 column III (firm-years with forecasts): U.S. 27.55% vs. sample mean 16.25%) and U.S.' high rank of investor protection (Table 1 Panel C).Although U.S. indeed has a highly litigious environment, it also has various securities regulations enacted to encourage firms to provide forward-looking disclosures and improve transparency. Salient examples include that in 1973, the SEC allowed firms to include forward-looking information in their formal filings; in 1979, the SEC passed the safe harbor rule to shelter firms from frivolous litigations again forward-looking disclosure made in good faith; and in 1995, the U.S. congress passed the Private Securities Litigation Reform Act to further stem unwarranted law suits against management forecasts. As such, the extent to which investor protection captures litigation risk is tempered for the U.S.

All three variables in the third factor group *Political economy* are significantly negatively associated with the likelihood of management forecasts, which is consistent with our prediction. Finally, the single variable *EXCH_DISC* in the fourth factor group *Mandatory disclosure* is significantly positively associated with the likelihood of management forecasts, which is consistent with the prediction that the quality of mandatory disclosure has a complementary effect on voluntary disclosure.

4.3 Regressions on multiple country-level factors

Table 3 Panel C considers all four factors in the same regression. As discussed earlier, we conduct the analysis for three samples that successively include more non-OECD countries with more diverse institutional characteristics. The results are very similar to those obtained through regressions on individual institutional characteristics. Specifically, the likelihood of the

occurrence of management forecasts is significantly positively associated with *Business protection* and *Mandatory disclosure*, and negatively associated with *Political economy*. A significant association also exists between management forecast likelihood and *Investor protection* when U.S. observations are excluded. Overall, the above results show that country-level institutional characteristics related to proprietary costs and government intervention in the economy inhibit management forecasts, while the quality of mandatory disclosure systems promote them. There is also evidence outside the U.S. that legal liability of disclosure restrains management forecasts.

4.4 Forecast properties

Table 4 reports the results of firm-level regressions of various forecast properties on the four institutional factors. For brevity, we only report the results based on the principal factors, i.e., the sample of 31 countries. Results based on rank scores for the other two samples are similar. Because forecast frequency (*FFREQ*) can be related to how firms make forecasts, we include it as a control in the regressions of other forecast attributes. The main findings can be summarized as follows: First, firms from countries with greater *Business protection* issue more frequent forecasts, and these forecasts are more quantitative than qualitative.[19] This is consistent with better *Business protection* indicating lower proprietary disclosure costs.

Second, in countries with better *Investor protection*, firms' forecasts have shorter horizons and more likely to contain explanations with the explanations more likely pointing to reasons lying external to the firm. These firms are also more likely to make downward forecast revisions containing bad news as opposed to upward revisions containing good news. Hence, the evidence supports our reasoning that *Investor protection* captures important dimensions of litigation risk.

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[19] In untabulated analysis using only closed-range forecasts, we find similar results: *Business protection*, *Investor protection*, and *Mandatory disclosure* are significantly negatively associated with the width of the range, while *Political economy* is marginally positive (t = 1.53).

Third, firms in countries with greater government involvement in the economy issue forecasts with shorter horizons and the forecasts are more likely to contain explanations. Moreover, these firms are also more likely to publish downward forecast revisions to convey bad news.

Finally, further supporting the notion that mandatory and voluntary disclosures are complements, firms from countries with better quality of *Mandatory disclosure* systems are more likely to provide internal reasons for their forecasts and are more likely to issue downward forecast revisions.

If we exclude the U.S. from the analysis, the results are in general similar except the following differences: Firms from countries with higher *Investor protection* issue less frequent forecasts; forecasts by firms from higher *Political economy* countries contain more external reasons as explanations; and firms from higher *Mandatory disclosure* countries issue more frequent and more quantitative forecasts. Meanwhile, *Mandatory disclosure* is no longer significant for *FATTR_EX*. As such, the results provide stronger support for our predictions on how the four institutional factors affect voluntary transparency.

5. Analysis of Informativeness of Management Forecasts

In this section we examine whether management forecasts are informative to investors and whether the level of informativeness is related to countries' institutional characteristics. By this analysis we provide insights into whether management forecasts are merely "cheap talk" or they actually provide information to investors. Following Beaver (1968), Warner, Watts, and Wruck (1988), Landsman and Maydew (2002), and DeFond, Hung, and Trezevant (2007), we measure the informativeness of management forecasts as the absolute value of market-adjusted cumulative stock returns over the two-trading-day window (0, +1), i.e., *ABS(CAR)*, where day 0

is the day on which the management forecast is announced. By design this analysis includes only firms that issue management forecasts and the analysis is at the forecast level.

Table 5 Panel A exhibits the informativeness of management forecasts in each of the 78 countries containing a total of 70,255 forecasts. To test whether the informativeness is significantly different from zero, for each forecast we subtract from *ABS(CAR(0, +1))* the mean of two-day *ABS(CAR)*s in the trading-day window (-30, -1). Column II shows that among all countries with more than ten forecasts, the absolute value of the two-day price reaction is significantly greater than zero except for Peru, Slovakia, and Sri Lanka. Column V shows that after we exclude forecasts issued on the earnings announcement dates, the two-day price reaction remains significantly greater than zero in all countries with more than ten forecasts except for Bulgaria.

Next, we examine how the four institutional characteristics are related to the informativeness of management forecasts. Gigler's (1994) theoretical model predicts that the credibility of management forecasts is negatively related to proprietary costs. To the extent that better *Business protection* indicates lower proprietary costs and more credible disclosure is more informative, we expect *Business protection* to be positively associated with forecast informativeness. *Investor protection* measures the expected legal liability of disclosure for managers. When the expected legal liability is high, managers are not likely to provide forecasts unless the forecasts are reasonably accurate (see Table 4). Accordingly, we expect *Investor protection* to be positively associated with informativeness of management forecasts. Government intervention in the economy likely creates incentives for firms to remain informationally opaque (Bushman et al., 2004), and thus firms in countries with greater government intervention are likely to have less credible forecasts. As such, we expect *Political*

economy to be negatively associated with informativeness of management forecasts. Finally, to the extent that mandatory disclosure and voluntary disclosure are complements, management forecasts, which are largely voluntary in our sample, will be more credible in environments where mandatory disclosure is of higher quality, and hence we expect *Mandatory disclosure* to be positively associated with forecast informativeness.

Table 5 Panel B presents the univariate comparison of forecast informativeness between groups of countries classified by the four factors of institutional characteristics. For each factor group, we divide the sample countries into two groups at the median of the average (normalized) ranking scores of non-missing country variables. We find that forecasts made by firms in countries with high *Business protection* on average have an absolute two-day price reaction that is 1.56% higher than those by firms from countries with low *Business protection*. Similarly, the two-day absolute price reaction for the group with high *Investor protection* is 1.38% higher than that for the group with low *Investor protection*. The differences for *Political economy* and *Mandatory disclosure* are -1.13% and 2.23%, respectively. When we exclude forecasts released contemporaneously with earnings announcements, the difference of the price reaction is larger for all the four institutional factors. The results are similar when we exclude forecasts issued by the U.S. firms, with the only exception that the difference for *Political economy* is no longer significant when all forecasts are considered in the analysis. Overall, as predicted, the evidence indicates that better business protection, investor protection, and quality of mandatory disclosure help enhance the informativeness of management forecasts; and involvement of the government in the economy reduces the informativeness.

Table 6 examines the association between informativeness of management forecasts and the institutional factors in multiple regressions. For brevity we only report the results for the

sample of 31 countries where principal factors are available. The inferences are similar when we use the rank-based measures (39 countries and 85 countries). Kim and Verrecchia (1991) propose that the precision of information affects its informativeness, and Baginski, Hassell, and Kimbrough (2004) find that attributions in management forecasts affect their informativeness in the U.S. In addition, forecast horizon could affect forecast accuracy and hence forecast informativeness. Hence, we control for these forecast properties. We also control for various firm characteristics that likely capture management's incentives to issue forecasts.

Consistent with the results in Table 5 Panel B, Column I shows that *Business protection, Investor protection* and *Mandatory disclosure* are positively associated with informativeness of management forecasts, and *Political economy* is negatively associated. The results are similar if we exclude the U.S. firms (column II) or management forecasts issued contemporaneously with earnings announcements (column III).[20]

In Table 7 we investigate the directional price reaction for a subsample of management forecasts for which the firm can refer to a forecast issued earlier and label the new forecast as either a relative increase (*REVISEUP* =1) or a relative decrease (*REVISEUP* =0). The evidence in columns I to III shows that the main effect of *REVISEUP* is significantly positive, indicating that an upward forecast revision is associated with a significantly higher two-day abnormal return than a downward revision. The coefficients are significantly positive for the interaction terms of *REVISEUP* and *Business protection* and *Investor protection* and negative for *Political economy*. The interaction term with *Mandatory disclosure* is significantly positive in column III after we exclude forecasts made contemporaneously with earnings announcements. As such, the results based on signed price reactions are also consistent with those in the univariate analysis and those

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[20] Untabulated results show that exclusion of both forecasts by U.S. firms and forecasts issued contemporaneously with earnings announcements does not qualitatively change the results, though significantly reducing the sample size.

based on the absolute price reaction. Our results are similar after we control for forecast properties and their interaction effects with *REVISEUP* and various firm characteristics.

To get a more accurate measure of the forecast surprise, we hand-collect detailed forecast information for a subsample of forecasts (1,861 forecasts outside the U.S.) with *REVISEUP* equaling either 1 or 0. We define a new forecast surprise variable *REVISE%* that equals [(current forecast - previous forecast)*100] / |previous forecast|. Regression results in columns IV to VI are qualitatively similar to those based on the categorical variable *REVISEUP*, with the exception that the interaction term of *REVISE%*Mandatory disclosure* is no longer significant.

To summarize, the above results show that forecast informativeness (signed and unsigned) are systematically associated with country-level institutional characteristics. Specifically, business protection, litigation risk, and quality of mandatory disclosures appear to enhance the market reaction to management forecasts, while government intervention in the economy seems to diminish it. The evidence here demonstrates the importance of institutional settings for the credibility/reliability of voluntary disclosures.

6. Additional Tests

6.1 Voluntary vs. mandatory forecasts

It is important to note that our main objective is to examine the relationship between management forecasts and country-level institutional characteristics. To the extent that mandatory regulations on management forecasts, if any, are indicative of a country's institutional characteristics, we do not need to distinguish between mandatory and voluntary forecasts. Nonetheless, to specifically provide insights into voluntary disclosure in the international setting, we contacted 34 major stock exchanges that are in our sample to find out their requirements. Among the 14 exchanges that replied, none suggested that management forecasts are mandatory

in their country. However, many stock exchanges require their listed firms to disclose "material" information to investors in a timely fashion. Such a requirement would make some of the forecasts mandatory. To exclude these potentially mandatory forecasts, we consider a subsample of firms where the change in year-to-year actual annual earnings is less than 100% (or 50% alternatively) under the assumption that larger earnings changes are more likely to indicate material information. In addition, we also exclude all forecasts in IPO and SEO years, because some stock exchanges require firms to provide forecasts in their prospectuses. For all these variations of the sample, our main results remain similar to those reported.

