Journal of Accounting and Public Policy xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Journal of Accounting and Public Policy

journal homepage: www.elsevier.com/locate/jaccpubpol

Full length article

Political uncertainty and firms' information environment: Evidence from China☆

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ARTICLE INFO

JEL Classification:
G14
G15
G18
P16

Keywords:
Political uncertainty
Information environment
Emerging market
China

ABSTRACT

How political uncertainty affects the supply of value relevant information about a firm is an important but unresolved question. Using an emerging market setting where political leaders are expected to exert significant influence on economic activities, we examine the effect of political uncertainty caused by turnovers of local government leaders on a firm's information environment. We find that during periods of political uncertainty, the total amount of idiosyncratic information about a firm that is available to the market is reduced. The adverse effect on information supply is manifest in firms that are more politically dependent and stronger when uncertainty is more severe. Further, we provide evidence suggesting that firms react to political uncertainty by reducing the amount and the quality of information provided to investors. We find that information intermediaries such as financial analysts and the media have a moderating effect on the information environment as they increase the production of information during periods of political uncertainty. However, these intermediaries do not negate the net loss of information.

1. Introduction

Recent finance literature has documented the adverse effect of political uncertainty on financial activities and firm value (e.g. Pastor and Veronesi, 2012, 2013, Boutchkova et al., 2012; Brogaard and Detzel, 2015). The market volatilities around the Brexit vote in the U.K. and the U.S. presidential election in 2016 are just two latest examples of such an effect. However, less is known about how political uncertainty affects the supply of value relevant information about a firm. This is an important question because the availability of information is a key factor in the efficient allocation of productive resources and essential for investors' optimal investment decisions (e.g., Myers and Majluf, 1984; Bushman and Smith, 2001; Biddle et al., 2009; Piotroski and Wong, 2013). In this

☆ We thank Martin Loeb (the editor), two anonymous referees, participants of research seminars at Saint Louis University, Central University of Finance and Economics of China, the 2016 Greater China Area Finance Conference in Xiamen, China, the 2017 AAA Annual Meeting, and the 2016 AAA Midwest Regional Meeting for their helpful comments and suggestions. Yunsen Chen thanks the support by the National Natural Science Foundation of China (71572209) and the Program for Innovation Research in Central University of Finance and Economics. Yunsen Chen and Dengjin Zheng thank China's Management Accounting Research & Development Center. Deqiu Chen thanks the support by the National Natural Science Foundation of China (71372060 and 71572035) and the Fundamental Research Funds for the Central Universities at the University of International Business and Economics (CXTD6-02). Weimin Wang thanks the financial support from the Summer Research Grant at the John Cook School of Business, Saint Louis University.

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https://doi.org/10.1016/j.jaccpubpol.2018.01.005

paper, we define information environment as the total amount of idiosyncratic information about a firm that is made available to investors[1] and examine how political uncertainty affects a firm's information environment.[2]

Political uncertainty could affect a firm's information environment in both directions. On the one hand, it could worsen the information environment by reducing the amount of information firms make available to the market. Firms concerned about increased political scrutiny (Watts and Zimmerman, 1986; Piotroski and Wong, 2013) could choose to reduce or obfuscate information disclosure. Political uncertainty also subjects the firms to more uncertain future cash flow streams. As a result, the option value of delaying decisions becomes higher (Dixit and Pindyck, 1994) which in turn causes firms to withhold disclosure of relevant information. On the other hand, the loss of information provided by the firm could be compensated by increased information production by other participants. Since investors likely demand more information during periods of political uncertainty, information intermediaries such as the media and financial analysts could increase the supply of information about the firms.[3] Therefore, the net effect of political uncertainty on a firm's information environment is an empirical question.

