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Political uncertainty and analysts' forecasts: International evidence☆

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ABSTRACT

This study examines the influence of political uncertainty proxied by national election on analysts' forecasts across 28 countries. We find analysts' forecasts' accuracy decreases, and the optimism increases in national election years compared to these in non-election years. Further analysis supports information opacity, local political connections, politically sensitives industries and the quality of institutions channels through which political uncertainty affects the analysts' forecasts.

1. Introduction

As professional investment intermediaries, sell-side financial analysts collect information about firms from various sources, make forecasts about firms' growth opportunities and issue recommendations to investors (Loh and Mujtaba Mian, 2006). In performing these tasks, financial analysts help to reduce information asymmetry between investors and firms. Empirical evidence in the U.S. and abroad suggests that analysts' forecasts in part contribute to the information environment of firms (e.g., Bushman et al., 2004; Lang et al., 2004), and help investors with interpreting public information (Livnat and Zhang, 2012). In addition, analysts' coverage improves firm visibility (Kelly and Ljungqvist, 2012), disciplines rating agencies (Fong et al., 2014), and affects corporate policies (Loh and Stulz, 2015). Analysts' forecasts and revisions are shown to convey valuable firm specific as well as industry-level information to investors (Piostroski and Roulstone, 2004; Barth and Hutton, 2000). Several studies further show that analysts' forecasts and recommendations affect stock prices (e.g., Lys and Sohn, 1990 and Francis and Soffer, 1997; among others), and that the ability to move prices upward with analysts' accuracy (Jackson, 2005; Chen et al., 2015).

Prior evidence indicates however that the importance of analysts' forecasts, considered as one of the most important aspects of analyst performance (Chen et al., 2015; Gu and Wu, 2003), hinges on their accuracy. Particularly, analysts' ability to make accurate earnings' forecasts can be compromised in an environment of higher uncertainty (Loh and Stulz, 2015). For instance, Duru and Reeb (2002) find that corporate international diversification leads to higher uncertainty because the collection and processing of information in international markets is more complex and difficult. This in turn results in less accurate, albeit more optimistic financial forecasts.[1] More recently, studies have focused on uncertainty arising from changes in macroeconomic conditions or crisis events and have shown that analysts' forecasts' accuracy decreases under such circumstances (e.g., Loh and Stulz, 2011, 2015; Arand and Kerl, 2012). Loh and Stulz (2015) define "bad times" as times when economic uncertainty is higher. The authors consider recessions and

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[1] Lim (2001) sustains that analyst should rationally be more optimistically biased under uncertain circumstances. To be able to access more private information from managers, forecasts are biased upward, helping analysts to eventually increase their forecast accuracy. Thus, analysts have incentive to issue overly optimistic forecasts to maintain access to company management. Nevertheless, Lim (2001) also shows that analysts issue forecasts with a minimum mean squared error as the benefit of greater information more than offsets the upward bias.

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crises as such events, and argue that in bad times, investors put more value on any informative signals (including analysts' forecasts and recommendations) because they have more difficulties assessing the prospects of the firms they invest in. At the same time however, the forecasting task of the analyst is made more difficult because of the surrounding uncertainty, resulting in a noisier output from analysts and less accuracy in their forecasts. In fact, Loh and Stulz (2015) show that in recessions, financial analysts' forecasts are not only less accurate, but also show less convergence (i.e., there is more disagreement among analysts).

In this paper, we add to this literature by formally assessing the sensitivity of forecast properties to *political uncertainty*. Specifically, we examine worldwide analysts' forecasts' accuracy around political elections events. Waisman et al. (2015) argue that businesses often face "*a significant amount of uncertainty related to the timing and context of government policy change, as well as the potential impact that these polices have on corporate investment decisions and firm profitability*". This is what several authors refer to as policy risk (e.g., Perotti, 1995; Durnev, 2010; Waisman et al., 2015). Policy risk is particularly acute in times of elections and has several implications for corporate decisions. For example, Julio and Yook (2012) provide evidence that firms reduce investment expenditures during the year leading up to elections. Similarly, Durnev (2010) explores the impact of elections on investment sensitivity to stock prices and shows that investment is 40% less sensitive to stock prices during election years compared to non-election years. The author argues that managers give less attention to stock prices during election periods because the uncertainty about future government policies decreases the information quality of stock prices. Moreover, during high political uncertainty periods, Huang et al. (2015) find that past dividend payers are more likely to stop paying dividends (and non-payers are less likely to start paying dividends). The authors explain that during the periods of high political uncertainty, managers expect future financial shortfalls and higher cost of external financing, leading them to choose more conservative dividend strategies.

We argue in this paper that analysts' forecasts accuracy is affected by political uncertainty about the new government and its impact on the country's future macro-economy, policies and regulations. The main rationale behind this conjecture is that the uncertainty surrounding political elections complicates the analysts' task of forecasting future earnings, based on the following underlying reasons:

First, as suggested above, political uncertainty affects firms' entire information environment since prices become less informative, the information quality of earnings decreases (e.g., Durnev, 2010), and cash flow volatility increases.[2] Supporting evidence that the uncertainty associated with government policy decisions increases the uncertainty about firms' future profitability and cash flow volatility, is found in Lambert et al. (2007) and Ng (2011), among others, who report a positive relation between accounting quality and information precision about future cash flows. These results suggest that more precise forecasts are associated with higher accounting quality. In addition, as observed by Bushman et al. (2004), analyst following and performance (often assessed by forecasts' accuracy) are positively associated with information disclosure, which tends to decrease during times of uncertainty, thus increasing the cost of collecting information. These arguments lead us to expect less accuracy in times of political uncertainty as analysts are unable to efficiently process lower quality and less precise information while producing earnings' forecasts.

A *second* reason behind our conjecture is the variation of investors' demand for analysts' service when political uncertainty is high. Uncertainty is a key channel through which political risk affects financial markets (Pástor and Veronesi, 2012; Durnev, 2010; Waisman et al., 2015; Liu and Zhong, 2017; Yu et al., 2020), in the context of elections, there is substantial information asymmetry and inherent uncertainty related to the way governments will shape regulatory and economic policy, both of which will dramatically increase capital market risk perception (e.g., Pástor and Veronesi, 2012, 2013),[3] and hence investors' demand for information services. As documented by Bercel (1994), investors incorporate in their firm valuation analysts' earnings' forecasts, and forecasts' revisions. Thus, in times of uncertainty, and following arguments in Loh and Stulz (2015), investors are likely to increase their demand for information services, which in turn may impact the properties of analysts' forecasts (Barth et al., 2001), and decrease their accuracy.

Finally, Francis and Philbrick (1993) and Das et al. (1998) argue that, when earnings are unpredictable, analysts tend to issue optimistic forecasts to curry favor with management to obtain private information. Lim (2001) shows that analysts have incentives to trade off this positive bias for more potential accurate information. This in turn leads to overoptimistic forecasts (less accuracy).

Our research design revolves around worldwide national elections. Bialkowski et al. (2008) consider the context of national elections as a natural setting of political uncertainty (Julio and Yook, 2012), providing us with an opportune testing ground to study the link between analysts' forecasts' accuracy and political uncertainty. Using national elections offers two main advantages: recurrence and exogeneity. Because elections are "recurrent" events that affect the informational environment of firms and analysts alike, they allow us to test how political uncertainty is embedded into the expectations of analysts, and to identify a causal effect on analyst performance without worrying about potential confounding effects (i.e., because of their recurrence). In addition, the timing of elections is exogenous to the firm in that it is often fixed by national law (constitution) and is outside the control of individual firms (Kelly et al., 2015). Cheynel (2013) notes in this respect that policy uncertainty can be considered "as an economy-wide risk because political factors can shape economic outcomes and change financial risk. These political factors are also less likely to be endogenously determined by firms accounting quality".[4] Finally, the occurrence of national elections offers over time and within-country variation in political uncertainty (Li et al., 2016), allowing us to draw stronger inferences in an international setting. Using an international sample of over 7000 firms from 28 countries, around the world between 1990 and 2017, we assess analysts' forecasts around national elections. We find that analysts' accuracy varies systematically across the election cycle, declining significantly during the election year when political uncertainty is highest compared to before the event. We further find that forecasts are particularly optimistic during election year (i.e., significantly less accurate). Also, we find that the influence of political uncertainty on analysts' forecasts' accuracy and bias is significantly more pronounced in election years with high closeness of votes. This evidence adds more credence to the negative (positive) impact of political uncertainty on analysts' forecasts' accuracy (bias).

To gain further insights on the impact of political uncertainty on analysts' forecasts' properties, we investigate, different possible channels through which policy uncertainty may impact analysts' forecasts. First, elections may create more incentives for mangers to conceal earnings management when the market participants can be distracted by unpredictable policy changes (Yung and Roots, 2019). Thus, political uncertainty will induce a lower financial reporting quality which increase information asymmetry and leading to more complex task for financial analysts because earrings become less predictable. In addition,

[2] As suggested by Lim's (2001) model, this makes private information more valuable, leading analysts to produce overoptimistic forecasts in exchange for the access to private information.