6.2 Robustness checks

 We perform a number of additional robustness checks.

a) Exclude Canadian firms: In all our above analyses, we exclude U.S. firms, partly because U.S. has significantly more observations than other countries and it may potentially impose undue influence on the results. To further ease this concern, we also exclude Canada, the second largest country in our analysis in terms of the number of observations. This change does not qualitatively affect our results.

b) Exclude cross-listed firms: Firms cross-listed in overseas stock markets may be subject to additional pressure from investors for disclosure. However, the four country-level institutional factors and their associated economic incentives are measured in the home country based on primary listings. As such, forecasts issued by cross-listed firms would create noise and thus bias against us finding systematic association between management forecasts and institutional factors. Although it is an empirical question as to what extent cross-listing can influence firms' forecasts, we exclude cross-listed firms from the analysis and find that our main results remain similar to those reported.

c) <u>Exclude pre-announcements</u>: Forecasts made after the end of the fiscal period, but before the corresponding actual earnings announcement date may not have the same attributes as those of forecasts made earlier. As such, we exclude all forecasts made after the end of the target fiscal period, i.e., pre-announcements, and find similar results.

d) <u>Trading volume</u>: Following DeFond et al. (2007), we use abnormal trading volume (*ABNVOL*) as an alternative measure of informativeness of management forecasts and find results (untabulated) similar to those reported using unsigned stock price reactions.

e) <u>Exclusion of forecasts made in the year of IPO or SEO or option grants</u>: Certain countries may require firms to provide earnings forecasts if they conduct IPO or SEO or issue options. While we do not have detailed information on which specific countries actually have these requirements, we exclude forecasts made in those years for robustness check. Our results remain similar.

f) <u>Empirical methods</u>: For the reported results, we correct the standard errors by clustering by country and include year and industry fixed-effects. Our results remain similar, and often more statistically significant, if we cluster both by firm and by year instead of by country. Further, for firm-level regressions, our results remain similar if we employ weighted OLS or weighted logistic regressions using the number of observations in the country as the weight.

7. Summary and Conclusion

In this study we examine how a country's institutional characteristics are related to its firms' provision of management forecasts and whether these institutional characteristics are further related to how investors react to these forecasts. On the basis of a factor analysis, we classify 18 country-level institutional variables identified in prior research as related to general corporate transparency into four broad categories: business protection, investor protection, political

economy, and mandatory disclosure. On the basis of the individual country variables in each category, we reason that these four categories of variables relate to proprietary costs of disclosure, litigation risk of disclosure, power of the government in the economy, and quality of mandatory disclosure systems, respectively. We find that the incidence of management forecasts is (a) positively associated with business protection, (b) negatively associated with investor protection, (c) negatively associated with the level of involvement of the government in the economy, and (d) positively associated with the quality of the mandatory disclosure systems. We also find that management forecasts are informative to investors in nearly all countries; and the informativeness of management forecasts are systematically related to the institutional characteristics. Specifically, while business protection, investor protection, and mandatory disclosure appear to enhance the informativeness, involvement of the government in the economy seems to reduce it.

This study is the first to document that management forecasts are a global phenomenon, and provides insights into the relationship between institutional characteristics and voluntary disclosure. We conduct a battery of subsample analysis and sensitivity tests to provide some degree of confidence that our inferences hold for management forecasts provided on a voluntary basis. However, to the extent that some of the management forecasts are implicitly mandated, caution should be exercised in interpreting the evidence in terms of voluntary disclosures. A second caveat relates to the interpretation of the factors of country variables. Although we attempt to interpret the institutional factors as capturing the most obvious common constructs in disclosure theories, admittedly there could be alternative mechanisms through which these factors affect management forecasts. Our evidence may bear different implications depending on how relatively important these alternative mechanisms are. We conduct a series of sensitivity

tests to ensure that the empirical regularity that we document is robust. As such, we believe that the empirical regularities uncovered here per se should be interesting to academics studying corporate disclosures. The empirical regularity can potentially help guide analytical models of voluntary disclosure to consider incorporating institutional characteristics and provide further empirically testable insights. Furthermore, future research can examine the relative importance of mandatory and voluntary disclosures and how institutional characteristics affect firms' incentives to delay the disclosure of bad news.

References

Aboody, D., R. Kasznik. 2000. CEO stock option awards and voluntary corporate disclosure. *Journal of Accounting and Economics* 29: 73-100.

Ajinkya, B., S. Bhojraj, P. Sengupta. 2005. The association between outside directors, institutional investors and the properties of management earnings forecasts. *Journal of Accounting Research* 43(3): 343-375.

Alford, A., J. Jones, R. Leftwich, M. Zmijewski. 1993. Relative informativeness of accounting disclosures in different countries. *Journal of Accounting Research* (Supplement): 183-223.

Ali, A., L. Hwang. 2000. Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research* 38: 1-21.

Ali, A., S. Klasa, E., Yeung. 2009. The limitations of industry concentration measures constructed with Compustat data: implications for finance research. *Review of Financial Studies* 22: 3839-72.

Baginski, S. P., J. M. Hassell. 1997. Determinants of management forecast precision. *The Accounting Review* 72(2): 303-312.

Baginski, S. P., J. M. Hassell, M. D. Kimbrough. 2002. The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in U.S. and Canadian markets. *The Accounting Review* 77(1): 25-50.

Baginski, S. P., J. M. Hassell, M. D. Kimbrough. 2004. Why do managers explain their earnings forecasts? *Journal of Accounting Research* 42 (1): 1-29.

Ball, R. 2001. Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. Brookings-Wharton Papers no Financial Services, 127-169. Brookings Institution Press.

Ball, R., S. Jayaraman, L. Shivakumar. 2011. Audited financial reporting and voluntary disclosure as complements: A test of the confirmation hypothesis. Working paper. Chicago University.

Ball, R., S. P. Kothari, A. Robin. 2000. The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics* 29: 1-51.

Ball, R., A. Robin, J. Wu. 2003. Incentives versus standards: Properties of accounting income in four east Asia countries. *Journal of Accounting and Economics* 36: 235-270.

Ball, R., L. Shivakumar. 2008. How much new information is there in earnings? *Journal of Accounting Research* 46 (5): 975-1016.

Bamber, L. S., Y. S. Cheon. 1998. Discretionary management earnings forecast disclosures: Antecedents and outcomes associated with forecast venue and forecast specificity choices. *Journal of Accounting Research* 36 (2): 167-190.

Bamber, L. S., K. H. Hui, and P. Yeung. 2010. Managers' EPS forecasts: Nickeling and diming the market? *The Accounting Review* 85(1): 63-95.

Beaver, W. 1968. The information content of annual earnings announcements. *Journal of Accounting Research* 6: 67-92.

Berger, P. G. 2011. Challenges and opportunities in disclosure research - A discussion of 'The financial reporting environment: Review of the recent literature.' *Journal of Accounting and Economics* 51(1-2), February 2011, 204-218.

Beyer, A., D. A. Cohen, T. Z. Lys, B. R. Walther. 2010. The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics* 50: 296-343.

Bhattacharya U., h. Daouk, M. Welker. 2003. The world price of earnings opacity. *The Accounting Review* (2003): 641-78.

Bushman, R. M., J. D. Piotroski. 2006. Financial reporting incentives for conservative accounting: The influence of legal and political institutions. *Journal of Accounting and Economics* 42: 107-148.

Bushman, R. M., J. D. Piotroski, A. J. Smith. 2004. What determines corporate transparency? *Journal of Accounting Research* 42(2): 207-252.

Chaney, P.K., M. Faccio, and D. Parsley. 2010. The quality of accounting information in politically connected firms. *Journal of Accounting and Economics* 51: 58-76.

Darrough, M., N. Stoughton. 1990. Financial disclosure policy in an entry game. *Journal of Accounting and Economics*12: 219-43.

DeFond, M., M. Hung, R. Trezevant. 2007. Investor protection and the information content of annual earnings announcements: International evidence. Journal of Accounting and Economics 43: 37-67.

Dontoh, A. 1989. Voluntary disclosure. *Journal of Accounting, Auditing & Finance* 4 (4): 480-511.

Dye, R. A. 1985. Disclosure of nonproprietary information. Journal of Accounting Research 23(1): 123-145.

Dye, R. A. 1986. Proprietary and nonproprietary disclosures. *Journal of Business* 59(2): 331-366.

Frankel, R., M. McNichols, G. P. Wilson. 1995. Discretionary disclosure and external financing. *The Accounting Review* 70(1): 135-150.

Frost, C. A., E. A. Gordon, A. F. Hayes. 2006. Stock exchange disclosure and market development: An analysis of 50 international exchanges. *Journal of Accounting Research* 44(3): 437-483.

Garrett, T. A. 2003. Aggregated versus disaggregated data in regression analysis: implication for inference. *Economic Letters* 81: 61- 65.

Gigler, F. 1994. Self-enforcing voluntary disclosures. *Journal of Accounting Research* 32: 224-240.

Hayn, C. 1995. The information-content of losses. *Journal of Accounting and Economics* 20: 125-53.

Hirst, D. E., L. Koonce, S. Venkataraman. 2008. Management earnings forecasts: A review and framework. *Accounting Horizons* 22 (3): 315-338.

Jaggi, B., P. Low. 2000. Impact of culture, market forces, and legal system on financial disclosures. *International Journal of Accounting* 35: 495-519.

Johnson, M. F., R. Kasznik, K. K. Nelson. 2001. The impact of securities litigation reform on the disclosure of forward-looking information by high technology firms. *Journal of Accounting Research* 39 (2): 297-327.

Karamanou I., N. Vafeas. 2005. The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research* 43(3): 453-485.

Kasznik, R., B. Lev. 1995. To warn or not to war: Management disclosures in the face of earnings surprise. *The Accounting Review* 70(1): 113-134.

Kato, K., D. J. Skinner, M. Kunimura. 2009. Management forecasts in Japan: An empirical study of forecasts that are effectively mandated. *The Accounting Review* 84(5): 1575-1606.

Kim, O., R. Verrecchia. 1991. Trading volume and price reactions to public announcements. *Journal of Accounting Research* 29, 302-321.

Klapper, L., L. Laeven, R. Rajan. 2006. Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics* 82: 591-629.

Land, J., M. Lang. 2002. Empirical evidence on the evolution of international earnings. *The Accounting Review* 77 (Supplement 2002): 115-133.

Lang, M., R. Lundholm. 1993. Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research* 31: 246-271.

Landsman, W., E. Maydew. 2002. Has the information content of quarterly earnings announcements declined in the past three decades? *Journal of Accounting Research* 40: 797-808.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer. 2006. What works in securities laws? *Journal of Finance* 61(1): 1-32.

Leuz, C., D. Nanda, P. Wysocki. 2003. Earnings management and institutional factors: An international comparison. *Journal of Financial Economics* 69: 505-527.

Rajan, R. G., L. Zingales. 1998. Financial dependence and growth. *American Economic Review* 88(3): 559-586.

Rogers, J. L., P. C. Stocken. 2005. Credibility of management forecasts. *The Accounting Review* 80(4): 1233-1260.

Rogers, J. L., A. Van Buskirk. 2009. Shareholder litigation and changes in disclosure behavior. *Journal of Accounting and Economics* 47: 136-156.

Skinner, D. 1994. Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32: 38-60.

Skinner, D. 1997. Earnings disclosures and stockholder lawsuits. *Journal of Accounting and Economics* 23: 249-282.

Verrecchia, R. E. 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5: 179-194.

Verrecchia, R. E., J. Weber. 2006. Redacted disclosure. *Journal of Accounting Research* 44, 791-814.

Wang, I. Y. 2007. Private earnings guidance and its implications for disclosure regulation. *The Accounting Review* 82 (5): 1299-1332.

Warner, J., R. Watts, K. Wruck. 1988. Stock prices and top management changes. *Journal of Financial Economics* 20: 461-492.

Appendix I: Variable definition

Management Forecasts Variables (firm-level)	
Variable	*Definition*
FOCR	An indicator variable equaling 1 if the firm issues a forecast in the given year, and otherwise 0.
FFREQ	The total number of management forecasts issued by the firm in the given year.
FHORI	A categorical variable that takes the value of 1, 2, and 3 if the forecast is a quarterly, semi-annual, or annual forecast, respectively. For firm-year observations, FHORI is measured as the average forecast horizon score of all forecasts issued in the given year.
FPREC	A score measuring how quantitatively precise the forecast is. It equals 1, 2, 3, or 4 if the forecast is a qualitative, min or max, range, or point forecast, respectively. For firm-year observations, FPREC is measured as the mean precision score of all forecasts issued in the given year.
FATTR	An indicator equaling 1 if the management forecast is accompanied by either an internal or an external attribution (explanation), and 0 otherwise.
FATTR_EX	An indicator variable equaling 1 if the forecasted financial performance is attributed to an factor/cause external to the firm, and 0 otherwise.
CAR	Two-day market-adjusted cumulative abnormal return in the (0, +1) window with day 0 as the management forecast date.
ABS(CAR)	The absolute value of CAR.
ABNVOL	Average trading volume during the firm's earnings forecast announcement window [0, 1], scaled by the average trading volume over the 100-day trading window [-120, 21].
REVISEUP	An indicator variable that equals 1 if the current forecast is an increase of the estimated performance relative to that in the previous forecast, and 0 for a decrease. It is measured at the firm-year level in forecast properties analysis or the forecast level in forecast informativeness analysis. At the firm-year level, if there are multiple forecast revisions of the same direction during the year, we combine them and treat them as one revision. We delete firm-years with multiple forecast revisions that are not in the same direction.
REVISE%	[(current forecast - previous forecast)*100] / |previous forecast|.