In this study, we examine the relationship between the information environment and political uncertainty in an emerging market setting. Specifically, we use turnover of municipal level government leaders in China as a measure of political uncertainty. Compared with the U.S. and other rule-of-law countries which form the backdrop of many studies[4], the Chinese setting is more suitable for an examination of the effect of political uncertainty for several reasons. First, politics and politicians have a much stronger influence on businesses in China than in a market based economy such as the U.S. China is ruled by one political party that has no term limits, does not answer to an electorate, and is not "checked and balanced" by other legal or political institutions. Bushman and Piotroski (2006) argue that a country's legal system and political economy influence the behavior of businesses, investors, and other market participants. While a U.S. firm is protected by permanent legal institutions and therefore insulated to a large extent against direct meddling from transient elected politicians, a Chinese firm is at the mercy of its political leaders. It is essential for Chinese businesses to cultivate and maintain political connections (*guanxi*) with government officials. Compared with U.S. firms, managing political risks is of paramount, not peripheral, importance to Chinese firms, and political concerns likely exert a primary, rather than a secondary, effect on business decisions, including decisions about information disclosure. Second, municipal leadership turnover in China creates an ideal experimental setting for our study. Chinese municipalities are large jurisdictions that govern millions, often tens of millions, in population. The Chinese political governance system leaves local municipalities as semi-autonomous economic regions, and the highest ranking municipal officials wield such vast power in their jurisdictions that they are often called "local emperors." Despite their powers in all local matters, municipal officials' tenures are exclusively dictated by the upper level government in secret deliberations and typically last about three years. As such, Chinese firms are subject to frequent, but unanticipated changes in their political leaders, which creates significant uncertainties to their welfare. Therefore, compared with fixed calendar election cycles in democratic countries that change political leaders, municipal leadership turnovers in China provide a relatively randomized sample of external political shocks.[5] Third, the information environment of the Chinese market is found to be one of the most opaque in the world (Morck et al., 2000; Jin and Myers, 2006; Piotroski et al., 2015). As the second largest economy of the world, and the largest emerging market, an examination of a possible adverse effect on its information environment is economically meaningful.

We examine all non-financial Chinese firms listed on its two main stock exchanges from 2000 to 2014. Using market based measures of stock price synchronicity and idiosyncratic volatility for information environment,[6] we find that municipal leadership turnover is positively associated with price synchronicity and negatively associated with idiosyncratic volatility after controlling for other factors. Our evidence supports the notion that political uncertainty adversely affects the information environment of firms by reducing the amount of value relevant information available to the market. Our results are robust to a battery of tests that include: matched sample approach and alternative measures of the dependent and main independent variables.

We also conduct cross-sectional analysis to ascertain whether a firm's information environment is more affected when the uncertainty is more pronounced. We posit that the following four conditions indicate a more severe degree of uncertainty: multiple changes in municipal leadership, changes in both party secretary and mayoral positions[7], abnormal turnover defined as top municipal leaders being demoted, fired, arrested or forced to resign, and new leader(s) without prior local connections. As predicted, we find that higher degree of political uncertainty is associated with a more adverse effect on the information environment.

If the reduction in firm specific information is indeed caused by political uncertainty, firms that are more reliant on political favors and/or susceptible to political influences ought to be more negatively affected by political uncertainty. To ascertain such a cross-sectional effect, we separate our samples by their political dependencies. Specifically, we compare state owned enterprises with

[1] We focus on idiosyncratic information about the firm and not public information about macro economic conditions, industry trends and competitors that also may be used by investors. While both types of information may be relevant, idiosyncratic information has unique values because it may inform investors about firm risks that are not diversifiable.

[2] Since it is not feasible to directly quantify idiosyncratic information about the firm, we use two price based measures, stock synchronicity (R^2) and idiosyncratic volatility, to infer the amount of information available to market participants. This practice is consistent with prior literature (e.g. Morck et al., 2000; Jin and Myers, 2006; Piotroski et al., 2015; Liao et al., 2016). We discuss this in detail in Section 3.

[3] The benefits to the information intermediaries could be increased viewership for the media and increased subscription and reputation for analysts.

[4] For example, Julio and Yook (2012), Gao and Qi, (2012), Pastor and Veronesi, (2013), and Dai and Ngo (2015), among others.

[5] Another advantage of this setting is that it gives researchers a much larger data set because there are hundreds of municipalities in China that experience leadership turnovers every few years.