[3] Bialkowski et al. (2008) and Boutchkova et al. (2012) also provide evidence that volatility is significantly higher than normal during elections.

[4] Under uncertainty, disclosure can dilute firms' cash flows sensitivity to systematic risk leading to a decrease in cost of capital and increase in market value for firms with high disclosure.

as documented in Boutchkova et al. (2012) industries' volatility increases during national election years compared with non-election years, especially in the industries that are more sensitive to political events. Local and global political risk have different impacts on systematic and idiosyncratic volatility. Therefore, increasing volatility will makes stock prices less informative and harder to dig out market information for financial analysts. The results show that political uncertainty decrease financial analysts' accuracy mainly through information opacity channel.

Second, we address whether political connections mitigate the negative impact of political uncertainty on forecasts' accuracy. Our conjecture is that with political connections and state ownership, firms enjoy political coziness that mitigates investors' fears, and insulates firms from the negative impact of political uncertainty. The literature abounds with studies that show that while politically connected firms exhibit less earnings quality, they are not penalized with a higher cost of debt (Chaney et al., 2011). Because the informational environment of these firms is less likely to change around elections, we expect political connections to mitigate the negative impact of political uncertainty on analysts' forecasts' accuracy. Alternatively, policy uncertainty may introduce noise in analysts' forecasts for these firms if the outcome of the election is uncertain. As prior research shows, these firms have higher future earnings' volatility than non-connected peers (Cooper et al., 2001), and analysts have greater difficulty in estimating the future earnings of these firms as a result of uncertain political benefits (Chen et al., 2010). We find that politically connected firms have higher forecasts accuracy around elections compared to non-politically connected firms, suggesting that analysts' forecasting task is easier for the former which can capitalize on their political links and hedge against political risk. Third, we explore how political sensitives industries may affect the analysts' proprietaries. Boutchkova et al. (2012) find that political sensitives industries return volatility to be positively associated with political uncertainty which increase the task complexity for analysts making earnings and cash flow less predictable. We find results consistent with the conjecture that firms in politically sensitive industries will be more affected by political uncertainty (Li et al., 2016), resulting in less accurate forecasts by analysts.

In a final step, we examine whether the negative impact of political uncertainty on forecasts' accuracy is moderated by the quality of institutions that prevail in the country. We argue that the uncertainty surrounding elections can be mitigated if the country enjoys more information transparency, less corruption, good law enforcement. Under these conditions, we expect the negative impact of political uncertainty on forecasts accuracy to be lessened. Our results show that the negative relation between analysts' forecasts and political uncertainty is mitigated in less corrupt environments, forthcoming information transparency, and better law enforcement. Also, the relation is mitigated in more stable political environments, with better financial development and in market-based countries.

To the best of our knowledge, we provide the first international empirical evidence on how political uncertainty impacts analyst forecast performance which is relevant worldwide. Our study contributes to literature in several ways. First, we enrich the literature that examines analyst performance during crisis periods. For example, Loh and Stulz (2015) who examine the sell-side recommendations of analysts in the U. S. during recessions (i.e., in bad states of the economy) provide evidence of over-optimism and less accuracy in forecasts during recessions and crisis. In contrast to Loh and Stulz (2017) that focus on market declines (an economic risk), a key feature of our study is that political uncertainty not an economic shock (Pástor and Veronesi, 2012), since election outcomes are unpredictable and markets participants (e.g., analyst following) are uncertain about the implementation of the declared reforms. Those outcomes are relevant to all aspects of policies such as trade, fiscal, regulation, taxation, social. Thus, we focus on our study on political and regulatory systems as particular sources of aggregate uncertainty that persists for longer horizon.

Second, we extend the existing study on US evidence (Baloria and Mamo, 2014) to an international setting that capture cross-country variations in information disclosure quality, political and institutional environments, that could condition the availability of information (Boubakri et al., 2013) and which can significantly affect analyst's responses to political uncertainty. Furthermore, this cross-country setting at different points in election time allows us to study the mechanisms through which policy uncertainty influence analyst behavior. Thus, understanding the effect of policy uncertainty on analyst performance requires not only analysis of the firm and the political cycle forces but also a careful analysis of country-specific factors, helping us to conclude on a world-wide impact of political uncertainty on analysts' forecasts. In contrast to Baloria and Mamo (2014) who focus on the period prior to the election, analyzing national election data at the international context and considering the post-election windows and different channels provide us a global opportune research setting where uncertainty rises steeply during elections and falls steeply afterwards. Particularly, our study document that political uncertainty is not fully resolved as the impact on analyst's accuracy is even more pronounced than before the election.

Third, our results add to the emerging literature on the real effects arising from political uncertainty, providing evidence on outcomes at the micro-level (e.g., Julio and Yook, 2012; Durnev, 2010; Huang et al., 2015; Waisman et al., 2015).

Last, we contribute to our understanding of the determinants of analysts' performance, and specifically on whether and how the accuracy in forecasts is affected in the face of policy risk. By doing so, we enrich the literature on the political determinants of analysts' performance, which have generally been ignored to date. Thus, we provide new insights on how information flows to the market during uncertain times measured by policy uncertainty and enrich the evidence on the effects of uncertainty on analysts' accuracy (e.g., Das et al., 1998; Zhang, 2006).

The rest of the paper is organized as follows: after reviewing the literature and developing our hypotheses in Section 2, we describe our data and present our summary statistics in Section 3. Section 4 presents the empirical analysis, possible channels and robustness checks. Section 5 concludes.

2. Literature review and hypotheses development

2.1. Political uncertainty and analysts' forecasts

Political uncertainty refers to the unpredictability of governmental policy or regulatory shifts emanating from a possible change in political leadership, and varies across time (Li et al., 2016). Pástor and Veronesi (2012, 2013) show theoretically that political uncertainty (considered by the authors as a non-economic shock) commands a risk premium. Empirical evidence supports this conjecture and indicates that political uncertainty (proxied by national elections) increases the cost of debt (Waisman et al., 2015; Liu and Zhong, 2017) and the cost of equity

(Brogaard et al., 2015; Li et al., 2016), respectively. Consistent with Cremers and Yan (2016), Waisman et al. (2015) argue that the impact of political uncertainty on the cost of capital is channelled through higher cash flow volatility, lower investments and more hoarding of cash, all of which increase the default probability of the firms, thus resulting in higher spreads. Liu and Zhong (2017) document that political uncertainty affects firm CDS spreads through idiosyncratic volatility and debt rollover channels.

Further empirical evidence exists on the impact of policy uncertainty on market uncertainty. Specifically, market uncertainty tends to increase as the day of voting approaches and the uncertainty about the election outcomes increases. Using U.S. presidential elections, Li and Born (2006) find that the mean of daily stock returns increases in three months preceding national elections, when the outcome is uncertain. This is not the case when the incumbent party is assured to be re-elected. Further, the influence of elections on financial market uncertainty, is documented in several other studies including Bialkowski et al. (2008) and more recently Smales (2014) in the Australian context. These studies show that market uncertainty is only resolved once the outcome of the election is known.

Additionally, political uncertainty also affects corporate decisions. For instance, it is established that political uncertainty has an impact on corporate tax behaviour (Li et al., 2016), capital structure (Cao, Duan and Uysal, 2013) and investments (Julio and Yook, 2012; Durnev, 2010). Julio and Yook (2012) recently show that firms reduce investment expenditures during times of political uncertainty.

In this paper, we assess the impact of political uncertainty on analysts' performance and forecasts' accuracy and posit, based on prior studies that political uncertainty can affect analysts' forecast accuracy for different reasons:

2.1.1. *Political uncertainty increases cash flow volatility*

The literature shows that around elections, firms are uncertain about the potential implications of the elections' outcome, especially the policies pursued by the government, should the incumbent loose the elections. Consequently, firms adjust their capital structure, decrease their investments, reduce their access to market financing, and alter their dividend policy. These adjustments occur because managers anticipate increased cash flow volatility under macroeconomic or policy uncertainties. This in turn, adds to the difficulty or complexity of the forecasting task, leading to less accuracy in earnings' forecasts, as argued by Duru and Reeb (2002) and Baloria and Mamo (2014).

2.1.2. *Political uncertainty increases macroeconomic uncertainty and investors' demand for analysts' services*

Elections engender anxiety as investors form and revise their expectations regarding future macroeconomic policy (Goodell and Vahamaa, 2013). Focusing on macroeconomic uncertainty measured by inflation and foreign exchange volatility, Hope and Kang (2005) find in an international setting that forecast accuracy decreases in the level of macroeconomic uncertainty. The authors also find that this negative association is stronger in emerging markets where "macroeconomic uncertainty represents a unique dimension in the complexities associated with predicting future firm performance". Recent studies (e.g., Pástor and Veronesi, 2012; Durnev, 2010; Waisman et al., 2015) show that political/macro-economic uncertainty increases capital markets risk perception, and thus the demand for analysts' services. This increased demand and the overall economic uncertainty leads to more complex valuations (Baloria and Mamo, 2014). and we consequently posit that political uncertainty around elections will result in less accurate forecasts. This conjecture finds ground in a number of seminal studies suggesting that complexity affects analyst forecast accuracy (e.g., Brown et al., 1987; Haw et al., 1994; Lang and Lundholm, 1996; Duru and Reeb, 2002; Clement, 1999).