Institutional Variables (country-level)	
Business protection variables	
PROT_PPT	An index of property rights protection which is the weighted average score obtained from the 2004 to 2008 opinion surveys of World Economic Forum on how executives rate the protection of property rights, including financial assets in each country. The score is from 1 to 10 with a high score indicates very strong protection of property rights. Source: Economic Freedom of the World Annual Report and Data of 2004-2008.
PROT_IPPT	An index of the protection of intellectual property rights. It is the weighted average score obtained from the 2008 and 2009 opinion surveys of World Economic Forum on how executives rate the protection of intellectual property, including anti-counterfeiting measures, in each country. The score is from 1 to 7 with a high score indicates very strong protection of intellectual property rights. Source: The Global Competitiveness Report 2009-2010.
RULE_LAW	Rule of law index, measuring the extent to which agents have confidence in and abide by the rules of society as in year 2000. These include perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary system, and the enforceability of contracts. A higher value of the index indicates better rule of law. Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
JUD_IND	An index of judicial independence. The index is scaled from 0 to 10 with the highest (lowest) score representing that the judiciary system in a country is entirely independent from (heavily influenced by) political influences of members of government, citizens, or firms. Source: The Global Competitiveness Report 2009-2010.
IMP_CRT	A measure of judicial impartiality which is the weighted average score obtained from the 2004 to 2008 opinion surveys of World Economic Forum on whether a trusted legal framework exists

	for private businesses to challenge the legality of government actions or regulation. Scaled from 0 to 10, with lower (higher) scores representing a judicial system inefficient and subject to manipulation (efficient and follows a clear, neutral process). Source: Economic Freedom of the World Annual Report and Data of 2004-2008.
EFF_JUD	Index of efficiency of the judiciary system which is the assessment of the efficiency and integrity of the legal environment as it affects business, particularly foreign firms, provided by International Country Risk (ICR). It is scaled from 0 to 10, with lower scores representing lower efficiency levels. Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
PATENT	An index measuring the strength of patent protection. The index is scored from 0 to 5, where higher values indicate stronger levels of patent protection. Source: Economic Freedom of the World: 2002 Annual Report.
RISK_EXP	Risk of expropriation, measuring the risk of outright confiscation of firms' wealth or forced nationalization by the state. The original score is scaled from 0 to 10, with lower scores for higher risks. We convert the score by subtracting the original score from 10, so higher scores now represent higher risks of expropriation. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
COST_ENTRY	The principal factor of three measures of the cost of entry into the country's market including (1) number of procedures or steps with which a start-up has to comply to obtain legal status, (2) time it takes to become operational, and (3) total cost of becoming operational as a share of per capital GNP. A higher value indicates a higher cost of entry to a country. Source: Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002).
Investor protection variables	
INV_PRO1	An investor protection index, which is the principal component of (1) the index of disclosure requirement on corporate governance, (2) the index of liability standard for misstatement in share issuance, and (3) the anti-director rights index. Scaled from 0 (lowest investor protection) to 1 (highest investor protection). Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
INV_PRO2	Strength of investor protection index on a 0 (worst protection) - 10 (best protection) scale. It is the average of the extent of disclosure for related-party transactions, extent of director liability for self-dealings, and ease of shareholder suits indices. Source: The World Bank, *Doing Business*, 2009.
PRIV_ENF	An index of private enforcement of securities laws and it is ranked between 0 (weak private enforcement) to 1 (strong private enforcement). This index is measured as the arithmetic mean of two underlying indices including (1) the index of disclosure requirement on corporate governance, and (2) the index of liability standard for misstatement in share issuance. Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
COMMON	An indicator variable that takes the value of one if the country has common law legal origin, and zero otherwise. Source: La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).
PUB_ENF	An index of public enforcement of securities laws and it is ranked between 0 (weak public enforcement) to 1 (strong public enforcement). This index is measured as the arithmetic mean of four underlying indices including (1) a Supervisor Characteristics index, (2) a Rule-making power index, (3) an Investigative Powers index, (3) an Orders index, and (4) a Criminal index. Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
Political economy variables	
AUTOCRACY	A measure of the general closeness of political institutions ranging from 0 (open) to 10 (closed). A higher value indicates a more autocratic state. It is measured as the average over years 2004-2009. Source: Polity IV Project of Center for Systemic Peace.
STATE_ENT	State ownership, measured as the average of government enterprises and investment as a percentage of GDP during 2004-2008. The original ratings range from 0 (high state ownership) to 10 (low state ownership). We convert the rating by subtracting the original score from 10, so higher ratings now represent higher state ownership. Source: Economic Freedom of the World Annual Report and Data of 2004-2008.
STATE_BANK	State ownership of the bank, measured by the share of the assets of the top 10 banks in a

country owned by the government of that country. Source: La Porta, Lopez-de-Silanes, and Shleifer (2002).

Mandatory disclosure variable	
EXCH_DISC	A measure of overall disclosure level mandated by a country' stock exchanges. If a country has more than one stock exchange, we use the mean. A higher value of the index indicates higher quality of the disclosure system. Source: Frost, Gordon, and Hayes (2006).
Business protection	The first principal factor of the 18 country variables considered. It is mainly correlated with (1) *PROT_PPT,* (2) *PROT_IPPT,* (3) *RULE_LAW,* (4) *JUD_IND,* (5) *IMP_CRT,* (6) *EFF_JUD,* (7) *PATENT,* (8) *RISK_EXP*, and (9) *COST_ENTRY.*
Investor protection	The second principal factor of the 18 country variables considered. It is mainly correlated with (1) *INV_PRO1,* (2) *INV_PRO2*, (3) *PRIV_ENF*, (4) *COMMON*, and (5) *PUB_ENF.*
Political economy	The third principal factor of the total 18 country variables considered. It is mainly correlated with (1) *AUTOCRACY*，and (2) *STATE_OWN.*
Mandatory disclosure	The fourth principal factor of the total 18 country variables considered. It is mainly correlated with *EXCH_DISC.*
Control Variables (firm- or industry-level)	
LNASSET	The natural logarithm of total assets.
ANALYST	The number of analysts following the firm from IBES. We set it to zero when it is missing.
INSTITUTION	The percentage of the firm's common equity held by institutional investors.
BIG4	An indicator variable equaling 1 if the auditor of the firm is a Big 4 auditor, and zero otherwise.
HITECH	An indicator variable equaling 1 if the firm is a firm in high-tech industries (i.e., with an SIC code of 2833-2836, 8731-8734, 7371-7379, 3570-3577, or 3600-3674), and 0 otherwise.
NEWS	An indicator variable equaling 1 if the current-year EPS is greater than or equal to the EPS in the previous year, and zero otherwise.
LOSS	An indicator variable equaling 1 if the firm reported losses in the current period, and 0 otherwise.
HERF	Equals (-1)* Herfindahl index, with the Herfindahl index calculated as the sum of the squares of fractional market shares of firms within each two-digit SIC industry of each country year. A larger value indicates lower industry concentration and hence higher industry competition.
BM	The ratio of book value of equity to market value of equity at the beginning of the fiscal year.
RD	The firm's R&D intensity, measured as the industry median of the ratio of R&D expense to total sales. The numerator and denominator are summed over all years for each firm before dividing. We compute this measure for each two-digits SIC industry using U.S. data for the period of 2004-2009 following Klapper, Laeven, and Rajan (2006).
EARNVOL	Standard deviation of annual EPS over the sample period, divided by the average total asset during the sample period.
SEGMENT	The total number of business segments reported by the firm.
ACCRUAL	A measure of firm-level aggressiveness in financial reporting, 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 as $ACCRUAL = (\Delta CA - \Delta CL - \Delta CASH + \Delta STD - DEP + \Delta TP)/\text{lag}(TA)$, where ΔCA is the change in total current assets; ΔCL is the change in total current liabilities; $\Delta CASH$ is the change in cash; ΔSTD is the change in the current portion of long-term debt included in total current liabilities; DEP is depreciation and amortization expense; ΔTP is the change in income taxes payable; and $\text{lag}(TA)$ is total assets at the end of the previous year.
INSIDER	The percentage of common equity held by insiders of each firm.
STKEXCH	The total number of stock exchanges on which the firm was listed in the year.
OPTGRANT	An indicator variable equaling 1 if the firm issued stock options to its directors in the given year, and 0 otherwise.
EXTFIN	A measure of the external dependence of finance for firms in each two-digit SIC industry,

measured as the industry-level median of the ratio of capital expenditures minus cash flow from operations, scaled by capital expenditures, as in the U.S. (see, Rajan and Zingales, 1998; Klapper, Laeven, and Rajan, 2006).

Appendix II: Country-level institutional characteristics

*: indicates the country is among those 31 countries with all country variables available to calculate principal factors. ♀: indicates that the country is among the 39 with Mandatory disclosure non-missing.

Country	I BUSINESS PROTECTION									II INVESTOR PROTECTION					III POLITICAL ECONOMY		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	PROT_ PPT	PROT_ IPPT	RULE_ LAW	JUD_ IND	IMP_ CRT	EFF_ JUD	PAT-ENT	RISK_ EXP	COST_ ENTRY	INV_ PRO1	INV_ PRO2	PRIV_ ENF	COM-MON	PUB_ ENF	AUTO-CRACY	STATE_ OWN	STATE_ BANK
1 Argentina*♀	3.37	2.50	0.18	2.06	2.36	6.00	3.33	4.09	0.62	0.48	4.70	0.36	0	0.58	0.00	0.80	0.61
2 Australia*♀	8.64	5.80	2.00	8.88	7.75	10.00	4.19	0.73	-2.55	0.78	5.70	0.71	1	0.90	0.00	0.00	0.12
3 Austria*♀	8.84	6.10	2.10	8.31	8.05	9.50	4.71	0.31	-0.38	0.10	4.00	0.18	0	0.17	0.00	0.00	0.50
4 Bahrain	6.84	5.10	.	5.28	4.59	.	.	.	.	.	5.70	.	1	.	7.00	6.00	.
5 Bangladesh	3.91	2.40	.	3.13	2.94	.	2.66	.	.	.	6.70	.	1	.	2.20	6.00	.
6 Belgium*♀	7.93	5.30	1.64	7.27	5.90	9.50	4.05	0.37	-0.75	0.07	7.00	0.43	0	0.15	0.00	0.00	0.28
7 Brazil*♀	5.41	3.00	-0.15	3.79	3.43	5.75	3.05	2.38	-0.54	0.44	5.30	0.29	0	0.58	0.00	2.00	0.32
8 Bulgaria	4.17	2.60	.	2.87	2.78	.	3.24	.	1.21	.	6.00	.	0	.	0.00	1.40	.
9 Canada*♀	8.37	5.50	2.01	8.26	7.28	9.25	3.90	0.33	-2.56	0.96	8.30	0.96	1	0.80	0.00	0.00	0.00
10 Chile*♀	6.86	3.60	1.33	5.49	6.05	7.25	3.41	2.50	-1.28	0.61	6.30	0.46	0	0.60	0.00	0.00	0.20
11 China	5.58	4.00	.	4.30	4.50	.	2.48	.	-0.52	.	5.00	.	0	.	7.00	10.00	.
12 Colombia	5.34	3.00	-0.64	4.51	4.38	7.25	3.24	3.05	1.36	0.35	8.30	0.26	0	0.58	0.00	5.60	0.54
13 Cyprus	7.15	4.70	.	7.20	6.55	.	.	.	.	.	5.00	.	1	.	0.00	0.40	.
14 Czech Republic	5.78	4.00	.	5.15	4.04	.	3.52	.	0.34	.	5.00	.	0	.	0.00	2.40	.
15 Denmark*♀	9.08	6.00	1.97	8.99	8.75	10.00	4.19	0.33	-0.16	0.36	6.30	0.57	0	0.37	0.00	0.00	0.09
16 Egypt	5.75	3.70	0.23	5.17	4.97	6.50	2.46	3.70	1.84	0.20	5.30	0.36	0	0.30	4.30	8.00	0.89
17 Estonia	7.30	4.60	.	7.03	6.15	.	.	.	.	.	5.70	.	0	.	0.00	0.00	.
18 Finland♀	8.87	6.10	2.13	8.85	8.11	10.00	.	0.33	0.71	0.47	5.70	0.58	0	0.32	0.00	0.40	0.31
19 France*♀	8.26	5.80	1.49	6.82	6.91	8.00	4.05	0.35	0.97	0.47	5.30	0.49	0	0.77	0.00	1.60	0.17
20 Germany*♀	9.16	5.70	1.91	9.08	8.25	9.00	4.52	0.10	0.93	0.00	5.00	0.21	0	0.22	0.00	0.00	0.36
21 Greece*♀	6.55	4.10	0.75	5.23	4.63	7.00	3.19	2.88	-2.01	0.32	3.30	0.41	0	0.32	0.00	0.00	0.78
22 Hong Kong*♀	8.37	5.30	1.66	8.03	8.11	10.00	2.90	1.71	1.26	0.85	9.00	0.79	1	0.87	0.00	0.00	0.00
23 Hungary	6.62	3.90	.	5.48	4.38	.	3.71	.	0.80	.	4.30	.	0	.	0.00	1.40	.
24 Iceland	8.70	5.50	.	8.24	7.93	.	.	.	.	.	5.30	.	0	.	.	0.80	.
25 India	6.59	3.60	0.23	7.13	6.19	8.00	2.18	2.25	-1.73	0.77	6.00	0.79	1	0.67	0.00	6.00	0.85
26 Indonesia*♀	4.30	3.50	-0.90	3.79	4.17	2.50	2.27	2.84	0.25	0.51	6.00	0.58	0	0.62	0.00	3.00	0.43
27 Ireland*♀	8.60	5.60	1.86	8.59	6.99	8.75	4.00	0.33	-0.15	0.48	8.30	0.55	1	0.37	0.00	1.40	0.04