[6] Li et al. (2014), among others, suggest that the R^2 and idiosyncratic volatility measures may contain noises and recommend using additional measures to triangulate results. Accordingly, we use trading volume and stock turnover as supplemental measures of information environment. The logic is that the amount and intensity of trading should be positively associated with the amount of information disseminated in the market. Our results are robust to these alternative measures.

[7] In the Chinese political system, the communist party secretary and the mayor are the number one and number two leaders, respectively, in a municipality.

non-state owned firms, and firms that receive government subsidies with firms that do not. We also compare firms that are domestically listed with those cross-listed on the Hong Kong Stock Exchange (HKEx) or issue B-shares. Domestically listed firms are susceptible to more local political influence compared with firms that cross-list on the HKEx because the latter are subject to HKEx's governance and information disclosure rules, making their information environment less sensitive to local politics. Similarly, firms that issue B-shares, shares denominated in foreign currencies and sold to foreign investors, are less sensitive to government influence because these firms are answerable to the interests of foreign investors who are not subject to local political influence. We find that the negative association between political uncertainty and the information environment is significant only for firms that are more politically dependent, i.e. state owned enterprises, firms that receive government subsidies, and firms that list domestically.

Next, we explore the channels through which political uncertainty affect the information environment. On the supply side and as discussed above, firms facing political uncertainty may choose to reduce the amount of information they make available to the public. This can be accomplished by either reducing the amount of information disclosure or using accounting discretion to obfuscate information. Therefore, we examine firms' accounting and disclosure practices: discretionary accrual levels, frequencies of voluntary management forecast, and overall quality of disclosure. We find that during periods of political turnovers firms have higher absolute levels of discretionary accruals[8], higher income decreasing accruals, fewer management forecasts, and lower overall disclosure qualities. The evidence suggests that firms react to political uncertainty by reducing the amount and quality of firm specific information provided to the market.

While firms may be reluctant to increase the supply of information during periods of political uncertainty, other market intermediaries may increase their production of information to meet increased investor demand. We examine two important information intermediaries, financial analysts and the media, to assess whether they increase information production. We find that analyst activities and media coverage increase for firms in regions that experience political turnovers. Further analysis shows a moderating effect by these intermediaries on the information environment during periods of political uncertainty. However, increased information production by intermediaries does not fully compensate for the loss of information provided by the firms.

This paper contributes to several streams of literature. The first is the literature that examine the economic impact of political uncertainty. Recent studies in finance have found that political uncertainty can lead to sub-optimal financial decisions (e.g. reduced investment) and adverse market outcomes such as increased risk premiums, higher cost of capital (Julio and Yook, 2012; Julio and Yook, 2016; Pastor and Veronesi, 2012, 2013; Francis et al., 2014; Gao and Qi, 2012; Chen et al., 2018; Cao et al., 2015; Colak et al., 2017). We extend this line of research into the accounting area by investigating whether political uncertainties affect firms' information environment. This is an important question because market participants rely on information to make optimal investment decisions and an opaque (transparent) information environment increases (decreases) information asymmetry between the firm and investors. We provide evidence of an adverse effect of political uncertainty on the information environment. Second, we contribute to the literature that links an economy's institutional features to properties of accounting information (e.g. Bushman and Piotroski, 2006; Ramanna and Roychowdhury, 2010; Dai and Ngo, 2015; Chen et al., 2018). We add to this stream of literature by showing that in an emerging market setting where businesses operate under the auspices of transient political leaders rather than permanent legal institutions, firms could reduce the amount and quality of value relevant information provided to the public. Lastly, this paper contributes to the literature that examines information opacity in world markets (Morck et al., 2000; Jin and Myers, 2006; Piotroski and Wong, 2013). The Chinese capital market is often found to be one of the most opaque in the world (Morck et al., 2000; Jin and Myers, 2006) and frequently ranked as the least transparent of the world's large economies (Piotroski and Wong, 2013). Lacking private property protection and having less developed financial system is often cited as the contributors of such lack of transparency. The results of this paper point to China's political system and firms' consideration of political cost as an additional contributor of the lack of information transparency in the Chinese market. We provide evidence that the concentrated power to local leaders combined with the secretive and unanticipated nature of local leadership change decisions generate uncertainties in local government jurisdictions that cause a general reduction of value relevant information to investors. What makes our findings important is that such uncertainties occur frequently and is a regular feature of the Chinese political system. As such, we complement and add to this stream of literature and the understanding of the lack of transparency of the Chinese market.