2.1.3. *Political uncertainty increases the value of private information to analysts*

According to Ke and Yu (2006), financial analysts often issue biased earnings' forecasts and seem to do so to "curry favour with management so that they can obtain more private information from management to improve their earnings forecast accuracy relative to other analysts". Based on Das et al. (1998) and Lim (2001), the access to management is more valuable to analysts when the firm's earnings are more difficult to forecast. This in turn leads to overoptimistic forecasts (less accuracy). In times of economic risk (recession and crisis), Loh and Sulz (2015) show indeed that analysts tend to be overoptimistic, suggesting that they overweigh private information relative to public information when faced with uncertainty. We thus posit that around elections, analysts' forecasts will be less accurate, since private information in the face of uncertainty becomes more valuable (Baloria and Mamo, 2014).

In sum, because political uncertainty (i) increases cash flow and earnings' volatility, (ii) makes prices less informative, and (iii) increases the transaction costs of collecting information (which is a primary source of information for financial analysts), we posit that forecasts accuracy will be lower around elections. Based on the arguments above, we expect that:

H1:. *Forecasts accuracy decreases with political uncertainty*.

2.2. *Mitigating effect of institutions on the impact of policy uncertainty*

As institutional characteristics shape the external environment under which firms operate, consequently, it affects the information flows in financial market as well as the behavior of market participants, including analysts' behaviors and managers' decision. As documented in literature, better institutional features, such as disclosure practices, the enforcement of accounting standards and legal protections, enforce managers to disclose firm-specific information in an accurate and timely manner, resulting in an improvement of information transparency in a country. Hence, better institutional features improve analysts' forecasts performance (Hope, 2003; Bushman et al., 2004). Additionally, the literature shows that better institutional environments are usually associated with less corruption, higher government stability, and a better law enforcement. To gain further insights on the impact of institutional features on the relation between political uncertainty and analysts' behavior, we construct hypothesis H2 as follows:

H2:. *The negative relation between forecasts accuracy and political uncertainty is mitigated with better institutional and political environments.*

3. Data description and summary statistics

3.1. *Political uncertainty*

We use national elections as a primary measure of political uncertainty in each country. Because of the differences in political and electoral systems across countries, we define national election as an election to select a national leader(s) holding executive power in government. For instance, we consider presidential elections to select a president in countries with presidential systems because the office of the president generally has supreme executive power in these countries. Concurrently, we consider legislative elections used in countries with parliamentary systems, since the cabinet responsible to parliament holds executive power in these systems. For countries with hybrid systems (i.e., combining both parliamentary and presidential democracy), we select the elections associated with the leader who exerts more executive power.[5] Following Julio and Yook (2012), we define the year as an election year for a firm when a firm's fiscal year end is no earlier than 60 days before and no later than 274 days after the election date.

[5] We also consider Julio and Yook (2012)'s classification as a reference.

Otherwise, it is a non-election year for this firm. Although national elections per se might not be a direct measure of political uncertainty, several previous studies show that the uncertainty is much higher in election years compared to that in non-election years.[6]

We collect national election data by combining several sources. The primary sources are Constituency-Level Election Archive (CLEA) and World Bank Database of Political Institutions.[7] We verify and supplement the election data with internet sources, including but not limited to Wikipedia,[8] Election Resources[9] and government official websites, as well as the available literature[10] and local newspapers. We use *ELEC* as an indicator that equals to one if a firm's fiscal year end is no earlier than 60 days before and no later than 274 days after the election date, and zero otherwise.

The characteristics of national elections for all 28 countries in our sample are reported in Table 1. Besides election system, we also gather information about election timing. Under the flexible election timing system, a government can be dissolved before the expiry of its full term for certain reasons, such as economic performance, internal conflict, scandal etc. We categorize election timing into fixed and flexible timing referring to the election laws and practices as well as the classification provided by Alesina and Roubini (1992) and Julio and Yook (2012).

We report the country distribution of the sample observations in Table 1. The country distribution is unbalanced. In particular, the observations from the U.S. dominate our sample, and account for almost 44%. Developed countries such as Canada, France, Germany, Japan, etc., collectively account for the majority of the observations in the sample as well.

Table 1
Summary Statistics of Country Elections.

Country	Election System	Election Timing	No. of Observations	No. of Elections
Argentina	Presidential	Fixed	135	9
Australia	Parliamentary	Flexible	4023	9
Austria	Parliamentary	Flexible	89	8
Belgium	Parliamentary	Fixed	485	6
Brazil	Presidential	Fixed	945	5
Canada	Parliamentary	Flexible	6358	8
Chile	Presidential	Fixed	32	3
Denmark	Parliamentary	Flexible	168	7
Finland	Hybrid	Flexible	242	6
France	Hybrid	Fixed	4780	5
Germany	Parliamentary	Flexible	4657	7
Greece	Parliamentary	Flexible	198	7
India	Parliamentary	Flexible	2963	5
Indonesia	Presidential	Fixed	172	2
Italy	Parliamentary	Flexible	781	7
Japan	Parliamentary	Flexible	28,434	5
Mexico	Presidential	Fixed	519	7
Netherlands	Parliamentary	Flexible	36	6
Norway	Parliamentary	Fixed	143	5
Peru	Presidential	Fixed	81	3
Philippines	Presidential	Fixed	237	7
Singapore	Parliamentary	Flexible	68	5
Sweden	Parliamentary	Fixed	684	7
Switzerland	Parliamentary	Fixed	1069	6
Thailand	Parliamentary	Flexible	740	8
Turkey	Parliamentary	Flexible	60	4
UK	Parliamentary	Flexible	4344	5
US	Presidential	Fixed	49,906	7
Total:			112,349	169

This table reports the characteristics and summary statistics of country elections during the period from 1990 to 2017.

3.2. Analysts' forecasts

We extract analysts' forecasts' data from the Institutional Broker's Estimate System (I/B/E/S) that collects estimates from the largest global houses as well as from regional and local brokers, covering over 40,000 companies in 70 financial markets around the world. In this paper, we use the annual consensus of the monthly summary file for earnings per share (EPS) estimates. In summary file, we find the summary statistics for all the EPS estimates announced by analysts in a specific month, for a particular fiscal end period, including means, medians, and standard deviations of EPS estimates. We define the month in which analysts announce the estimates as the *statistical month,* and the future month for which the analysts estimate EPS, as the *forecasted month*. We eliminate the observations in the first three statistical months to incorporate time lag for the publication of annual reports[11] and last two statistical months to make sure that analyst forecasts are made before national elections. After that, we use the means of all monthly observations in a year as a proxy for annual consensus.

We remove the countries that have less than 30 observations and the observations before 1985.[12] We use the means of monthly observations in a year as the annual observations. In the final sample, we have 112,349 panel observations with over 7000 firms across 28 countries and 27 years from 1990 to 2017. The year- and industry- distribution of observations are reported in Panel A and B in Fig. 1, respectively. In Panel A, we visualize a steady increase in the number of observations starting in 1990, and a slight decrease after 2008, most likely as a result of the sub-prime financial crisis. In Panel B,[13] we note that manufacturing firms dominate the sample, followed by finance, insurance, real estate, services, transportations and public utilities.

3.3. Control variables

We categorize our control variables under three broad headings: (1) *Institutional environment* variables, (2) *Political institutions* variables, (3) and *Firm and country-specific control* variables that include firm size, firm profitability, industry classification, and real GDP growth.

3.3.1. Institutional environment variables

To explore the relation between analyst forecasts accuracy and the institutional environment, we focus on the country institutional environment (e.g., corruption, law enforcement), and country information transparency characteristics as they have been widely used in the literature.

Previous research shows that analysts' forecasts tend to be positively related to the quality of information disclosure and transparency, given that higher disclosure decreases the cost of collecting information about the companies (Lang and Lundholm, 1996; Hope, 2003; Francis et al., 2009). We thus expect that analysts' activity is affected by the quality of

[6] Bialkowski et al. (2008), Boutchkova et al. (2012) and Pástor and Veronesi (2012, 2013) show that stock market volatility is significantly higher than normal during election period.

[7] See http://www.electiondataarchive.org/index.html and http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0, contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html

[8] See http://www.wikipedia.org/.

[9] See http://www.electionresources.org/.

[10] We use the timing and type of election (See Table 1) from Julio and Yook (2012) when information is unavailable in our main data sources.

[11] We admit that the fiscal year ends may be different across the firms in our international sample. Since we cannot identify the exact date for the annual report publication for each firm, we use the average time horizon of three months for all the firms.

[12] Although I/B/E/S starts to collect estimates data in 1976, there are very little observations before 1985.