Appendix II (*cont'd*)

Country	1 PROT_PPT	2 PROT_IPPT	3 RULE_LAW	4 JUD_IND	5 IMP_CRT	6 EFF_JUD	7 PAT-ENT	8 RISK_EXP	9 COST_ENTRY	10 INV_PRO1	11 INV_PRO2	12 PRIV_ENF	13 COM-MON	14 PUB_ENF	15 AUTO-CRACY	16 STATE_OWN	17 STATE_BANK
28 Israel*♀	7.04	4.00	1.08	8.26	6.24	10.00	4.05	1.75	2.30	0.59	8.30	0.66	1	0.63	0.00	6.00	0.65
29 Italy*♀	6.20	3.90	0.94	4.20	3.23	6.75	4.33	0.65	0.93	0.20	5.70	0.44	0	0.48	0.00	0.00	0.36
30 Jamaica	6.07	3.50	.	5.57	4.29	.	.	.	-1.99	.	5.30	.	1	.	0.00	0.00	.
31 Jordan	7.21	4.70	0.57	6.47	6.10	8.66	2.99	3.93	1.35	0.24	4.30	0.44	0	0.60	4.50	4.60	0.26
32 Kazakhstan	4.79	3.20	.	3.23	4.16	.	.	.	-1.25	.	6.00	.	0	.	6.00	6.00	.
33 Kenya	4.64	3.10	-1.02	3.21	3.32	5.75	3.05	4.02	1.27	0.53	5.00	0.47	1	0.70	0.00	3.40	0.30
34 Kuwait	6.50	4.00	.	6.76	6.29	.	.	.	.	.	6.30	.	0	.	7.00	3.00	.
35 Latvia	6.10	3.60	.	4.55	4.02	.	.	.	0.36	.	5.70	.	0	.	0.00	6.00	.
36 Lebanon	.	.	.	.	.	.	.	.	0.51	.	5.00	.	0	.	1.00	.	.
37 Lithuania	5.95	3.80	.	4.12	4.07	.	.	.	-0.02	.	5.00	.	0	.	0.00	0.00	.
38 Luxembourg♀	8.29	5.90	.	7.94	7.59	.	.	.	.	.	4.30	.	0	.	.	2.20	.
39 Malaysia♀	7.42	4.50	0.55	6.60	6.91	9.00	.	2.05	1.03	0.73	8.70	0.79	1	0.77	0.70	8.00	0.10
40 Malta	6.80	4.40	.	7.02	5.66	.	.	.	.	.	.	.	0	.	.	4.00	.
41 Mauritius	7.10	4.00	.	5.94	5.84	.	.	.	.	.	7.70	.	.	.	0.00	4.20	.
42 Mexico*♀	5.10	3.20	-0.37	4.12	3.63	6.00	2.86	2.71	-0.93	0.10	6.00	0.35	0	0.35	0.00	2.80	0.36
43 Morocco	5.59	3.10	.	4.26	4.75	.	.	.	-0.13	.	3.30	.	0	.	6.00	0.00	.
44 Namibia	6.91	4.60	.	7.13	5.87	.	.	.	.	.	5.30	.	1	.	0.00	5.20	.
45 Netherlands*♀	8.75	5.80	1.97	8.92	8.11	10.00	4.38	0.02	-0.96	0.54	4.70	0.69	0	0.47	0.00	2.00	0.09
46 New Zealand*♀	8.46	6.00	1.99	9.07	8.08	10.00	4.00	0.31	0.73	0.46	9.70	0.55	1	0.33	0.00	0.40	0.00
47 Nigeria	4.56	3.10	-1.06	4.64	3.92	7.25	.	4.67	1.53	0.36	5.70	0.53	1	0.33	0.00	8.00	0.10
48 Norway*♀	8.55	5.70	2.01	8.55	8.13	10.00	3.90	0.12	-0.61	0.44	6.70	0.48	0	0.32	0.00	0.00	0.44
49 Oman	7.11	5.00	.	6.68	6.68	.	.	.	.	.	5.00	.	.	.	8.00	10.00	.
50 Pakistan	4.37	3.00	-0.62	3.56	3.15	5.00	1.99	4.38	0.99	0.63	6.30	0.48	1	0.58	2.50	6.00	0.86
51 Peru*♀	4.16	2.50	-0.52	2.25	2.70	6.75	2.71	4.46	-1.81	0.66	6.70	0.50	0	0.78	0.00	2.00	0.26
52 Philippines♀	4.80	2.90	-0.50	3.66	3.20	4.75	.	4.78	-2.37	0.81	4.00	0.92	0	0.83	0.00	2.00	0.27
53 Poland♀	4.85	3.60	.	4.43	3.59	.	3.24	.	-0.19	.	6.00	.	0	.	0.00	2.20	.
54 Portugal♀	7.28	4.60	1.16	7.28	4.59	5.50	.	1.10	-1.22	0.57	6.00	0.54	0	0.58	0.00	0.00	0.26
55 Qatar	.	4.50	.	.	.	.	.	.	.	.	5.00	.	.	.	10.00	.	.
56 Romania	4.82	3.40	.	3.43	3.34	.	2.71	.	0.51	.	6.00	.	0	.	0.00	10.00	.
57 Russia	3.35	2.70	.	2.63	2.94	.	3.52	.	0.62	.	5.00	.	0	.	0.50	0.40	.
58 Saudi Arabia	.	4.60		.	.	.	.	.	.	.	7.00		.	.	10.00	.	.
59 Serbia	4.28	2.80	.	2.96	3.10	.	.	.	.	.	5.30	.	.	.	1.00	2.00	.

Country	1 PROT_PPT	2 PROT_IPPT	3 RULE_LAW	4 JUD_IND	5 IMP_CRT	6 EFF_JUD	7 PAT-ENT	8 RISK_EXP	9 COST_ENTRY	10 INV_PRO1	11 INV_PRO2	12 PRIV_ENF	13 COM-MON	14 PUB_ENF	15 AUTO-CRACY	16 STATE_OWN	17 STATE_BANK
60 Singapore*♀	8.92	6.20	2.12	7.63	8.25	10.00	4.05	0.70	0.44	0.77	9.30	0.83	1	0.87	4.00	3.00	0.14
61 Slovakia	6.10	3.70	.	4.23	3.67	.	.	.	1.00	.	4.70	.	.	.	0.00	0.00	.
62 Slovenia♀	6.30	4.50	.	5.55	4.96	.	.	.	2.16	.	6.70	.	0	.	0.00	0.00	.
63 South Africa*♀	7.83	5.20	0.30	7.04	7.18	6.00	4.05	3.12	1.90	0.60	8.00	0.75	1	0.25	0.00	4.00	0.00
64 South Korea*♀	7.01	4.20	0.65	5.77	5.48	6.00	4.19	1.69	-0.40	0.36	5.30	0.71	0	0.25	0.00	2.00	0.25
65 Spain*♀	7.02	4.30	1.38	4.86	5.17	6.25	4.05	0.48	-1.17	0.55	5.00	0.58	0	0.33	0.00	0.00	0.02
66 Sri Lanka	5.56	3.60	-0.17	4.74	4.47	7.00	3.60	3.95	1.29	0.40	5.30	0.57	1	0.43	1.00	5.20	0.71
67 Sweden*♀	8.70	6.10	1.98	8.34	8.19	10.00	4.38	0.60	-0.18	0.39	6.30	0.43	0	0.50	0.00	2.00	0.23
68 Switzerland*♀	9.16	6.10	2.22	8.81	8.18	10.00	4.05	0.02	-1.61	0.30	3.00	0.55	0	0.33	0.00	0.00	0.13
69 Taiwan♀	7.20	5.00	0.87	5.60	5.49	6.75	.	0.88	-0.56	0.55	5.30	0.71	0	0.52	0.00	3.20	0.77
70 Thailand*♀	6.16	3.30	0.43	5.72	5.47	3.25	2.24	2.58	0.41	0.37	7.70	0.57	1	0.72	1.70	3.40	0.17
71 Tunisia	7.03	4.00	.	6.57	6.55	.	2.24	.	-0.67	.	5.30	.	0	.	5.00	8.00	.
72 Turkey*♀	5.26	2.70	0.07	4.95	4.18	4.00	2.86	3.00	1.97	0.34	5.70	0.36	0	0.63	1.00	1.60	0.56
73 Ukraine	3.45	2.60	.	2.38	2.85	.	.	.	0.11	.	4.70	.	0	.	0.00	3.00	.
74 United Arab Emirates	6.80	5.60	.	6.39	6.35	.	.	.	.	.	4.30	.	1	.	8.00	8.40	.
75 United Kingdom*♀	8.23	5.30	1.93	8.36	7.70	10.00	4.19	0.29	-0.42	0.78	8.00	0.75	1	0.68	0.00	0.00	0.00
76 United States*♀	8.03	5.40	1.92	7.11	6.59	10.00	5.00	0.02	-2.18	1.00	8.30	1.00	1	0.90	0.00	2.00	0.00
77 Venezuela	2.12	2.00	-0.81	0.50	1.01	6.50	2.90	3.11	3.24	0.22	2.30	0.19	0	0.55	0.70	8.80	0.58
78 Vietnam	5.01	3.00	.	4.31	4.59	.	.	.	-0.76	.	2.70	.	0	.	7.00	6.00	.

Table 1 Principal factors of country-level institutional characteristics

Panel A presents the factor patterns after a Varimax rotation in the Principal Factor analysis. All variables are defined in the Appendix I. In Panel B, the correlation coefficients significant at better than the 10% level are in bold face. Panels A and B are based on the sample consisting of 31 countries.