The rest of the paper is organized as follows: Section 2 discusses literature, background, and hypotheses; Section 3 discusses data and methodology; Section 4 presents the main empirical results and robustness tests; Section 5 presents results of the cross-sectional analyses; Section 6 presents results of the channel analyses; Section 7 discusses a possible alternative explanation; Section 8 concludes.

2. Literature, background and hypothesis development

2.1. The economic effect of political uncertainty

There is a growing body of research that examines the adverse effect of political uncertainty on economic activities and financial outcomes. Pastor and Veronesi (2013) develop a theoretical model showing that political uncertainty commands a risk premium. Using the policy uncertainty index of Baker et al. (2016), they find empirical evidence that confirms the theoretical predictions. Pastor and Veronesi (2012) also show theoretically that stock prices decline when a policy change is announced. Consistent with the

[8] We use a battery of discretionary/abnormal accrual measures that has been proposed in the literature (Jones, 1991; Dechow et al., 1995; Dechow and Dechev, 2002).

notion that political uncertainty negatively affects asset prices, Boutchkova et al. (2012) show evidence that local and global political risks increase stock return volatilities of affected industries and Gao and Qi (2012) find political risks affect bond yields.

Political uncertainty is also found to alter corporate decisions. Julio and Yook (2012) study corporate investment decisions in 48 countries around national elections and find that during election years, firms reduce investment expenditures relative to nonelection years by an average of 4.8%. Several studies examine the effects of political uncertainties on corporate decisions in emerging markets. Emerging markets provide better settings to study the economic impact of politics because compared with developed markets, they typically have less stable legal and economic institutions and more intrusive political systems. An et al. (2016) examines corporate investment decisions around turnovers in local political leaders in China. They find that firms significantly reduce investments as these turnovers created political uncertainties. Xu et al. (2016) find that Chinese firms reduce their cash holdings during the first year of a new government leadership.

Compared with the evidence about the financial impact of political uncertainties, less well understood is how political uncertainty affects the supply and the availability of value relevant information for investors in the market. There is some evidence that events that create political uncertainties, such as elections and political turnovers, affect firms' accounting choices, but with mixed results. For example, Dai and Ngo (2015) find increased accounting conservatism during periods of U.S. gubernatorial elections, suggesting a positive effect of political uncertainty on accounting quality. In contrast, other studies indicate a negative effect of political uncertainty on accounting quality. Ramanna and Roychowdhury (2010) find that politically connected outsourcing firms use discretionary accruals to depress reported earnings during the U.S. congressional election of 2004. Similarly, Gross et al. (2016) show that firms located on regions that are more politically aligned with the elected party engage in more earnings management. Bu et al. (2015) find that political uncertainty significantly reduces accounting conservatism for Chinese firms. These seemingly conflicting findings could be attributable to the fact that specific accounting choices are only a subset of a firm's information environment and do not capture the net impact of politics on the supply and availability of value relevant information (Piotroski et al., 2015). Our research differs from these studies in that we do not focus on specific accounting choices such as conservatism or accruals. Instead, we attempt to capture the totality of value relevant information available to investors. Another difference is that we examine other information sources (financial analysts and the media) in addition to a firm's accounting choices.