[13] See the detailed definition on the website: http://siccode.com/en/

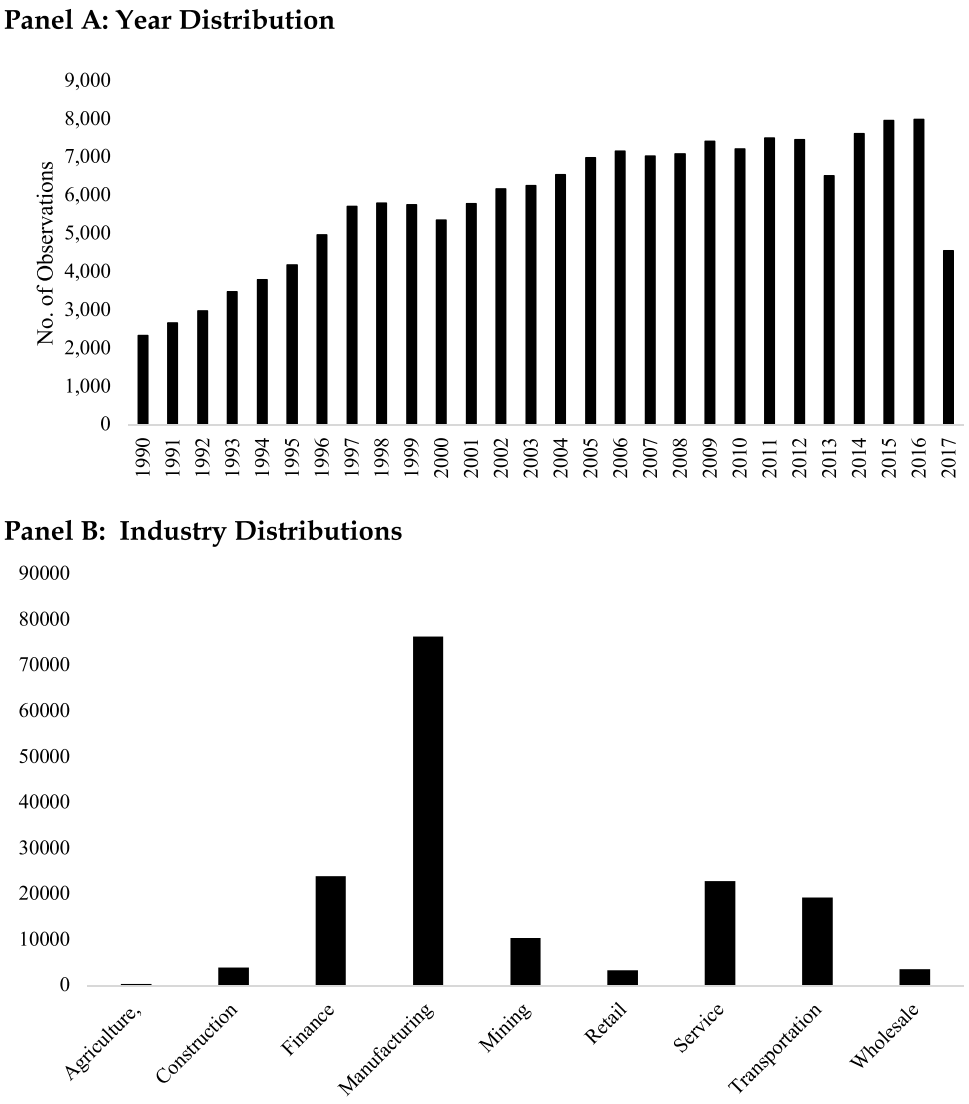

Fig. 1. Year and Industry Distributions. These figures depict the distribution of annual consensus observations in term of year (Panel A) and industry (Panel B) distribution.

information transparency standards at the country-level, and we conjecture that there is a positive relation between high-quality information transparency standards and analysts' accuracy. We also expect better quality institutions (i.e., lower corruption, and better law enforcement) to be positively related to analysts' forecasts accuracy.

3.3.2. *Political institutions variables*

Recent finance and accounting studies explore the role of political institutions in shaping firms' outcomes. Specifically, Qi et al. (2010) find that political institutions explain cross-country differences in the cost of debt. In the same vein, Boubakri et al. (2013) provide evidence that strong political institutions are associated with higher corporate risk-taking. Eleswarapu and Venkataraman (2006) suggest that equity-trading costs are higher in politically unstable environments. Therefore, we expect analyst activity to be influenced by the quality of political institutions in place. Following Qi et al. (2010) and Boubakri et al. (2013), we measure the strength of the stability of political institutions prevailing in a country using political risk rating index (*POLRISK*) from ICRG and political stability (*POLSTAB*) and government stability (*GOVSTAB)* from (WGI). These indices measure the competitiveness and fairness of elections, as well as the extent to which competing political and minority groups could constraint government. We conjecture that there is a positive relation between the stability of political institutions and analyst accuracy.

3.3.3. *Firm and country-specific control variables*

Larger firms are likely to be followed by more analysts (Bhushan, 1989), and are expected to have more forthcoming disclosure policies (e.g., Rajan and Servaes, 1997; Duru and Reeb, 2002; Gu and Wu, 2003). Such size effect usually captures a host of factors, including the potential for greater fees from trading and corporate finance activities (and hence greater potential analyst revenues as larger firms are more visible and more prestigious). Consistent with previous research, we measure firm size with the log of market capitalization at the time of the issue (*LSIZE*). We expect the coefficient of (*LSIZE*) to be positively related to analysts' forecasts' accuracy.

We also control for various other factors identified in literature as the determinants of analysts' forecasts, including profitability, growth and cash flow volatility. Specifically, following Bhushan (1989) and Lang and Lundholm (1996), we measure profitability with the return on assets ratio (*ROA*), and we measure the growth opportunity as the ratio of market value of equity to the book value of equity at the end of the year

Table 2
Descriptive Statistics.

Variable	N	Mean	STD	P5	P25	P50	P75	P95
ACCU	164,510	-6.128	26.874	-20.683	-3.769	-1.292	-0.446	-0.097
BIAS	164,510	3.296	23.691	-4.776	-0.551	0.240	2.243	16.659
ELECT	164,510	0.257	0.437	0.000	0.000	0.000	1.000	1.000
CRISIS	164,510	0.152	0.359	0.000	0.000	0.000	0.000	1.000
ANUM	164,510	1.778	0.792	0.693	1.099	1.735	2.398	3.121
LOSS	164,510	0.200	0.400	0.000	0.000	0.000	0.000	1.000
LSIZE	164,510	3.017	0.099	2.858	2.949	3.015	3.082	3.183
LEV	164,510	0.234	0.200	0.000	0.063	0.208	0.357	0.588
ROA	164,510	0.030	0.160	-0.193	0.013	0.047	0.087	0.182
CHEPS	164,510	-0.079	8.842	-2.999	-0.517	0.006	0.335	2.622
MTB	164,510	2.636	7.447	0.462	1.057	1.718	2.921	7.787
PPE	164,510	0.303	0.259	0.009	0.079	0.243	0.465	0.831
ISALE	164,510	0.226	0.302	0.000	0.000	0.022	0.416	0.882
INSIDER	164,510	0.324	0.249	0.004	0.104	0.291	0.516	0.761
RET	164,510	0.006	0.039	-0.061	-0.014	0.007	0.028	0.068
VOL	164,510	0.105	0.051	0.040	0.066	0.094	0.134	0.203
MRET	164,510	0.006	0.019	-0.029	-0.004	0.008	0.017	0.031
MVOL	164,510	0.046	0.023	0.018	0.030	0.042	0.057	0.085
GDP	164,510	2.512	2.480	-1.128	1.495	2.535	3.773	7.064

This table reports the descriptive statistics of annual consensus variables during a period of 1990–2017. Appendix A outlines definitions and data sources for all variables.

(*MTB*) (i.e., the market to book ratio). Consistent with prior research, we expect a positive relation between *ROA* and *MTB*, and analysts' forecasts' accuracy, respectively.

Moreover, prior research (e.g., Lang and Lundholm, 1996; Brown and Higgins, 2001; Duru and Reeb, 2002) suggests that earnings' change *CHEPS* is negatively related to forecasts' accuracy. In this vein, Lim (2001) finds evidence that long-term earnings volatility is associated with less accurate forecasts, since the forecasting task is harder for firms with historically volatile earnings compared to firms with historically more stable earnings. Following Lys and Soo (1995) who argue that the number of analysts measures the intensity of competition in the market, we include the number of analysts per firm (*ANUM*) to control for the incentives to forecast accurately.

To control for country-level characteristics, we use the information from International Country Risk Guide (ICRG). We add country dummies to capture the fix-effect of other country-level variables. Moreover, we incorporate year dummies to capture the global conditions that may affect all the countries in our sample simultaneously. We further use the two-digit SIC code to control for industry characteristics, and a crisis dummy (*CRISIS*) to control for the impact of global financial crisis. Additionally, to capture the level of capital market development and overall domestic economic factors, we control for economic growth (*DPG*), and market volatility (*MVOL*) as indicators for the healthiness of local economy. We expect these controls to be negatively related to analysts' forecasts errors.