Panel A Factor patterns

		Factor Pattern			
		Factor 1 Business protection	**Factor 2 Investor protection**	**Factor 3 Political economy**	**Factor 4 Mandatory disclosure**
1	*PROT_PPT*	**0.977**	0.077	0.020	0.055
2	*PROT_PPT*	**0.963**	0.076	0.008	0.002
3	*RULE_LAW*	**0.943**	0.124	-0.131	0.053
4	*JUD_IND*	**0.928**	0.109	0.079	0.189
5	*IMP_CRT*	**0.927**	0.148	0.108	0.057
6	*EFF_JUD*	**0.832**	0.184	-0.165	0.152
7	*PATENT*	**0.776**	-0.052	-0.196	0.109
8	*RISK_EXP*	**-0.898**	0.002	0.131	0.028
9	*COST_ENTRY*	**-0.709**	-0.500	0.019	-0.255
10	*INV_PRO1*	0.023	**0.945**	-0.034	-0.040
11	*INV_PRO2*	0.128	**0.686**	0.386	0.374
12	*PRIV_ENF*	0.237	**0.855**	0.118	-0.045
13	*COMMON*	0.232	**0.751**	0.335	0.370
14	*PUB_ENF*	-0.209	**0.773**	0.134	-0.175
15	*AUTOCRACY*	0.043	0.135	**0.789**	-0.064
16	*STATE_ENT*	-0.321	0.138	**0.731**	-0.026
17	*STATE_BANK*	-0.455	-0.617	0.076	0.186
18	*EXCH_DISC*	0.184	-0.077	-0.107	**0.910**
	Eigenvalue	8.315	3.865	1.268	1.102
	Variance explained by each factor	7.611	4.029	1.587	1.323

Table 1 (*cont'd*)
Panel B Correlation matrix (Pearson\Spearman)

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
I Business protection	1	*PROT_PPT*		**0.947**	**0.900**	**0.908**	**0.948**	**0.778**	**0.645**	**-0.779**	**-0.641**	-0.020	0.063	0.202	0.196	-0.158	-0.079	**-0.350**	**-0.383**	0.145
	2	*PROT_IPPT*	**0.955**		**0.910**	**0.824**	**0.895**	**0.767**	**0.641**	**-0.751**	**-0.599**	0.000	0.081	0.227	0.185	-0.133	-0.076	-0.280	**-0.396**	0.096
	3	*RULE_LAW*	**0.917**	**0.883**		**0.815**	**0.848**	**0.837**	**0.578**	**-0.795**	**-0.723**	0.112	0.136	0.265	0.268	-0.025	-0.041	**-0.458**	**-0.392**	0.139
	4	*JUD_IND*	**0.944**	**0.900**	**0.862**		**0.895**	**0.787**	**0.565**	**-0.761**	**-0.767**	-0.004	0.189	0.230	**0.324**	-0.169	-0.139	**-0.325**	**-0.397**	0.268
	5	*IMP_CRT*	**0.948**	**0.925**	**0.854**	**0.955**		**0.784**	**0.525**	**-0.678**	**-0.696**	0.074	0.208	0.288	**0.264**	-0.085	-0.001	-0.256	**-0.418**	0.145
	6	*EFF_JUD*	**0.799**	**0.797**	**0.871**	**0.789**	**0.754**		**0.553**	**-0.685**	**-0.762**	0.266	**0.309**	**0.350**	**0.334**	0.125	-0.202	**-0.324**	**-0.374**	0.167
	7	*PATENT*	**0.721**	**0.725**	**0.758**	**0.629**	**0.587**	**0.717**		**-0.672**	**-0.323**	-0.065	-0.153	0.140	0.011	-0.220	-0.290	-0.230	-0.212	0.225
	8	*RISK_EXP*	**-0.853**	**-0.848**	**-0.875**	**-0.792**	**-0.743**	**-0.718**	**-0.766**		**0.517**	0.057	-0.013	-0.169	-0.087	0.181	0.247	**0.417**	**0.391**	-0.116
	9	*COST_ENTRY*	**-0.727**	**-0.680**	**-0.761**	**-0.802**	**-0.768**	**-0.758**	**-0.485**	**0.544**		**-0.421**	**-0.575**	**-0.537**	**-0.656**	-0.214	0.042	0.233	**0.607**	-0.259
II Investor protection	10	*INV_PRO1*	0.094	0.104	0.160	0.105	0.175	0.224	0.022	0.000	**-0.454**		**0.522**	**0.762**	**0.626**	**0.726**	-0.022	0.156	**-0.567**	-0.061
	11	*INV_PRO2*	0.188	0.178	0.157	0.271	0.262	0.233	-0.011	-0.089	**-0.527**	**0.544**		**0.549**	**0.763**	**0.409**	0.210	0.257	**-0.493**	0.179
	12	*PRIV_ENF*	**0.299**	**0.305**	0.278	**0.306**	**0.332**	0.282	0.194	-0.223	**-0.536**	**0.833**	**0.585**		**0.698**	**0.497**	0.086	0.195	**-0.710**	-0.052
	13	*COMMON*	**0.318**	0.288	0.285	**0.415**	**0.370**	0.286	0.101	-0.152	**-0.635**	**0.648**	**0.793**	**0.698**		**0.479**	0.228	0.206	**-0.598**	0.256
	14	*PUB_ENF*	-0.155	-0.149	-0.057	-0.128	-0.077	0.008	-0.250	0.161	-0.165	**0.769**	**0.398**	**0.533**	**0.470**		**0.323**	0.236	-0.280	-0.191
III Political economy	15	*AUTOCRACY*	0.053	0.041	0.050	0.002	0.095	-0.075	-0.148	0.037	-0.041	0.142	**0.319**	0.200	0.290	**0.335**		**0.354**	0.074	-0.019
	16	*STATE_ENT*	-0.297	-0.296	**-0.461**	-0.181	-0.204	**-0.317**	-0.238	**0.388**	0.191	0.125	**0.304**	0.199	0.270	0.204	**0.299**		0.079	-0.280
	17	*STATE_BANK*	**-0.503**	**-0.492**	**-0.433**	**-0.415**	**-0.494**	**-0.330**	-0.283	**0.445**	**0.531**	**-0.501**	**-0.491**	**-0.616**	**-0.494**	-0.231	-0.047	0.145		-0.029
IV Mandatory disclosure	18	*EXCH_DISC*	0.236	0.186	0.231	0.295	0.200	0.252	0.294	-0.195	-0.238	-0.063	0.191	-0.038	0.231	-0.199	-0.028	-0.220	0.088	

Table 1 (*cont'd*)
Panel C Rank measures across samples

Countries	I **Business Protection (Rank Measure)**	II **Investor Protection (Rank Measure)**	III **Political Economy (Rank Measure)**	IV **Mandatory Disclosure (Rank Measure)**
United States	0.649	0.986	0.306	0.615
The 30 additional countries in the sample consisting of 31 countries	0.585	0.540	0.397	0.500
The 8 successively additional countries in the sample consisting of 39 countries	0.557	0.566	0.468	0.548
The 39 successively additional countries in the sample consisting of 78 countries	0.456	0.483	0.653	na

Table 2 Management forecast occurrence and properties by country

*: indicates the country is among those 31 countries with all country variables available to calculate principal factors. ♀: indicates that the country is among the 39 with Mandatory disclosure non-missing. *FATTR%* is total number of forecasts with attribution divided by total number of forecasts. *FATTR_EX%* is the total number of forecasts with external attribution divided by the total number of forecasts with attribution. *REVISEUP%* is the total number of upward revisions of forecasts divided by the total number of forecast revisions.

Panel A By country

	Country	I No. of firm-years	II No. of firm-years with forecasts	III % of firm-years with forecasts (%FORECAST)	IV No. of firms	V No. of firms with forecasts	VI % of firms with forecasts	VII FFREQ	VIII FPREC	IX FHORI	X FATTR (%)	XI FATTR_EX (%)	XII REVISE UP (%)
1	Argentina*♀	402	4	1.00	70	3	4.29	1.75	1.42	2.75	25.00	100.00	.
2	Australia*♀	7,861	1,797	22.86	1,604	587	36.60	1.91	2.19	2.71	17.70	54.09	51.30
3	Austria*♀	437	204	46.68	78	62	79.49	2.13	1.85	2.75	18.63	57.90	65.52
4	Bahrain	163	4	2.45	31	4	12.90	1.25	1.75	3.00	0.00	.	.
5	Bangladesh	326	2	0.61	90	2	2.22	1.00	1.00	3.00	0.00	.	100.00
6	Belgium*♀	721	174	24.13	134	69	51.49	1.91	2.13	2.64	13.22	26.09	64.29
7	Brazil*♀	1,845	98	5.31	328	60	18.29	1.22	1.65	2.43	12.25	75.00	71.43
8	Bulgaria	140	30	21.43	32	17	53.13	1.57	1.88	2.72	0.00	.	100.00
9	Canada*♀	16,227	893	5.50	3,629	450	12.40	2.03	2.21	2.30	21.28	42.11	47.92
10	Chile*♀	1,038	20	1.93	182	14	7.69	1.35	1.45	2.45	10.00	50.00	.
11	China	9,620	733	7.62	2,068	421	20.36	1.50	1.75	2.01	30.56	42.86	68.52
12	Colombia	226	10	4.42	47	7	14.89	1.10	1.60	3.00	20.00	50.00	.
13	Cyprus	288	143	49.65	64	59	92.19	1.57	1.75	2.30	46.15	42.42	100.00
14	Czech Republic	65	20	30.77	12	8	66.67	2.95	1.45	2.82	20.00	0.00	50.00
15	Denmark*♀	898	494	55.01	178	131	73.60	2.66	2.61	2.93	23.48	38.79	57.36
16	Egypt	199	5	2.51	47	4	8.51	1.00	1.60	3.00	20.00	0.00	.
17	Estonia	76	12	15.79	15	7	46.67	1.50	2.18	2.67	33.33	25.00	50.00
18	Finland♀	692	452	65.32	117	108	92.31	2.30	1.86	2.52	30.97	47.86	27.78
19	France*♀	3,885	958	24.66	693	328	47.33	2.04	1.94	2.72	12.11	48.28	61.29
20	Germany*♀	4,896	1,642	33.54	923	487	52.76	2.38	2.07	2.79	18.76	39.29	59.36
21	Greece*♀	941	124	13.18	180	65	36.11	1.35	1.72	2.60	10.48	30.77	60.00
22	Hong Kong*♀	6,653	660	9.92	1,211	489	40.38	1.27	1.43	2.42	33.33	59.09	45.71
23	Hungary	120	56	46.67	25	16	64.00	1.84	1.88	2.71	10.71	16.67	30.00
24	Iceland	36	7	19.44	7	4	57.14	1.57	2.07	2.14	14.29	0.00	100.00
25	India	13,846	581	4.20	2,771	390	14.07	1.38	2.19	2.71	5.34	45.16	48.57
26	Indonesia*♀	1,495	270	18.06	319	121	37.93	1.54	1.39	2.86	9.26	44.00	61.91
27	Ireland*♀	249	96	38.55	45	27	60.00	2.28	1.91	2.72	26.04	72.00	51.43
28	Israel*♀	1,037	76	7.33	381	34	8.92	1.99	2.44	1.86	25.00	57.90	41.18
29	Italy*♀	1,541	420	27.26	271	155	57.20	1.74	1.97	2.80	11.43	29.17	63.64
30	Jamaica	186	1	0.54	33	1	3.03	1.00	4.00	3.00	0.00	.	.
31	Jordan	976	5	0.51	195	4	2.05	1.00	1.60	3.00	0.00	.	.