2.2. Political governance in china and the information environment

A country's legal institutions and political economy affect the behavior of businesses, investors, regulators and other market participants (Bushman and Piotroski, 2006). In markets with weak institutions and marketization, opportunities are created for political factors to influence business activities (Shleifer and Vishny, 1994). In this kind of environment, firms will seek to establish strong, stable connections with their local governments (Piotroski and Zhang, 2014). The political system in China is characterized by heavy-handed political influence and the virtual absence of permanent legal institutions. China is ruled by only one political party, the Chinese Communist Party (CCP), which has a perpetual and monopolistic hold on power. Political leaders are not elected by the people but are appointed by the party. They wield significant influence over many aspects of the society, including economic and business activities. Because of the lack of powerful permanent institutions that could act as checks and balances, the Chinese economy and business activities are heavily influenced by transient political leaders. Businesses have to cultivate and maintain good relationships with ruling politicians for policy, protection and other economic benefits (Xin and Pearce, 1996). Therefore, the Chinese economy, in contrast to the economies of most democratic countries, is more relational (*Guanxi*) in nature and firms with political connections capture tangible economic benefits (e.g. Tu et al., 2013; Wu et al., 2012). The Chinese governance system is such that its municipalities exist as autonomous economic regions. The municipal government is headed by dual leadership of the Communist party secretary and the mayor, who act as the number one and number two leaders, respectively. (The presence and eminence of the party secretary over the civilian chief of government shows that the real power in China resides with the CCP.) These political leaders, sometimes called "local emperors," take charge in local economic policy, taxation, regulation, government incentives, enforcement, and in the case of state owned enterprises, even operations and personnel choices. Despite their immense power in local matters, the tenures of municipal party secretaries and mayors are decided by upper level government officials. According to the "*Chinese Organizational Act* (2004)," the regular term of a local leader is five years with possible renewal in conjunction with the meetings of the National People's Congress every five years (Piotroski et al., 2015). However, most of the leaders do not complete their terms (Landry et al., 2017), and the average tenure of municipal leaders is less than three years[9] (Liu et al., 2015). Since personnel decisions are not deliberated and decided in a public manner, but rather are determined in secret meetings, the public usually does not anticipate when their political leaders will depart and who the successors will be. As such, Chinese firms are subject to frequent and unanticipated turnovers in their local leaders. When leadership turnover takes place and a new leader (or leaders if both the party secretary and the mayor are replaced) is installed, firms in the affected jurisdictions are faced with important uncertainties. First, the new leaders may have very different policy preferences and favored economic outcomes compared with the departing leaders with whom the firms have already cultivated relationships (An et al., 2016). Second, there is uncertainty as to whether the new leaders tend to help or harm local businesses, i.e. the "helping hand" vs. the "grabbing hand" phenomenon (e.g. Frye and Shleifer, 1996; Shleifer and Vishny, 2002). As a result, firms must act strategically to manage such risks. We posit that a firm's information disclosure decisions are an essential part of their strategic response to political risks.

Firms acting out of concern for political risks during leadership turnovers may choose to withhold or reduce value relevant

[9] In our sample, the average tenure is 2.79 years.

information disclosure. Piotroski and Wong (2013) argue that the political cost firms bear include that of increased political scrutiny by politicians. Information disclosure could attract and provide the basis for such scrutiny that could lead to increased regulatory actions, taxation, expropriation, loss of government benefits, among others. Bushman et al. (2004) find that financial transparency is negatively affected by the risks of state expropriation of firms' wealth. Healy and Palepu (2001) state that political considerations of firm's information disclosure include management's concern about attracting explicit or implicit taxes, or regulatory actions. In the context of China where local leaders wield significant powers, politicians could use the information to levy resources from firms to achieve political and personal goals, i.e. the "grabbing hand" phenomenon (Shleifer and Vishny, 2002). While such political risk could be managed through the establishment of connections between the firms and the incumbent politicians, the risk is elevated during periods of leadership change when existing political connections are disrupted and the preferences of the incoming leaders are unknown.[10] Therefore, it is likely that Chinese firms exposed to the risks of political transitions would reduce or obfuscate information disclosure to avoid becoming targets of political scrutiny.