The detailed descriptions for all the variables appear in Appendix A. The summary statistics and the correlation matrix are reported in Table 1 and Table 2 respectively.

4. Empirical analysis

Following the literature, we define the properties of analysts' forecasts as follows:

$$BIAS = \frac{Estimated \quad EPS - Actual \quad EPS}{Price \quad on \quad Statistical \quad Date}$$

$$ACCU = -\frac{|Estimated \quad EPS - Actual \quad EPS|}{Price \quad on \quad Statistical \quad Date}$$

4.1. Multivariate regression model

Our multivariate regression is as follows:

$$Forecast \quad Measures_t = \alpha + \beta_1 ELECTION + \gamma Control\_Variables_t + \varepsilon_t$$

Where *Forecast Measures* include *BIAS*, *ACCU*, Δ*BIAS*, Δ*ACCU*. *ELECT* is the indicators for elections as defined in Section 3. *Control variables* include firm-level information, analysts' estimates' characteristics, country-level factors, industry and year dummies. At the firm-level, we control for size (*LSIZE*), *LEV*, *ROA*, change in EPS (*CHEPS*), and Market Return; market volatility (*MRET; MVOL*). At the country level, we control for GDP growth rate *(GDP)* and country dummies. We use the clustered standard errors' approach to mitigate the impact of serial correlations in panel data.

4.2. National elections and analysts' forecasts

Table 3 reports the multivariate regression results for the entire sample. As shown in column (2), we find that the forecasts are biased upward, with coefficients of about 0.3% in election yeas as compared to the mean of forecasts' bias in *no-election* years. With regard to accuracy, as reported in column (1), we document a significant decrease in election years with a coefficient of 0.14%, suggesting that national elections decrease analysts' forecasts' accuracy when political uncertainty is high. Economically, the analysts' forecasts' accuracy is reduced by approximately 2% and forecasts' error is biased upward by 9% in election years.[14] Moreover, column (3) and (4) in Table 3 reports the impacts of national elections on the change of analysts' forecasts' accuracy (bias) in a year relative to these in previous year. We find that the mean of the changes of forecasts' accuracy in election years are significantly more negative in contrast to the mean of changes in non-election years, which supports a decline of forecasts' accuracy when political uncertainty is high. Regarding the change of forecasts' bias, we find that the mean of the change of forecasts' bias is more positive in election years compared

[14] According to the descriptive statistics reported in Table 2, the means of *BIAS* and *ACCU* are 3.296% and − 6.128% respectively. When the statistical year is an election year, the percentage increase (decrease) of *BIAS* (*ACCU*) is equal to 0.3%/3.296% (−0.14%/−6.128%). When using REVISION and DISPER as alternatives measures to accuracy, our results are not significant.

Table 3
Multivariate Regressions for Analysts' forecasts' Accuracy and Bias.

	ACCU (1)	*BIAS* (2)	Δ*ACCU* (3)	Δ*BIAS* (4)
ELECT	-0.142 * **	0.285 * **	-0.223 * **	0.327 * **
	(0.043)	(0.049)	(0.063)	(0.071)
CRISIS	-0.488	0.521	-0.082	-0.197
	(0.685)	(0.805)	(0.591)	(0.602)
ANUM	1.259 * **	-0.572 * **	0.241 * **	-0.211 * *
	(0.066)	(0.073)	(0.073)	(0.085)
LOSS	-1.362 * **	0.786 * **	3.210 * **	-3.698 * **
	(0.104)	(0.117)	(0.146)	(0.168)
LSIZE	-5.074 * **	19.161 * **	-16.607 * **	22.395 * **
	(1.204)	(1.338)	(1.282)	(1.536)
LEV	-3.420 * **	1.245 * **	-0.157	-0.387
	(0.270)	(0.301)	(0.301)	(0.346)
ROA	1.408 * **	1.407 * *	-6.527 * **	18.136 * **
	(0.492)	(0.575)	(0.911)	(1.049)
CHEPS	0.026 * *	-0.041 * **	0.001	0.067 * **
	(0.012)	(0.014)	(0.023)	(0.025)
MTB	0.237 * **	-0.127 * **	0.171 * **	-0.271 * **
	(0.014)	(0.015)	(0.019)	(0.022)
PPE	-1.134 * **	0.742 * *	-0.067	-0.995 * **
	(0.295)	(0.326)	(0.310)	(0.372)
ISALE	-0.631 * **	0.638 * **	-0.083	0.160
	(0.167)	(0.189)	(0.182)	(0.213)
INSIDER	0.489 * **	-0.431 * *	0.130	-0.061
	(0.178)	(0.199)	(0.205)	(0.235)
RET	23.285 * **	-21.040 * **	9.186 * **	16.809 * **
	(0.808)	(0.925)	(1.093)	(1.275)
VOL	-7.711 * **	5.478 * **	4.579 * **	-1.018
	(0.702)	(0.783)	(0.919)	(1.038)
MRET	-14.563 * **	14.755 * **	-5.849 * **	0.293
	(1.606)	(1.846)	(2.267)	(2.642)
MVOL	14.481 * **	-23.078 * **	21.934 * **	-34.805 * **
	(1.772)	(1.990)	(2.341)	(2.678)
GDP	0.091 * **	-0.075 * **	-0.018	0.045 * *
	(0.015)	(0.018)	(0.019)	(0.023)
CONSTANT	9.534 * **	-52.517 * **	46.970 * **	-64.384 * **
	(3.533)	(3.926)	(3.769)	(4.535)
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.04	0.06	0.10
No. of Obs	135,909	135,909	99,050	99,050

This table reports the multivariate regression results for the full sample during a period of 1990 − 2017. The standard errors are clustered by firms and reported in the parentheses. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. Appendix A outlines definitions and data sources for all variables.

with the mean of changes in non-election year. It indicates an increase of forecasts' bias on average in election years, which further strengthens the positive impact of political uncertainty on forecasts' bias. This also suggests that analysts are more optimistic in election years.

As expected, we also find that *LSIZE*, LSALE, *LEV* and *PPE* are positively (negatively) related to *BIAS* (*ACCU*), while *ANUM, CHEPS, INSIDER and MTB* are negatively (positively) related to *BIAS (ACCU*). Note that the profitability measured by ROA is positively related to forecasts' accuracy, and negatively related to the variation of forecasts' accuracy. It suggests a higher forecasts' accuracy and a lower variation of forecasts' accuracy in profitable firms since profitable firms are more visible and more stable making them relatively easy to predict. For country level controls, we document a positive (negative) relation between *GDP* and *ACCU* (*BIAS*). Meanwhile, *MVOL* is negatively related to *BIAS* but positively related to analysts' accuracy.

Next, we examine the robustness of our findings from three aspects. First, we use alternative measures of analysts' forecasts' accuracy and bias, denoted by *ACCU2* and *BIAS2*, respectively. Following Lang et al. (2003), we use actual EPS as deflators to calculate analysts' forecasts' accuracy and bias. As reported in Table 4 Panel A, we document a significant decline(increase) of analysts' forecasts' accuracy (bias) in election years, which are consistent with our findings in Table 3. Second, we use individual analysts' forecasts to examine the robustness of our findings. Particularly, we extract the detailed EPS forecasts of individual analysts from I/B/E/S. We use the similar multivariate regression model with analysts' fixed effects. As reported in Table 4 Panel B, we document significantly negative (positive) relationship between national election dummy and *ACCU3* (*BIAS3)*. This evidence further strengthens the results we reported in Table 3.

Third, to further quantify the magnitude of political uncertainty in national election years, we extract the information of votes from CLEA. Specifically, we use the ratio of votes obtained by winning party and that obtained by the closest second party to measure the closeness of votes in election years. We separate the elections into three groups according to the closeness of votes. The high ratio suggests a low closeness and vice versa. We remove the countries without voting information. We set *CLOSE* equal to one for close-elections (low ratio group) and zero otherwise when we analyze the impact of close-elections on analysts' behavior and use the same setting when we analyze the impact of not-close-elections on analysts' behavior. We report in Table 4 Panel C a negative (positive) coefficient for *ACCU*(*BIAS*) for *ELECT***CLOSE* variable. It suggests that the influence of political uncertainty on analysts' forecasts' accuracy and bias is significantly more pronounced in election years with high closeness of votes. This finding supports the fact that election outcome is less predictable in closely contested elections (e.g., Julio and Yook, 2012), which increases political uncertainty. Thus, a high degree of political uncertainty negatively affects more the ability of analysts to issue accurate forecast and leads to more bias when elections are closely contested. In a nutshell, as per our conjectures, forecasts' accuracy decreases and forecasts' errors are biased upward in times of increased political uncertainty, consistent with the fact that the ability of analysts to make accurate forecasts about firms' performance is compromised in an environment of higher uncertainty (Loh and Stulz, 2015). These results are statistically and economically significant, even after controlling for a multitude of firm and country level determinants of forecasts' accuracy.