32	Kazakhstan	76	2	2.63	13	2	15.38	1.00	2.00	3.00	0.00	.	.
33	Kenya	221	6	2.71	45	4	8.89	1.17	2.17	2.67	16.67	100.00	.
34	Kuwait	790	13	1.65	182	9	4.95	1.62	1.35	2.43	7.69	0.00	50.00
35	Latvia	145	35	24.14	28	12	42.86	1.26	1.58	2.83	8.57	33.33	100.00
36	Lebanon	39	3	7.69	7	2	28.57	1.00	1.00	3.00	0.00	.	.
37	Lithuania	201	108	53.73	35	30	85.71	2.58	1.42	2.86	7.41	37.50	59.38
38	Luxembourg♀	87	26	29.89	22	11	50.00	2.54	1.99	2.17	26.92	71.43	66.67
39	Malaysia♀	5,246	526	10.03	936	357	38.14	1.23	1.69	2.78	19.39	41.18	44.00
40	Malta	87	2	2.30	16	2	12.50	1.00	1.50	2.50	0.00	.	.
41	Mauritius	158	1	0.63	33	1	3.03	1.00	1.00	3.00	100.00	100.00	.
42	Mexico*♀	606	47	7.76	106	24	22.64	1.64	2.11	2.50	25.53	58.33	33.33
43	Morocco	335	5	1.49	67	1	1.49	1.60	2.10	3.00	20.00	100.00	100.00
44	Namibia	17	2	11.76	4	2	50.00	1.50	3.50	2.25	0.00	.	.
45	Netherlands*♀	635	245	38.58	124	79	63.71	1.99	2.04	2.44	20.41	54.00	68.12
46	New Zealand*♀	652	234	35.89	118	77	65.25	1.78	2.19	2.75	16.67	56.41	41.89
47	Nigeria	528	21	3.98	123	16	13.01	1.10	1.31	2.71	0.00	.	0.00
48	Norway*♀	1,331	129	9.69	269	69	25.65	1.47	2.11	1.98	18.61	37.50	41.18
49	Oman	521	6	1.15	95	5	5.26	1.00	2.00	2.17	16.67	0.00	.
50	Pakistan	1,494	25	1.67	321	17	5.30	1.08	1.52	2.24	12.00	33.33	.
51	Peru*♀	601	11	1.83	107	8	7.48	1.09	1.36	2.73	9.09	0.00	100.00
52	Philippines♀	1,220	190	15.57	213	83	38.97	1.69	1.62	2.77	10.53	30.00	83.33
53	Poland♀	2,056	307	14.93	413	164	39.71	1.74	1.59	2.74	14.33	45.46	52.94
54	Portugal♀	277	65	23.47	51	30	58.82	1.22	1.85	2.57	10.77	57.14	100.00
55	Qatar	211	9	4.27	40	7	17.50	1.11	1.44	2.33	0.00	.	.
56	Romania	174	83	47.70	44	28	63.64	2.06	1.25	2.96	2.41	50.00	40.00
57	Russia	889	280	31.50	175	98	56.00	1.95	1.59	2.82	9.64	66.67	51.35
58	Saudi Arabia	510	11	2.16	133	10	7.52	1.18	1.73	1.73	0.00	.	100.00
59	Serbia	38	9	23.68	11	5	45.45	1.56	1.78	2.56	0.00	.	.
60	Singapore*♀	3,823	317	8.29	691	210	30.39	1.26	1.82	2.22	24.29	55.84	40.00
61	Slovakia	49	9	18.37	11	5	45.45	1.11	1.44	2.33	11.11	100.00	50.00
62	Slovenia♀	116	49	42.24	21	19	90.48	1.82	1.23	2.97	20.41	30.00	42.86
63	South Africa*♀	1,610	281	17.45	300	153	51.00	1.28	2.45	2.45	10.68	46.67	33.33
64	South Korea*♀	9,029	281	3.11	1,723	112	6.50	1.59	1.26	2.72	11.74	66.67	50.00
65	Spain*♀	916	221	24.13	162	91	56.17	1.62	1.93	2.81	7.69	41.18	59.38
66	Sri Lanka	798	13	1.63	216	7	3.24	1.31	1.46	2.83	7.69	0.00	0.00
67	Sweden*♀	2,378	237	9.97	463	123	26.57	1.62	1.73	2.50	10.55	60.00	44.19
68	Switzerland*♀	1,339	452	33.76	240	160	66.67	1.81	2.06	2.75	13.72	46.77	64.94
69	Taiwan♀	7,690	238	3.09	1,563	103	6.59	1.97	1.69	2.29	16.81	57.50	39.54
70	Thailand*♀	2,606	705	27.05	463	241	52.05	1.86	1.57	2.42	31.21	50.46	42.13
71	Tunisia	181	2	1.11	37	2	5.41	1.00	1.50	3.00	0.00	.	.
72	Turkey*♀	836	26	3.11	167	19	11.38	1.23	1.52	2.85	0.00	.	.
73	Ukraine	23	2	8.70	4	1	25.00	1.50	1.75	3.00	0.00	.	.

#	Countries												
74	United Arab Emirates	83	2	2.41	16	1	6.25	1.00	1.50	3.00	0.00	.	.
75	United Kingdom*♀	8,770	1,558	17.77	1,706	726	42.56	1.47	1.87	2.60	12.58	40.31	42.99
76	United States*♀	47,264	13,023	27.55	10,512	3,951	37.59	3.10	2.71	1.94	24.37	41.27	57.36
77	Venezuela	101	3	2.97	20	1	5.00	1.00	3.00	3.00	0.00	.	.
78	Vietnam	387	121	31.27	143	82	57.34	2.24	1.32	2.68	3.31	50.00	88.24
	Total	**184,229**	**29,932**		**37,969**	**11,294**							
	Overall Mean			**16.25**			**29.75**	**2.37**	**2.26**	**2.32**	**20.70**	**44.17**	**55.64**

Panel B By country subsamples

Countries	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
	No. of firm-years	No. of firm-years with forecasts	% of firm-years with forecasts (*%FORECAST*)	No. of firms	No. of firms with forecasts	% of firms with forecasts	*FFREQ*	*FPREC*	*FHORI*	*FATTR (%)*	*FATTR_EX (%)*	*REVISE-UP (%)*
United States	47,264	13,023	27.55	10,512	3,951	37.59	3.10	2.71	1.94	24.37	41.27	57.36
The 30 additional countries in the sample consisting of 31 countries	85,258	12,674	14.87	16,865	5,174	30.68	1.71	1.88	2.58	16.69	49.61	54.21
The 8 successively additional countries in the sample consisting of 39 countries	17,384	1,853	10.66	3,336	875	26.23	1.81	1.69	2.60	18.77	47.57	57.14
The 39 successively additional countries in the sample consisting of 78 countries	34,323	2,382	6.94	7,256	1,294	17.83	1.39	1.77	2.69	10.86	40.59	64.30

Table 3 The occurrence of management forecasts and country-level institutional characteristics

In Panel A, the statistics are calculated for the sample of 39 countries. All variables are defined in Appendix I. Panel B estimates the *Logistic model: FOCR =f* (individual *country-level institutional characteristic*) +*control variables* +ε. Panel C estimates the *Logistic model: FOCR =f* (*all country-level institutional factors*) +*control variables* +ε. ***, **, and * indicate that the estimated coefficients are statistically significant at the 1%, 5%, and 10% level, respectively in Chi-square tests based on robust standard errors clustered by country. All firm-level continuous variables are winsorized at the 1st and the 99th percentiles. Year and industry fixed effects are included in all regressions.

Panel A Descriptive statistics

	All countries				Exclude USA			
	All Obs.	*FOCR =1*	*FOCR =0*	*Diff*	**All Obs.**	*FOCR =1*	*FOCR =0*	*Diff*
	(N = 149,906)	(N = 27,550)	(N = 122,356)		(N = 102,642)	(N = 14,527)	(N = 88,115)	
	I	II	III	IV	V	VI	VII	VIII
LNASSET	4.141	6.391	3.634	2.758***	4.302	6.369	3.961	2.407***
ANALYST	3.610	10.836	1.983	8.854***	3.467	11.444	2.152	9.292***
INSTITUTION	26.492	36.108	24.327	11.781***	26.700	37.695	24.887	12.808***
BIG4	0.476	0.736	0.418	0.319***	0.519	0.731	0.484	0.247***
HITECH	0.183	0.229	0.173	0.056***	0.172	0.191	0.169	0.022***
NEWS	0.506	0.450	0.518	-0.069***	0.516	0.463	0.525	-0.062***
LOSS	0.370	0.247	0.398	-0.152***	0.332	0.193	0.355	-0.162***
HERF	-0.225	-0.231	-0.223	-0.008***	-0.284	-0.357	-0.272	-0.084***
BM	0.741	0.644	0.763	-0.119***	0.862	0.755	0.880	-0.125***
RD	0.038	0.042	0.038	0.005***	0.035	0.037	0.035	0.002***
EARNVOL	0.831	0.462	0.914	-0.452***	0.649	0.366	0.696	-0.330***
SEGMENT	2.199	3.044	2.009	1.034***	2.377	3.442	2.201	1.241***
ACCRUAL	-0.001	0.034	-0.008	0.043***	0.005	0.004	0.005	-0.001
INSIDER	16.013	12.747	16.749	-4.002***	15.319	14.224	15.499	-1.275***
STKEXCH	1.302	1.773	1.196	0.577***	1.335	2.004	1.225	0.779***
OPTGNANT	0.149	0.296	0.116	0.181***	0.082	0.134	0.073	0.061***
EXTFIN	-2.324	-2.276	-2.335	0.060***	-2.155	-2.245	-2.140	-0.106***

Table 3 (*Cont'd*)

Panel B Regressions of individual institutional characteristics (dependent variable =*FOCR*)

	Institutional Characteristics	N (Countries)	All available countries			Exclude USA		
			Adj. R-square (%)	*Coef.*	*Pr > ChiSq*	Adj. R-square (%)	*Coef.*	*Pr > ChiSq*
	I Business protection							
1	*PROT_PPT*	75	34.52	0.228***	0.00	27.72	0.182***	0.00
2	*PROT_IPPT*	77	34.77	0.367***	0.00	27.73	0.274***	0.00
3	*RULE_LAW*	45	37.33	0.654***	0.00	30.18	0.483***	0.00
4	*JUD_IND*	75	34.56	0.180***	0.00	28.29	0.196***	0.00
5	*IMP_CRT*	75	34.21	0.143***	0.00	27.82	0.164***	0.00
6	*EFF_JUD*	45	36.40	0.203***	0.00	29.02	0.102**	0.05
7	*PATENT*	48	37.81	0.598***	0.00	29.18	0.421***	0.00
8	*RISK_EXP*	45	37.72	-0.519***	0.00	30.20	-0.360***	0.00
9	*COST_ENTRY*	63	35.25	-0.264***	0.00	27.78	-0.123***	0.00
	Principal Factors	31	36.87	0.561***	0.00	29.70	0.497***	0.00
	Average Rank	78	34.65	2.495***	0.00	27.76	1.987***	0.00
	II Investor protection							
10	*INV_PRO1*	45	35.50	0.580	0.50	29.12	-0.860***	0.00
11	*INV_PRO2*	77	33.88	0.074	0.48	27.16	-0.083**	0.02
12	*PRI_ENF*	45	35.50	0.733	0.48	29.25	-1.220***	0.00
13	*COMMON*	72	34.39	0.516	0.12	27.15	-0.110	0.42
14	*PUB_ENF*	45	35.87	1.141	0.23	28.61	-0.029	0.56
	Principal Factors	31	35.94	0.122	0.52	28.62	-0.165**	0.03
	Average Rank	78	34.05	0.706	0.35	27.07	-0.448***	0.00
	III Political economy							
15	*AUTOCRACY*	75	34.16	-0.114**	0.02	27.21	-0.074***	0.00
16	*STATE_ENT*	75	34.37	-0.094**	0.02	27.86	-0.096***	0.00
17	*STATE_BANK*	45	37.01	-1.765***	0.00	29.47	-1.088***	0.00
	Principal Factors	31	35.89	-0.122*	0.08	28.29	-0.049***	0.00
	Average Rank	78	34.92	-1.741***	0.00	27.80	-1.294***	0.00
	IV Mandatory disclosure							
18	*EXCH_DISC*	39	36.23	0.990***	0.00	29.89	0.904***	0.00
	Principal Factors	31	36.10	0.209***	0.00	28.82	0.209***	0.00
	Average Rank	39	36.25	1.458***	0.00	29.27	1.274***	0.00

Table 3 (*Cont'd*)

Panel C Regressions of multiple institutional characteristics (Dependent variable =*FOCR*)