However, the firm is not the only source of value relevant information. During periods of political uncertainty, investors may demand more information and thus cause a demand-driven supply of information from other sources. The increased information supply could come in the manner of increased private information gathering by investors. It could also come through market intermediaries such as the media and analysts. In return, the information providers could realize various economic benefits in terms of increased viewership for the media and increased subscription and reputation for the analysts. Whether political uncertainty exerts an adverse or beneficial influence on the information environment depends on whether the reduction of information provision by the firm overwhelms the increased supply of information through other sources.[11]

The information environment in China has lagged behind major economies of the world. In fact, using market based measures of the information environment, China ranks near the bottom of countries studied (Morck et al., 2000; Jin and Myers, 2006). Political control of enterprises and the financial markets stand out as the main impediments to a good information environment for investors (Piotroski and Wong, 2013), and political considerations can create incentives to distort the flow of information (Piotroski and Wong, 2015). Because of the heavy influence of politics and political leaders in China, we posit that the increase in supply of information by other sources will not be enough to compensate for the loss of information from the firms. As such, we hypothesize that:

H1. Political uncertainty negatively affects a firm's information environment.

Following and consistent with H1, the adverse effect on the information environment should be a function of the severity of political uncertainty. We posit that the following four scenarios indicate a more severe degree of uncertainty: multiple changes in top municipal leadership positions in a single year, the simultaneous changes of both top municipal leaders (the party secretary and the mayor), abnormal leadership turnovers in cases where the departing leaders have been demoted, dismissed, resigned, or arrested for corruption, and the incoming leader is from a different region with no prior local connections. We expect these more severe forms of uncertainty to have stronger association with firm's information environment.

If political uncertainty caused by political turnovers affects the amount of information provided about a firm, the effect should be stronger for firms that are more politically dependent. We use three proxies for political dependency: state-owned enterprises, firms that receive state subsidies, and firms that list domestically (compared with firms that cross-listed on HKEx or have B-shares that are marketed to foreign investors). First, state-owned enterprises are more susceptible to local politics because in addition to the usual political influence, their operational and personnel decisions are also under the influence, even control by the local leaders. State-owned enterprises are also likely more dependent on financing by government controlled banks. Second, for firms that receive government subsidies, their cash flow is directly affected by political decisions. Therefore, these firms are more dependent on the decisions of local political leaders. Lastly, firms that are only listed domestically in China (compared with those cross-listed on HKEx or issue B-shares) are not subject to disclosure requirements that make their information more transparent and therefore more susceptible to uncertainties in local politics. Thus, we hypothesize that:

H2. The adverse effect of political uncertainty on the information environment is stronger for firms that are more politically dependent.

3. Data and Specifications

3.1. Sample and data

Our sample consists of all nonfinancial firms listed on the Shanghai and Shenzhen stock exchanges from 2000 to 2014[12]. We hand-collected the turnover data of mayors and the Communist Party secretaries at the municipal level in each year: our key explanatory

[10] When the preferences of the new political leader are unknown, it is difficult for the firm to decide what kind of information to disclose. For example, firm disclosing information about positive future cash flows may attract increased taxation, lose government subsidies, and/or face other forms of expropriation. On the other hand, since Chinese politicians are often evaluated and promoted based on the economic performance of the region they rule, firms disclosing negative information may be viewed by the incoming leader as a hindrance to his political future, which may cause the politician to treat the firm and its managers unfavorably.

[11] In addition to using proxies that capture total information, we separately examine proxies of information provision by information intermediaries such as analysts and the media, which are among the most important sources of information besides the firm. Details are in Section 6.

[12] Our sample excludes firms in financial industries (i.e., banks, insurance companies, security companies, fund management companies and trust companies, according to the CSRC 2001 industry classification) because financial data are not comparable between firms in financial and non-financial industries.

Table 1
Sample distribution.

Panel A: Sample distribution by year

Year	(1) MSChange = 0	(2) MSChange = 1	(3) Ratio = (2)/(4)	(4) Total
2000	511	282	35.56%	793
2001	439	490	52.74%	929
2002	497	534	51.79%	1031
2003	469	613	56.65%	1082
2004	892	228	20.36%	1120
2005	855	346	28.81%	1201
2006	699	486	41.01%	1185
2007	569	652	53.40%	1221
2008	1023	344	25.16%	1367
2009	1085	330	23.32%	1415
2010	1069	478	30.90%	1547
2011	1007	838	45.42%	1845
2012	1245	844	40.40%	2089
2013	1395	781	35.89%	2176
2014	1670	475	22.14%	2145
Total	13,425	7,721	36.51%	21,146