Moreover, we find that analysts' forecasts' accuracy significantly decreases in election years and the forecasted *EPSs* are biased upward when national elections are involved. Moreover, we note that after election when the political uncertainty is resolved there is less bias in analysts' forecasts. To summarize, this analysis shows optimistically biased estimates, and less accuracy in national election years. Thus, it seems that as expected, political uncertainty decreases analysts' forecasts' accuracy Table 5.

4.3. Endogeneity analysis

In previous sections, we document a significant decline of analysts' forecasts 'accuracy, and an increase of analysts' forecasts' bias in national election years in which political uncertainty is high. Since Li et al. (2016) posit that in some countries, the timing of elections can be endogenous to economic conditions. This could happen when the incumbent leader has the option to call for an early election, typically when economic conditions are favourable, as this increases the probability of retaining power (Boutchkova et al., 2012). Under these

Table 4
Robustness Analysis.

Panel A: Alternative Measures of Analysts' Forecasts		
	ACCU2 (1)	*BIAS2 (2)*
ELECT	-4.235 * **	2.810 * **
	(1.348)	(1.100)
Other Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.02	0.01
No. of Obs	89,028	88,734
Panel B: Individual Analysts' Forecasts		
	ACCU3 (3)	*BIAS3 (4)*
ELECT	-0.181 * **	0.215 * **
	(0.027)	(0.034)
Other Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.40	0.30
No. of Obs	2,213,982	2,213,982
Panel C: Closeness of Votes		
	ACCU (5)	*BIAS (6)*
*ELECT*CLOSE*	-0.249 * **	0.410 * **
	(0.051)	(0.058)
ELECT	0.365 * **	-0.426 * **
	(0.082)	(0.093)
Other Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.07	0.04
No. of Obs	135,909	135,909

This table reports the regression results to examine the robustness of the impacts of national elections on analysts' forecasts' accuracy and bias. In Panel A, we use alternative measures of analysts' forecasts' accuracy (*ACCU2*) and bias (*BIAS2*). *ACCU2* is the absolute value of the difference between the median of forecasted EPS and the corresponding actual EPS deflated by the actual EPS. *BIAS2* is the difference between the median of forecasted EPS and the corresponding actual EPS deflated by the actual EPS. In Panel B, we use individual analysts' forecasts' accuracy (*ACCU3*) and bias (*BIAS3*). *ACCU3* is the absolute value of the difference between individual analyst's forecasted EPS and the corresponding actual EPS deflated by stock price. *BIAS3* is the difference between individual analyst's forecasted EPS and the corresponding actual EPS deflated by stock price. In Panel C, we examine the impact of the closeness of votes. The closeness of votes is measured by the ratio of votes obtained by winning party and that obtained by the closest second party. We separate the elections into three groups according to the closeness of votes. The high ratio indicates the low closeness and vice versa. *CLOSE* is an indicator that equals to one when the ratio of votes falls into low ratio group, and zero otherwise. We remove the countries without voting information. All dependent variables are scaled by 100. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

circumstances, the calling of elections may coincide with variation in analysts' forecasts that are unrelated to political uncertainty, potentially confounding our inferences.

To address this possibility, we divide elections into those with fixed (scheduled) and those not fixed by constitutional law (flexible). The national elections with fixed timing are more exogenous, which alleviates the potential endogeneity concern. Thus, we check the robustness of our findings using countries with fixed timing only and report the results in Table 6. As expected, we still document the significantly negative (positive) relationship between political uncertainty and *ACCU (BIAS)*, which adds more credence to the baseline findings in Section 4.2.

Table 5
Elections and Analysts' Forecasts: After Elections.

	ACCU (1)	*BIAS (2)*	*ΔACCU (3)*	*ΔBIAS (4)*
ELECT	-0.130 * **	0.258 * **	-0.173 * **	0.226 * **
	(0.047)	(0.054)	(0.065)	(0.073)
AFTER_ELECT	0.032	-0.068	0.121 *	-0.246 * **
	(0.046)	(0.053)	(0.062)	(0.071)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.04	0.06	0.10
No. of Obs	135,909	135,909	99,050	99,050

This table reports the coefficients of the key variables for both election and after election. The firm characteristics, country-level variable, industry dummy and year dummy are controlled. The dependent variables are 100 *ACCU and 100 *BIAS, respectively. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Table 6
Endogeneity Analysis: Fixed-Election Timing.

	ACCU (1)	*BIAS (2)*	*ΔACCU (3)*	*ΔBIAS (4)*
ELECT	-0.130 * **	0.258 * **	-0.363 * **	0.391 * **
	(0.047)	(0.054)	(0.084)	(0.097)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.04	0.08	0.12
No. of Obs	135,909	135,909	51,338	51,338

This table reports the multivariate regression results for the subsample in which the election time are fixed during a period of 1990 − 2017. The standard errors are clustered by firms and reported in the parentheses. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. Appendix A outlines definitions and data sources for all variables.

5. Possible channels and moderation effects

In this section, we investigate the potential channel through which elections may lead to change in analyst forecasts.

5.1. The opaqueness of accounting reports

Morck et al. (2000) argue that greater transparency and more complete revelation of firm-specific information should reduce R2. However, Jin and Myers (2006) suggest that opacity of financial reports could affect more than the second moment of stock return distributions. Thus, lower financial reporting quality may increase information asymmetry and consequently the cost of collecting firm specific information for financial analysts.

A high level of uncertainty during election may provide an opportunity for managers to conceal earnings management taking advantage that market participants can be distracted by unpredictable policy changes (Yung and Roots, 2019). Thus policy-induced economic uncertainty makes it more difficult for financial analysts to make more accurate forecast. To examine the effect of the opaqueness of financial statements on the relation between national elections and analysts forecasts accuracy, we split our sample on high versus low information opacity. Following Hutton et al. (2009) we measure *OPAQUE* as the prior three years' moving sum of the absolute value of discretionary

Table 7
Possible channels: the opaqueness of accounting reports.

Panel A: Analysts' Forecasts' Measures				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High OPAQUE	Low OPAQUE	High OPAQUE	Low OPAQUE
ELECT	-0.064	-0.296 * **	0.126	0.471 * **
	(0.068)	(0.069)	(0.080)	(0.077)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.06	0.08	0.03	0.06
No. of Obs	56,002	55,918	56,002	55,918
Chi2-Statistics (p-value)	3.27 * ** (0.0707)		5.51 * * (0.0189)	
Panel B: The Changes of Analysts' Forecasts' Measures				
	Δ*ACCU*	Δ*ACCU*	Δ*BIAS*	Δ*BIAS*
	High OPAQUE	Low OPAQUE	High OPAQUE	Low OPAQUE
ELECT	-0.157	-0.410 * **	0.240 * *	0.567 * **
	(0.104)	(0.090)	(0.121)	(0.098)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.05	0.09	0.09	0.12
No. of Obs	41,679	44,444	41,679	44,444
Chi2-Statistics (p-value)	2.46 (0.1167)		3.09 * (0.0788)	

This table reports the effect of accounting reports opaqueness on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of accounting reports opaqueness, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Table 8
Possible channels: equity volatilities.

Panel A: Systematic Volatility				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High Volatility	Low Volatility	High Volatility	Low Volatility
ELECT	-0.127 *	-0.202 * **	0.235 * **	0.341 * **
	(0.072)	(0.059)	(0.082)	(0.067)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.07	0.04	0.04
No. of Obs	66,771	66,534	66,771	66,534
Chi2-Statistics (p-value)	0.36 (0.5480)		0.55 (0.4563)	
Panel B: Idiosyncratic Volatility				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High Volatility	Low Volatility	High Volatility	Low Volatility
ELECT	-0.071	-0.177 * **	0.216 * *	0.284 * **
	(0.083)	(0.048)	(0.094)	(0.054)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.06	0.04	0.04
No. of Obs	66,934	66,371	66,934	66,371
Chi2-Statistics (p-value)	0.70 (0.4022)		0.23 (0.6291)	

This table reports the mitigation effect of equity volatility on the relationship between national elections and analysts' forecasts measures. We use CAPM model to decompose equity return into systematic and idiosyncratic returns. Specifically, we use MSCI equity market index in a country to proxy for the market return. The systematic component is the part that can be explained by CAPM model and the idiosyncratic component is the residual. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

accruals. The results in Table 7 show that the negative relationship between financial analysts Bias and national election is more pronounced in low financial reporting quality. This evidence suggests that political uncertainty affects financial analysts forecast mainly through the opaqueness of financial reporting channel.

5.2. Equity volatility

As documented in Boutchkova et al. (2012), local and global political risk have different impacts on systematic and idiosyncratic volatility components. Thus, to examine the equity volatility channel through which political uncertainty affects analyst forecast accuracy, following the methodology of Morck et al. (2000) and Jin and Myers (2006) we decompose total volatility into systematic and idiosyncratic components to determine the impact of policy uncertainty through each sub-channel. The results reported in Table 8 show that there is no difference between the high versus low volatility groups for both measures of volatility.