	I		II		III		IV		V		VI	
	All countries						**Exclude USA**					
Institutional Characteristics	Principal factors		Rank measures		Rank measures		Principal factors		Rank measures		Rank measures	
N (Countries)	31		39		78		30		38		77	
N (Total Observations)	132,522		149,906		184,229		85,258		102,642		136,965	
N (*FOCR* =1)	25,697		27,550		29,932		12,674		14,527		16,909	
Pseudo R-square (%)	37.23		36.71		33.40		30.46		30.53		26.92	
	Coef	*Pr > ChiSq*	*Coef*	*Pr > ChiSq*	*Coef*	*Pr > ChiSq*	*Coef*	*Pr > ChiSq*	*Coef*	*Pr > ChiSq*	*Coef*	*Pr > ChiSq*
Business Protection	**0.924*** **	**0.00**	**3.551*** **	**0.00**	**4.172*** **	**0.00**	**0.782*** **	**0.00**	**3.407*** **	**0.00**	**4.190*** **	**0.00**
Investor Protection	**0.075**	**0.16**	**0.292**	**0.23**	**0.434**	**0.16**	**-0.419*** **	**0.00**	**-1.482*** **	**0.00**	**-1.871*** **	**0.00**
Political Economy	**-0.197*** **	**0.01**	**-1.670*** **	**0.01**	**-2.318*** **	**0.00**	**-0.205** **	**0.02**	**-0.815** **	**0.05**	**-2.435*** **	**0.00**
Mandatory Disclosure	**0.198*** **	**0.00**	**1.751*** **	**0.00**			**0.310*** **	**0.00**	**1.629*** **	**0.00**		
LNASSET	0.380***	0.00	0.399***	0.00	0.470***	0.00	0.319***	0.00	0.318***	0.00	0.458***	0.00
ANALYST	0.071***	0.00	0.076***	0.00	0.093***	0.00	0.107***	0.00	0.087***	0.00	0.163***	0.00
INSTITUTION	0.008***	0.00	0.010***	0.00			0.008***	0.00	0.010***	0.00		
BIG4	0.371***	0.00	0.437***	0.00	0.689***	0.00	0.470***	0.00	0.415***	0.00	0.660***	0.00
HITECH	0.917***	0.00	0.996***	0.00	1.114***	0.00	1.101***	0.00	1.049***	0.00	1.271***	0.00
NEWS	-0.194***	0.00	-0.225***	0.00	-0.248***	0.00	-0.170***	0.00	-0.156***	0.00	-0.154***	0.01
LOSS	-0.151***	0.00	-0.145***	0.00	0.042	0.51	-0.386***	0.00	-0.276***	0.00	-0.278***	0.00
HERF	0.023	0.89	-0.038	0.88	0.164	0.56	-1.096***	0.00	-1.241***	0.00	-1.498***	0.00
BM	-0.319***	0.00	-0.336***	0.00	-0.448***	0.00	-0.322***	0.00	-0.304***	0.00	-0.448***	0.00
RD	4.642***	0.00	3.575***	0.00			5.792***	0.00	2.795***	0.00		
EARNVOL	0.029	0.21	0.092***	0.00			-0.082**	0.05	-0.049	0.16		
SEGMENT	0.029***	0.01	0.040***	0.00			0.085***	0.00	0.069***	0.00		
ACCRUAL	0.130***	0.01	0.136***	0.00			-0.116*	0.10	-0.134***	0.01		
INSIDER	-0.460***	0.00	-0.442***	0.00			-0.135**	0.03	-0.107**	0.02		
STKEXCH	0.130***	0.00	0.143***	0.00			0.250***	0.00	0.169***	0.00		
OPTGRANT	0.882***	0.00	1.001***	0.00			1.242***	0.00	1.071***	0.00		
EXTFIN	0.068***	0.00	0.058***	0.00			0.063***	0.00	0.021	0.11		
Intercept	-5.352***	0.00	-8.127***	0.00	-8.034***	0.00	-6.479***	0.00	-7.671***	0.00	-8.293***	0.00
Year Indicators	Yes		Yes		Yes		Yes		Yes		Yes	
Industry Indicators	Yes		Yes		Yes		Yes		Yes		Yes	

Table 4 Management forecast properties and country-level institutional characteristics (Number of countries = 31)

***, **, and * indicate statistical significance (two-tailed for t-tests) at the 1%, 5%, and 10% level, respectively, based on robust standard errors clustered by country. Country factors are measured by the principal factors. All firm-level continuous variables are winsorized at the 1st and the 99th percentiles. Year and industry fixed effects are included in all regressions. See Appendix I for definition of all variables.

	I		II		III		IV		V		VI	
Model	OLS		OLS		OLS		Logistic		Logistic		Logistic	
Dependent Variable	FFREQ		FPREC		FHORI		FATTR		FATTR_EX		REVISEUP	
N (FOCR =1)	25,697		25,697		25,697		25,697					
N (FATTR =1)							5,434		5,434			
N (FATTR_EX =1)									2,396			
N (REVISEUP =1/0)											7,581	
N (REVISEUP =1)											4,244	
Adj./Pseudo R-square	23.22		15.77		21.03		13.21		14.08		19.47	
	Coef	t value	Coef	t value	Coef	t value	Coef	Pr > ChiSq	Coef	Pr > ChiSq	Coef	Pr > ChiSq
Business Protection	**0.276***	**4.51**	**0.178***	**6.63**	-0.024	-0.54	0.002	1.00	0.059	0.54	0.097	0.23
Investor Protection	**0.197**	**0.79**	**0.123**	**0.82**	**-0.217***	**-8.59**	**0.110***	**0.00**	**0.076***	**0.10**	**-0.139****	**0.00**
Political Economy	**0.020**	**0.35**	**-0.029**	**-1.19**	**-0.102***	**-3.08**	**0.243***	**0.00**	**0.072**	**0.15**	**-0.215****	**0.00**
Mandatory Disclosure	**0.031**	**0.46**	**0.039**	**1.53**	**0.006**	**0.13**	**0.032**	**0.61**	**-0.069***	**0.06**	**-0.159****	**0.00**
LNASSET	0.115***	8.72	0.021***	3.34	-0.020*	-1.87	0.003	0.87	0.020	0.27	-0.066**	0.03
ANALYST	0.024***	6.91	-0.005***	-2.70	-0.005***	-4.85	-0.009***	0.00	-0.019**	0.00	0.033***	0.00
INSTITUTION	-0.001	-0.94	0.001	0.27	-0.001***	-3.35	0.001	0.33	0.004**	0.02	-0.001	0.46
BIG4	0.176***	3.82	0.110***	4.37	0.013	0.83	0.181***	0.00	0.065	0.28	-0.137**	0.00
HITECH	0.084	1.22	0.012	0.21	-0.087***	-2.80	0.099	0.18	0.382***	0.00	0.230	0.28
NEWS	-0.061**	-2.09	-0.032**	-2.12	0.022**	2.18	0.002	0.94	-0.048	0.26	0.855***	0.00
LOSS	-0.136***	-3.14	-0.061***	-3.16	-0.158***	-5.50	0.168**	0.03	0.064	0.20	-1.082**	0.00
HERF	0.576	1.51	0.032	0.61	-0.201**	-2.01	-0.111	0.24	-0.506**	0.00	0.132	0.25
BM	-0.130***	-6.33	-0.057***	-2.66	-0.014	-1.10	0.087***	0.00	-0.031	0.68	-0.351**	0.00
RD	2.297***	4.50	-0.380	-0.58	-2.439**	-2.02	1.252***	0.01	5.680***	0.01	-1.154	0.48
EARNVOL	0.025	1.09	0.018	1.21	-0.036	-1.27	-0.078**	0.05	-0.238**	0.00	0.009	0.80
SEGMENT	-0.029***	-6.53	-0.010**	-2.38	0.025***	5.97	0.001	0.87	0.005	0.70	0.015	0.36
ACCRUAL	0.234***	4.96	0.032	1.29	-0.075***	-2.52	-0.137**	0.04	-0.243**	0.00	0.640***	0.00
INSIDER	-0.215***	-4.65	-0.112***	-3.43	0.066**	2.20	0.047	0.55	-0.009	0.97	0.027	0.88
STKEXCH	-0.013	-0.70	-0.040***	-3.55	-0.008	-0.85	0.036	0.12	0.062**	0.04	-0.092**	0.00
OPTGRANT	0.322***	4.10	0.097***	3.20	-0.009	-0.27	-0.024	0.53	-0.248**	0.00	-0.003	0.96
EXTFIN	0.044***	5.27	0.003	0.61	0.002	0.39	0.017	0.16	0.005	0.81	-0.066**	0.00
FFREQ			0.199***	6.79	-0.051***	-3.46	0.428***	0.00	0.086***	0.00	0.103***	0.00
Intercept	1.298***	8.28	0.548***	6.38	2.701***	9.52	-3.182***	0.00	-0.353*	0.06	0.407	0.11
Year Indicators	Yes		Yes		Yes		Yes		Yes		Yes	
Industry Indicators	Yes		Yes		Yes		Yes		Yes		Yes	

Table 5 Stock price reaction to management forecasts and the effect of country-level institutional characteristics

Stock price reaction, *CAR*, to the management forecast is measured as the two-day (0, +1) cumulative market-adjusted returns around the management forecast. Panel A shows the mean value of the absolute value of *CAR*, i.e., *ABS(CAR)*, for all the 78 countries. P-values are for the tests of H0: [*ABS(CAR)* in trading-day window (0, +1)] - [mean of two-day *ABS(CAR)* in the trading day window (-30, -1) relative to the management forecast date] = 0. ***, **, and * indicate that the estimated coefficient is statistically significant at the 1%, 5%, and 10% level, respectively, in two-tailed t-tests. See Appendix I for definition of all other variables.

Panel A: Descriptive statistics of absolute value of CAR, *ABS(CAR)*, by country

		I	II	III	IV	V	VI
		All forecasts			Exclude forecasts issued on earnings announcement date		
	Country	No. of Forecasts	ABS(CAR) (%)	P value	No. of Forecasts	ABS(CAR) (%)	P value
1	Argentina	10	8.195**	0.05	7	9.970*	0.08
2	Australia	3,330	6.214***	0.00	2,308	6.495***	0.00
3	Austria	481	3.525***	0.00	117	4.215***	0.00
4	Bahrain	4	2.543	0.41	3	0.600	0.67
5	Bangladesh	2	1.025	0.45	1	1.860	.
6	Belgium	331	4.666***	0.00	104	5.822***	0.00
7	Brazil	117	3.215***	0.00	72	3.344***	0.00
8	Bulgaria	22	4.686*	0.10	11	2.554	0.15
9	Canada	2,024	6.116***	0.00	687	7.347***	0.00
10	Chile	28	1.739***	0.00	12	1.827**	0.03
11	China	2,640	7.238***	0.00	1,295	6.356***	0.00
12	Colombia	8	1.830*	0.08	5	1.568	0.24
13	Cyprus	235	4.793***	0.00	200	4.696***	0.00
14	Czech Republic	60	3.711***	0.00	28	4.639**	0.03
15	Denmark	1,334	4.698***	0.00	304	5.330***	0.00
16	Egypt	5	1.854	0.13	1	4.220	.
17	Estonia	15	4.665***	0.01	8	4.755**	0.04
18	Finland	1,036	5.014***	0.00	309	5.682***	0.00
19	France	1,896	3.818***	0.00	776	3.635***	0.00
20	Germany	3,764	4.103***	0.00	1,179	4.059***	0.00
21	Greece	175	2.985***	0.00	88	3.311***	0.00
22	Hong Kong	712	6.246***	0.00	579	6.073***	0.00
23	Hungary	104	4.300***	0.00	65	4.342***	0.00
24	Iceland	11	3.316***	0.03	1	0.850	.
25	India	796	4.023***	0.00	465	3.659***	0.00
26	Indonesia	400	3.251***	0.00	290	3.334***	0.00
27	Ireland	420	5.456***	0.00	228	5.813***	0.00
28	Israel	313	6.430***	0.00	141	6.120***	0.00
29	Italy	737	2.842***	0.00	358	2.723***	0.00
30	Jamaica	1	0.870	.	.	.	.
31	Jordan	3	3.850	0.25	1	7.090	.
32	Kazakhstan	8	5.535*	0.08	5	6.516	0.19
33	Kenya	4	11.928	0.32	1	1.440	.
34	Kuwait	20	6.367**	0.03	14	7.446*	0.07
35	Latvia	45	4.003***	0.00	19	5.337***	0.01