Panel B: Sample distribution by industry

Industry	(1) MSChange = 0	(2) MSChange = 1	(3) Ratio = (2)/(4)	(4) Total
Agriculture, forestry, livestock farming, fishery	225	124	35.53%	349
Mining	393	221	35.99%	614
Food & beverage	542	338	38.45%	879
Textiles & apparel	371	225	37.75%	596
Timber & furnishings	40	24	37.50%	64
Paper & printing	229	144	38.61%	373
Petrochemicals	1320	785	37.29%	2105
Electronics	704	360	33.83%	1064
Metals & non-metals	1022	652	38.95%	1674
Machinery	2168	1252	36.61%	3420
Pharmaceuticals	868	487	35.94%	1355
Other manufacturing	98	53	35.10%	151
Utilities	579	332	36.44%	911
Construction	289	140	32.63%	429
Transportation	530	316	37.35%	846
IT	966	464	32.45%	1430
Wholesale and retail trade	945	559	37.17%	1504
Real estate	1042	601	36.58%	1643
Social Services	470	251	34.81%	721
Communication and cultural industry	207	104	33.44%	311
Comprehensive	417	289	40.93%	706
Total	13,425	7721	36.51%	21,146

This table reports the sample distribution by year and industry. Panel A reports the sample distribution by year. Panel B reports the sample distribution by industry. The sample includes all firms in the Chinese stock markets from 2000 to 2014. See Appendix A for definitions of the variables.

variables. Other data are retrieved from the WIND, CSMAR, and CCER databases, which provide financial accounting, stock price and corporate governance data for all Chinese publicly listed firms. We winsorize all continuous variables at the 1% and 99% levels. In our sample, there are 305 unique cities whose mayors or party secretaries turned over, and 7721 firm-year observations for firms that registered in these cities from 2000 to 2014.

Table 1 provides the sample distribution by year and industry. Panel A of Table 1 reports the number of firms in each year. Our sample has a total of 21,146 firm-year observations from 2000 to 2014. The number of publicly traded firms has increased over the years from 511 in 2000 to 1670 in 2014. About 36.51% of the observations experience political leadership turnovers. The highest percentage of turnovers is 56.65% in 2003 and the lowest is 20.36% in 2004. Panel B of Table 1 tabulates the industry distribution. The top five industries experiencing political turnovers are comprehensive, metals and non-metals, paper and printing, food and beverage, and textiles and apparel.

3.2. Specifications

We examine the impact of political uncertainty on a firm's information environment by using the following specification:

$$INFOR_{i,t} = \alpha_0 + \alpha_i + \alpha_t + \alpha_p + \beta_1 MSChange_{i,t} + \beta_2 Control_{i,t} + \mu_{i,t} \quad (1)$$

INFOR is a firm's information environment which we measure with two proxies: stock price synchronicity (*SYN*), and idiosyncratic volatility (*Idio*) (Morck et al., 2000; Campbell et al., 2001; Jin and Myers, 2006; Bartram et al., 2012). Stock price synchronicity measures the extent of co-movement of the firm's stock with the market and idiosyncratic volatility measures the variance of the firm's stock return that is not explained by the market return. Roll (1988) argues that since only a small portion of the volatility of the stock can be explained by market movements, idiosyncratic volatility or low synchronicity (r^2) is likely explained by firm-specific information. Firm specific information could be supplied by the firm via mandatory or voluntary disclosures, market intermediaries such as analysts and the media, and investors. It is disseminated through public or private channels as well as through price discoveries. Although these price based measures do not identify the source, channel, or the content of such information, it captures the totality of the information in the environment (Piotroski et al., 2015), which represents the aggregate changes in accounting, disclosure and dissemination practices.[13] The first proxy, *SYN*, is constructed based on the r^2 of the CAPM model estimated using weekly return data during the given fiscal year. Stocks with a higher r^2 tend to have a higher correlation with the market. Since r^2 is truncated by 0 and 1, we define *SYN* as the logged value of r^2 divided by $(1 - r^2)$ (i.e., $SYN = log[r2/(1-r2)]$). Our second proxy, *Idio*, is defined as the idiosyncratic volatility of firm *i* in year *t* and is estimated by the variance of the residuals of the CAPM model using weekly returns data during the given fiscal year. Firms with greater *Idio* tend to have more firm-specific information, which leads to better information environment.