5.3. Political connections

Politically connected firms are prevalent in all countries as documented by Faccio (2006). These firms benefit from close relationships with the government, preferential treatment, easier access to finance, and an implicit guarantee of government bailout in times of distress. Because politically connected firms (PCF) might have private information sources, and are thus better informed about possible policy changes, compared to their non-connected peers. Under such circumstances, PCFs could adjust their strategies in anticipation of election outcomes using their political connection to hedge political risk and optimizing political benefits. Therefore, around elections, PCF firms are less affected by

Table 9
Possible Channels: Political Connections.

	ACCU PC (1)	*ACCU NPC (2)*	*BIAS PC (3)*	*BIAS NPC (4)*
ELECT	-0.207	-0.139 * **	0.051	0.280 * **
	(0.315)	(0.044)	(0.269)	(0.050)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.11	0.07	0.08	0.04
No. of Obs	1148	132,157	1148	132,157
Chi2-Statistics (p-value)	0.04 (0.8446)		0.41 (0.5204)	

This table reports the mitigation effect of political connections on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to political connection (PC) and Non-Political Connection (NPC). The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

national elections than other firms, and why the forecasting task of analysts may end up being easier. As shown in Table 9, we do find that forecasts' accuracy and bias of politically connected firms is not affected by national elections as much as that of non-politically connected firms.

5.4. Politically sensitive industries

Boutchkova et al. (2012) identify politically sensitive industries as "more dependent on trade, contract enforcement and labor", and find

Table 10
Possible Channels: Industry Sensitivity to Political Uncertainty.

Panel A: Trade				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.311 * **	0.044	0.429 * **	0.133
	(0.098)	(0.077)	(0.112)	(0.089)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.09	0.07	0.06	0.04
No. of Obs	29,671	41,166	29,671	41,166
Chi2-Statistics (p-value)	5.48 * * (0.0193)		2.96 * (0.0856)	
Panel B: Input				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.346 * **	0.059	0.505 * **	0.054
	(0.070)	(0.057)	(0.078)	(0.066)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.07	0.05	0.04
No. of Obs	60,573	67,991	60,573	67,991
Chi2-Statistics (p-value)	13.50 * ** (0.0002)		13.28 * ** (0.0003)	
Panel C: Labor				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.214 * **	-0.046	0.410 * **	0.183 * *
	(0.082)	(0.067)	(0.091)	(0.078)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.09	0.07	0.06	0.04
No. of Obs	46,908	52,543	46,908	52,543
Chi2-Statistics (p-value)	1.73 (0.1882)		2.49 (0.1146)	

This table reports the mitigation effect of industry sensitivity to political uncertainty on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of each financial development measures, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Table 11
Mitigation Effects: Country Information Transparency.

Panel A: Comprehensive Measure of Transparency (TRP)				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	0.083	-0.136 * *	-0.083	0.361 * **
	(0.080)	(0.064)	(0.092)	(0.073)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.08	0.04	0.05
No. of Obs	68,082	62,167	68,082	62,167
Chi2-Statistics (p-value)	2.92 * (0.0873)		9.09 * ** (0.0026)	
Panel B: CIFAR				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	0.273 * **	-0.215 * **	-0.158 *	0.373 * **
	(0.075)	(0.074)	(0.087)	(0.085)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.08	0.04	0.05
No. of Obs	35,064	52,042	70,872	59,377
Chi2-Statistics (p-value)	1.41 (0.2353)		0.38 (0.5387)	
Panel C: Earning Transparency (ET)				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.001	-0.167 * **	0.203 * *	0.300 * **
	(0.089)	(0.060)	(0.101)	(0.069)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.08	0.04	0.05
No. of Obs	70,872	59,377	70,872	59,377
Chi2-Statistics (p-value)	1.41 (0.2353)		0.38 (0.5387)	

This table reports the mitigation effect of financial development on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of each financial development measures, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

their return volatility to be positively associated with political uncertainty. We thus expect that firms in politically sensitive industries will be more affected by political uncertainty (Li et al., 2016), resulting in less accurate forecasts by analysts. Following Boutchkova et al. (2012), we use *INPUT*, *TRADE*, and *LABOR* to identify the political sensitivity of a particular industry. We describe the definition of these variables in the Appendix A. The results reported in Table 10 show that ACCU(BIAS) decrease (increase) more significant in high politically sensitive industries, suggesting that these industries are more complex to assess in times of political uncertainty.

5.5. Moderation effects and robustness checks

First, we perform a split sample analysis to determine whether the negative relation between forecasts' accuracy and political uncertainty is mitigated in countries with better information transparency. Following Francis et al. (2009), we use three measures to capture the quality of information transparency. First, we use a comprehensive measure of transparency (*TRP*) for each country. Higher values of *TRP* indicate more transparency. Second, we use *CIFAR* to measure the quality of the financial reporting environment. The third measure is a measure of Earnings Transparency (*ET*) which is based on three earnings opacity metrics in Bhattacharya et al. (2003) that intended to capture three attributes of earnings numbers: earnings aggressiveness, earnings smoothing, and loss avoidance. A higher average rank indicates less opacity and, by implication, greater transparency. The results in Table 11 panel A for *TRP* measure show that forecasts accuracy is significantly worse in lower information transparency environment.[15] For CIFAR measure, we report in panel B that *ACCU*(*BIAS*) increase (decrease) in the high group versus it decreases (increase) in the low group. However, for *ET* measure, we find in the panel C that *BIAS* increases in both group but is more pronounced in the low group. Overall, our results suggesting that the prevalent information transparency mitigate the impact of policy uncertainty on the capacity of the analysts to make accurate forecast.

Second, we perform a split sample analysis to determine whether the negative relation between forecasts' accuracy and political uncertainty is mitigated by the financial market development and the market financial structure. The results in Table 12 show that the forecast accuracy decrease during election year in low developed market when % of Market Capitalization over GDP is used as a measure.

[15] As additional robustness test given the heavy weight of observations from the U.S., we re-run our analysis after we eliminate them from our sample. In unreported results for shape of space, the negative association between forecasts' accuracy and political uncertainty is significant after removing the U.S. observations from the sample, alleviating any concern that our inferences may be biased because of them.

Table 12
Mitigation Effects: Financial Developments.

Panel A: % of Market Capitalization over GDP				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.079	-0.214 * **	0.060	0.421 * **
	(0.064)	(0.069)	(0.073)	(0.078)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.08	0.03	0.05
No. of Obs	70,996	62,309	70,996	62,309
Chi2-Statistics (p-value)	1.19 (0.2744)		6.52 * * (0.0107)	
Panel B: % of Stock Trade Volumes over GDP (Heterogeneous Belief)				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.703 * **	0.021	0.822 * **	0.131 *
	(0.083)	(0.068)	(0.093)	(0.079)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.06	0.05	0.03
No. of Obs	60,846	53,175	60,846	53,175
Chi2-Statistics (p-value)	28.69 * ** (0.0000)		21.84 * ** (0.0000)	

This table reports the mitigation effect of financial development on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of each financial development measures, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Table 13
Mitigation Effects: Financial Structure.

	ACCU Bank	*ACCU* Market	*BIAS* Bank	*BIAS* Market
ELECT	-0.272 * **	0.071	0.415 * **	0.002
	(0.081)	(0.070)	(0.093)	(0.081)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.09	0.07	0.07	0.03
No. of Obs	39,819	77,738	39,819	77,738
Chi2-Statistics (p-value)	6.77 * ** (0.0093)		7.43 * ** (0.0064)	

This table reports the mitigation effect of financial structure on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to financial structure: bank-based and market-based. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Also, we find that the accuracy decreases during election in bank versus market-based structure which is consistent with the fact that banks have access to private information than public increasing the costs for financial analysts in policy-induced economic uncertainty when investors call for greater transparency Table 13.

We finally assess the robustness of our results by using alternative measures of political uncertainty. Specifically, we use political risk variables, such as political risk rating *(POLRISK)* and government stability (*GOVSTB*) from ICRG and political stability (*POLSTB*) from WGI in Table 14.

The results show that *ACCU* is negatively related to political risk proxies suggesting that the higher the policy risk, the lower the accuracy. We also find that analysts make less errors in their forecasts when policy risk rating is higher. For *GOVSTAB* as alternative proxies for policy uncertainty, we continue to observe, in our split sample analysis, a significant negative relation between political uncertainty proxies and forecasts' accuracy (in the subsample of countries with lower government stability). However, for POLSTAB as alternative measure, the result does not seem to hold.

Table 14
Mitigation Effects: Political Environment.