36	Lebanon	3	16.543	0.35	2	23.660	0.43
37	Lithuania	276	2.957***	0.00	94	3.258***	0.00
38	Luxembourg	113	5.905***	0.00	45	6.424***	0.00
39	Malaysia	585	3.150***	0.00	307	2.719***	0.00
40	Malta	2	3.530	0.55	.	.	.
41	Mauritius	1	9.030	.	1	9.030	.
42	Mexico	109	3.742***	0.00	72	4.105***	0.00
43	Morocco	8	1.759*	0.09	2	2.610	0.16
44	Namibia	3	1.377	0.37	3	1.377	0.37
45	Netherlands	587	5.262***	0.00	260	4.286***	0.00
46	New Zealand	414	4.176***	0.00	237	4.447***	0.00
47	Nigeria	22	3.571***	0.00	5	3.460	0.19
48	Norway	151	6.495***	0.00	70	7.286***	0.00
49	Oman	6	1.893*	0.06	4	2.570**	0.04
50	Pakistan	25	3.723***	0.00	16	2.859***	0.01
51	Peru	14	2.251	0.15	6	0.802	0.52
52	Philippines	297	3.360***	0.00	186	2.561***	0.00
53	Poland	484	4.065***	0.00	275	4.075***	0.00
54	Portugal	79	3.115***	0.00	57	2.657***	0.00
55	Qatar	10	6.191**	0.02	8	3.625***	0.00
56	Romania	166	4.193***	0.00	77	4.396**	0.02
57	Russia	461	4.405***	0.00	363	4.323***	0.00
58	Saudi Arabia	13	7.548**	0.04	6	10.452	0.14
59	Serbia	2	2.555*	0.07	.	.	
60	Singapore	374	4.432***	0.00	173	4.447***	0.00
61	Slovakia	10	5.822	0.20	3	0.530	0.97
62	Slovenia	84	2.467*	0.08	39	1.674***	0.00
63	South Africa	360	3.669***	0.00	272	3.710***	0.00
64	South Korea	451	3.409***	0.00	283	3.091***	0.00
65	Spain	337	2.250***	0.00	208	2.322***	0.00
66	Sri Lanka	15	2.246	0.12	7	0.747	0.36
67	Sweden	388	4.952***	0.00	146	5.045***	0.00
68	Switzerland	939	4.326***	0.00	339	4.693***	0.00
69	Taiwan	516	3.175***	0.00	383	2.978***	0.00
70	Thailand	1,265	2.581***	0.00	744	2.379***	0.00
71	Tunisia	2	2.220	0.12	1	1.500	.
72	Turkey	38	2.419***	0.00	18	2.008***	0.00
73	Ukraine	14	5.066***	0.00	11	4.974***	0.01
74	United Arab Emirates	3	6.020*	0.07	2	6.135	0.30
75	United Kingdom	2,102	6.604***	0.00	1,535	6.690***	0.00
76	United States	38,198	6.656***	0.00	12,290	6.891***	0.00
77	Venezuela	3	3.487	0.48	2	4.865	0.61
78	Vietnam	234	4.005***	0.00	69	3.879***	0.00
	Total	**70,255**			**28,303**		
	Overall Mean		**5.837**			**5.797**	

Table 5 (*cont'd*)

Panel B Univariate comparison of management forecast informativeness, *ABS(CAR)*

	All countries						Exclude USA					
	All forecasts			Exclude forecasts issued on earnings announcement date			All forecasts			Exclude forecasts issued on earnings announcement date		
	High	**Low**	*Diff*	**High**	**Low**	*Diff*	**High**	**Low**	*Diff*	**High**	**Low**	*Diff*
Business Protection	6.041	4.482	1.559***	6.220	3.996	2.224***	5.013	4.482	0.531***	5.384	4.046	1.338***
N (countries)	(39)	(39)		(37)	(38)		(38)	(39)		(37)	(37)	
Investor Protection	6.106	4.724	1.382***	6.097	4.676	1.421***	4.962	4.724	0.238***	5.132	4.641	0.491***
N (countries)	(39)	(39)		(37)	(38)		(38)	(39)		(37)	(37)	
Political Economy	4.842	5.969	-1.126***	4.314	6.082	-1.768***	4.846	4.865	-0.020	4.314	5.214	-0.900***
N (countries)	(39)	(39)		(37)	(38)		(38)	(39)		(37)	(37)	
Mandatory Disclosure	6.163	3.938	2.225***	6.350	3.825	2.525***	5.095	3.938	1.157***	5.554	3.825	1.729***
N (countries)	(20)	(19)		(20)	(19)		(19)	(19)		(19)	(19)	

Table 6 Informativeness of management forecasts measured by *ABS(CAR)* and country-level institutional characteristics

    This table uses principal factors of country-level variables. ***, **, and * indicate that the estimated coefficients are statistically significant at the 1%, 5%, and 10% level, respectively, in two-tailed t-tests based on robust standard errors clustered by country. Year and industry fixed effects are included in all regressions. See Appendix I for the definition of all other variables.

	Dependent Variable = ABS(CAR)					
	I		II		III	
	All 31 Countries		**Exclude USA**		**Exclude Forecasts Issued at Earnings Announcement Date**	
N (Countries)	31		30		31	
N (Forecasts)	61,799		23,601		23,903	
Adj. R-square (%)	11.01		10.17		13.43	
	Coef	*t value*	*Coef*	*t value*	*Coef*	*t value*
Business Protection	**0.530*****	**6.87**	**0.503*****	**7.01**	**0.493*****	**5.25**
Investor Protection	**0.471*****	**6.51**	**0.352*****	**8.21**	**0.300*****	**5.70**
Political Economy	**-0.290*****	**-4.64**	**-0.221*****	**-4.32**	**-0.402*****	**-5.54**
Mandatory Disclosure	**0.121*****	**2.81**	**0.136*****	**3.37**	**0.206*****	**3.62**
FPREC	0.151***	5.04	0.151***	6.20	0.267***	8.28
FHORI	-0.176***	-6.35	-0.167***	-5.34	-0.280***	-6.77
FATTR	0.002***	4.27	0.007	0.80	0.002***	4.51
LNASSET	-0.381***	-7.46	-0.241***	-8.15	-0.408***	-6.58
ANALYST	0.011***	4.47	0.008***	2.82	0.001	0.36
BIG4	0.034	0.39	-0.111	-1.50	-0.026	-0.24
HITECH	0.367**	1.96	0.904***	2.68	0.575	1.23
NEWS	0.008	0.08	-0.136*	-1.86	0.017	0.15
LOSS	0.668***	7.37	0.689***	6.14	1.001***	8.29
HERF	0.638***	3.38	0.275*	1.74	0.348	1.31
BM	0.145	1.51	0.138	1.60	0.224**	2.08
Intercept	5.896***	13.68	4.877***	17.39	6.699***	18.12
Year Indicators	Yes		Yes		Yes	
Industry Indicators	Yes		Yes		Yes	

Table 7 Signed market reaction to management forecasts and country-level institutional characteristics

The analyses for Column I, II and II are performed only among firm-years with at least two management forecasts for the same earnings/sales target. ***, **, and * indicate that the estimated coefficients are statistically significant at the 1%, 5%, and 10% level, respectively, in two-tailed t-tests based on robust standard errors clustered by country. Country factors are measured by principal factors. *UE* is forecast revision. See Appendix I for definition of all other variables.

	UE= REVISEUP						UE= REVISE%					
	I		II		III		IV		V		VI	
	All 31 Countries		Exclude USA		Exclude Earn. Ann. Date		All 31 Countries		Exclude USA		Exclude Earn. Ann. Date	
N (Countries)	29		28		28		28		27		28	
N (Forecasts)	12,855		3,683		5,968		7,146		1,861		3,156	
N (*REVISEUP*=1)	7,560		2,011		2,850							
Adj. R-square (%)	19.93		20.06		23.09		12.07		16.02		15.85	
	Coef	t value	Coef	t value	Coef	t value	Coef	t value	Coef	t value	Coef	t value
UE	6.963***	5.57	6.082***	3.48	7.938***	6.29	0.045***	3.44	0.008	0.52	0.018	1.15
UE *Business Protection	**1.542*****	**3.85**	**1.528*****	**3.76**	**1.511*****	**3.47**	**0.014***	**1.69**	**0.011***	**1.78**	**0.012**	**1.32**
UE *Investor Protection	**0.462****	**2.30**	**0.847*****	**4.08**	**0.317***	**1.69**	**0.020*****	**5.66**	**0.017*****	**4.41**	**0.024*****	**4.85**
UE *Political Economy	**-0.931*****	**-3.67**	**-0.814*****	**-3.26**	**-1.040*****	**-3.66**	**-0.013****	**-2.20**	**-0.012*****	**-3.06**	**-0.014*****	**-2.22**
UE *Mandatory Disclosure	**-0.025**	**-0.09**	**0.042**	**0.17**	**0.602****	**2.22**	**-0.008**	**-1.25**	**-0.005**	**-1.08**	**0.004**	**0.49**
Business Protection	-0.829***	-2.82	-0.744***	-2.50	-0.665**	-2.20	0.169	0.64	0.368	1.51	-0.028	-0.08
Investor Protection	-0.205	-1.24	-0.400**	-2.46	-0.172	-1.13	0.310***	2.87	0.032	0.25	0.111	0.66
Political Economy	0.667***	3.84	0.610***	3.32	0.615***	3.45	0.209	1.12	0.044	0.26	0.128	0.51
Mandatory Disclosure	-0.004	-0.02	-0.045	-0.24	-0.370*	-1.87	0.286*	1.73	0.218	1.60	0.427*	1.68
FPREC	-0.058	-1.09	0.046	0.63	-0.116**	-2.34	-0.112*	-1.89	0.004	0.05	-0.207**	-2.24
FHORI	0.086	1.55	-0.043	-0.39	-0.012	-0.11	0.212**	2.27	-0.211	-1.18	0.150	1.03
FATTR	0.023	0.13	-0.424	-1.56	0.107	0.60	-0.201	-0.82	-1.566***	-4.37	-0.632*	-1.65
UE *FPREC	0.093***	3.44	0.041	0.57	0.224***	4.21	0.011***	4.01	0.007**	2.40	0.015***	4.33
UE *FHORI	-0.552***	-4.96	-0.374***	-2.65	-0.720***	-6.92	-0.005	-1.11	0.008	1.54	0.006	1.18
UE *FATTR	0.107	0.74	0.187	0.64	0.004	0.02	0.017	1.55	0.011	0.88	0.012	0.89
LNASSET	-0.066***	-2.62	-0.114	-1.58	-0.004	-0.09	0.043	0.78	-0.082	-1.18	0.134	1.60
ANALYST	-0.009**	-2.19	-0.007	-1.08	-0.003	-0.46	-0.017**	-2.40	-0.020**	-2.40	-0.010	-0.95
BIG4	-0.007	-0.03	-0.639**	-2.30	-0.565**	-2.33	0.257	0.94	-0.172	-0.51	-0.322	-0.79
HITECH	-0.739	-1.57	-0.899	-1.22	-0.767	-1.52	-0.563	-0.87	0.860	0.69	-0.869	-0.85
NEWS	0.450***	3.89	0.742***	3.40	0.892***	5.29	1.015***	5.51	1.268***	5.12	1.414***	4.78
LOSS	-1.602***	-8.80	-1.910***	-5.41	-1.458***	-5.09	-2.013***	-7.68	-2.454***	-6.33	-1.596***	-4.17
HERF	-0.001	-0.01	-0.310	-0.56	-0.119	-0.20	-0.193	-0.36	0.504	0.91	-1.193	-1.45
BM	0.189*	1.73	0.096	0.33	0.564***	2.94	-0.235	-1.03	0.106	0.44	0.228	0.69
Intercept	-3.482***	-6.77	-1.949**	-2.30	-4.052***	-6.46	-0.119	-0.18	2.274***	2.59	-1.258	-1.25
Year Indicators	Yes		Yes		Yes		Yes		Yes		Yes	
Industry Indicators	Yes		Yes		Yes		Yes		Yes		Yes	