Panel A: Political Risk (*POLRISK*)				
	ACCU	ACCU	BIAS	BIAS
	High	Low	High	Low
ELECT	-0.060	-0.251 * **	0.183 * *	0.431 * **
	(0.072)	(0.086)	(0.084)	(0.099)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.08	0.05	0.05
No. of Obs	40,470	47,978	40,470	47,978
Chi2-Statistics (p-value)	1.48 (0.2244)		1.83 (0.1757)	
Panel B: Political Stability (*POLSTAB*)				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.203 * **	-0.065	0.423 * **	0.158 *
	(0.068)	(0.079)	(0.077)	(0.092)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.08	0.06	0.03
No. of Obs	52,228	50,941	52,228	50,941
Chi2-Statistics (p-value)	1.04 (0.3070)		2.91 * (0.0883)	
Panel C: Government Stability (*GOVSTAB*)				
	ACCU	*ACCU*	*BIAS*	*BIAS*
	High	Low	High	Low
ELECT	-0.036	-0.189 * **	0.023	0.414 * **
	(0.079)	(0.057)	(0.108)	(0.068)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.07	0.04	0.04
No. of Obs	39,094	91,268	39,094	91,268
Chi2-Statistics (p-value)	1.41 (0.2352)		7.03 * ** (0.0080)	

This table reports the mitigation effect of political environment on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of each political environment measure, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Finally, to capture the quality of the legal institutions in country, we consider measures of corruption (*CORRUPTION*) and the enforcement of law *(RULE OF LAW*) the results in Table 15 show that forecasts accuracy is significantly worse in highly corrupt environments, with low law enforcement.

6. Conclusion

In this study, we examine the influence of political uncertainty, proxied by national elections, on the behavior of analysts' forecasts on an international setting. Using firm-level monthly analyst forecasts' consensus data across 28 countries, we find that political uncertainty is associated with less accurate forecasts and more optimistic forecasts' bias. These findings suggest that the relation is relevant world-wide not just a US evidence Baloria and Mamo (2014). Also, our evidences are consistent with the extant literature that shows: 1) a positive relationship between the complexity of the forecasting task and analysts' earnings forecasts errors (Brown et al., 1987; Bhushan, 1989; Lang and Lundholm, 1996; Clement, 1999); 2) less predictable earnings lead to more optimistic biases in analysts' earnings forecasts (Das et al., 1998;

Table 15
Mitigation Effects: Legal Environment.

Panel A: Rule of Law (*RULE OF LAW*)				
	ACCU	ACCU	BIAS	BIAS
	High	Low	High	Low
ELECT	0.043	-0.273 * **	0.075	0.500 * **
	(0.075)	(0.069)	(0.089)	(0.078)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.08	0.08	0.04	0.05
No. of Obs	39,590	63,579	39,590	63,579
Chi2-Statistics (p-value)	5.64 * * (0.0176)		7.58 * ** (0.0059)	
Panel B: Corruption (*CORRUPTION*)				
	ACCU	ACCU	BIAS	BIAS
	High	Low	High	Low
ELECT	-0.004	-0.522 * **	0.098	0.773 * **
	(0.068)	(0.078)	(0.080)	(0.089)
Other Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.07	0.09	0.04	0.05
No. of Obs	51,784	51,385	51,784	51,385
Chi2-Statistics (p-value)	14.73 * ** (0.0001)		10.43 * ** (0.0012)	

This table reports the mitigation effect of legal environment on the relationship between national elections and analysts' forecasts measures. We divide the full sample into two subsamples according to the median of each legal environment measure, respectively. *High* (*Low*) indicates the subsample in which the observations are above (below) the medians. The standard errors are clustered by firms. * ** , * * and * indicate 1%, 5% and 10% significant level, respectively. The standard errors are clustered by firms and reported in the parentheses. Appendix A outlines definitions and data sources for all variables.

Lim, 2001; Duru and Reeb, 2002); and 3) uncertainty increases analysts' forecasts divergence (Barron and Stuerke, 1998; Park, 2005).

Moreover, we examine the impact of information opacity, institutional characteristics, industry characteristics, political connections channels on the relationship between national elections and analysts' forecasts' properties. We document that this relationship is mitigated by political connections and information opacity and is amplified by higher corruption, low information transparency and less law enforcement, as well as in low financial development and in bank-based markets. Overall, our findings highlight that the impact of political uncertainty on the real economy is channelled by analysts' forecasts properties including accuracy, in addition to the change in analysts' forecast's behavior during national election years.

Further, our findings generate several practical implications. First, our finding supports the assertion that analysts incorporate the information uncertainty embedded in political uncertainty in their forecasts, thus pointing to the potential importance of political uncertainty as a factor in asset pricing. Second, since financial analyst represent the believes of investors, our evidence imply that investors adjust their actions when they are exposed to uncertainty regarding the content and the implications of policy decisions. Third, our finding that policy uncertainty leads to more forecast errors supports more the underreactions hypothesis (e.g., Mendenhall, 1991) and not the analyst forecast optimism explanation.

We admit that measuring policy uncertainty still a challenge for empirical research, our measure of national election date as a source of political uncertainty has some limitation. For example, Kelly et al. (2015) discuss that the difficulty in evaluating the effect of political uncertainty particularly comes from the complexity involved in isolating exogenous variation in this uncertainty. The authors isolate political uncertainty by focusing on its variation around political events, namely, national elections. National elections conform to Kelly et al. (2015) conclusion. Second, our study supports the fact the policy induced is larger during election years and impacts the analyst's performance, however it does not respond to the question: Is analyst accuracy lower because it is harder to predict cash flows, dig out market information? which need to be explored by futures studies.

Appendix A. Variable definitions and sources

Variable	Description	Source
Measures for Analyst Forecasts		
BIAS	Analysts' forecasts' error: it equals to the difference between the median of forecasted EPS and the corresponding actual EPS divided by the price on statistical date.	I/B/E/S and Authors' Calculations
ACCU	Analysts' forecasts' accuracy: it equals to the minus one times the absolute value of the difference between the median of forecasted EPS and the corresponding actual EPS divided by the price on statistical date.	
BIAS2	Analysts' forecasts' error: it equals to the difference between the median of forecasted EPS and the corresponding actual EPS divided by the actual EPS.	
ACCU2	Analysts' forecasts' accuracy: it equals to the minus one times the absolute value of the difference between the median of forecasted EPS and the corresponding actual EPS divided by the actual EPS.	
BIAS3	Analysts' forecasts' error: it equals to the difference between individual analyst's forecasted EPS and the corresponding actual EPS divided by the price on statistical date.	
ACCU3	Analysts' forecasts' accuracy: it equals to the minus one times the absolute value of the difference between individual analyst's forecasted EPS and the corresponding actual EPS divided by the price on statistical date.	
ANUM	The number of analysts that follow a firm.	
Election Dummies		
ELEC	An indicator that equals to one if a firm's fiscal year end is no earlier than 60 days before and no later than 274 days after the election date, and zero otherwise	Constituency-Level Elections Archive (CLEA) and other sources
Firm Characteristics		
LOSS	It is an indicator that equals to one if net income is negative and zero otherwise.	Worldscope and Authors' Calculations
LSIZE	The logarithm of the market capitalization of a firm.	
LEV	The total liabilities divided by the total assets.	
PPE	The total amount of property, plants and equipment scaled by the total assets.	
INSIDER	The percentage holding of insiders.	
ROA	The return on assets: it equals to the net income divided by the total assets.	
CHEPS	The percentage change of EPS: it equals to the EPS in year *t* divided the EPS in year *t-1* and then minus one.	
MTB	The market value of equity divided by the book value of equity.	
Institutional Variables – Country Level		

(*continued on next page*)

(*continued*)

Variable	Description	Source
GDP	The annual growth rate of GDP in a country.	International Country Risk Guide (ICRG)
MRET	The annualized monthly return of MSCI equity market index in a country.	Thomas Reuter's Datastream
VOL	VOL is the volatility of individual stock return.	Thomas Reuter's Datastream
MVOL	The standard deviation of the monthly return of MSCI equity market index in a country.	Thomas Reuter's Datastream
CORRUPTIONRULE OF LAW	Corruption reflects the corruption within the political system. The lower rating indicates a high corruption level.Captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular quality of contract enforcement.	International Country Risk Guide (ICRG)World Governance Index (WGI
ET	Francis, Huang, Khurana and Pereira (2009)'s earning transparency measure.	Francis et al. (2009)
Political variables		
GOVSTAB	Government stability reflects the government's ability to carry out its declared program and its ability to stay in office. The low rating indicates a high risk and vice versa.	International Country Risk Guide (ICRG
POLSTAB	Political stability and the absence of violence measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.	World Governance Index (WGI
POLRISK	Political rating reflects the political stability of the countries covered by ICRG on a comparable basis. The lower the value indicates a higher risk, and vice versa.	International Country Risk Guide (ICRG)
Other Control Variables		
CRISIS	It equals to one during 1990, 1997, 2001 and 2007, and zero otherwise.	
TRADE	International trade exposure of an industry, and larger values correspond to higher industry-level sensitivities to political uncertainty.	Boutchkova et al. (2012)
LABOR	Labor intensity of an industry, larger values correspond to higher industry-level sensitivities to political uncertainty.	Boutchkova et al. (2012)
INPUT	Sensitivity of an industry to contract enforcement, and larger values correspond to higher industry-level sensitivities to political uncertainty.	Boutchkova et al. (2012)

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