The main explanatory variable is *MSChange*, which equals 1 if the mayor or the party secretary in registrant *i*'s city turns over in year *t*, and 0 otherwise. We also use several alternative definitions of political turnover in our robust tests.

Control is a vector that includes the time-varying variables. We control for firm characteristics reported in prior literature (e.g., Morck et al., 2000; Campbell et al., 2001; Jin and Myers, 2006; Bartram et al., 2012) that may potentially affect a firm's stock price synchronicity or idiosyncratic volatility. *Size* is the firm's size, which is equal to the logged value of the firm's total assets. *Lev* is the firm's leverage ratio, which equals total debts divided by total assets. *ROA* is the firm's profitability ratio, which is equal to net income divided by total assets. *MB* is the market-to-book ratio, defined as the total market value of equity divided by total net assets. *StdSale* is the standard deviation of firm *i*'s income from year $t - 2$ to year *t*. *Sigma* is the buy-and-hold stock return of firm *i*'s stock in year *t*. *Turnover* is the average weekly stock turnover rate of firm *i* in year *t*. Li et al. (2014) notes that using either R^2 or idiosyncratic stock return volatility would cause biases if firms' systematic risks are not controlled. Therefore, we add *LnBeta*2 as a control variable measured as the logged value of beta squared of firm *i* in year *t*. Beta squared is the square of the average weekly market beta estimated from the market model (CAPM) using weekly returns for firm *i*. Moreover, since the political uncertainty measure is based on city-level variations, we also control for *FiscalRev*, which is the fiscal revenue of city *i*, scaled by the GDP of city *i*.

Since stock synchronicity is a function of the relative weight of non-idiosyncratic volatility (e.g. at the market or industry level) and idiosyncratic volatility, an increase in non-idiosyncratic volatility could lead to an increase in synchronicity even holding idiosyncratic volatility constant.[14] Political uncertainties could lead to increase in non-idiosyncratic volatilities. For example, Boutchkova et al. (2012) find that during national elections, volatilities of certain politically sensitive industries increase. To address this issue, we employ several control variables in the main model. To control industry level volatility, we construct a variable *Ind_Volatility* according to Boutchkova et al. (2012), which is the average annualized industry return volatility calculated as industry average of firm standard deviations of weekly returns multiplied by the square root of 52 from 2000 to 2014. In addition, we also add controls for industry and geographic diversification because the problem discussed above is more severe if an industry is concentrated in a particular geographic region. We include two control variables: *Ind_Diver* defined as the square sum of the ratio of each sales from industry *j* for firm *i* in year *t*, i.e. $\Sigma\{(Sale_{i,j,t}/TotalSale_{j,t})^2\}$, a proxy for industry concentration; *Pro_Diver*, defined as the logged value of the total number of provinces in which firm *i* has at least one subsidiary corporation in year *t*, a proxy for geographic diversification. Further, to control for uncertainties caused by the macro political environment in China, we include a dummy variable for political sensitive year which equals 1 if the sample year is a year when the Chinese Communist Party Congress takes place. The quinquennial Chinese Communist Party Congress is arguably the most important political event in China and on the same level of importance as national elections in western democracies.

We control for industry, year and province fixed effects by adding α_i, α_t and α_p in the regressions. To address the concerns of autocorrelation among observations associated with a given firm, we cluster standard errors at the firm level. Definitions for all variables are found in Appendix A.

[13] The literature does not have a consensus on whether synchronicity and idiosyncratic volatility are good measures of firm specific information. A long stream of literature (e.g. Morck et al., 2000; Wurgler, 2000; Jin and Myers, 2006, Piotroski and Roulstone, 2004; among others) argue that lower synchronicity and higher idiosyncratic volatility reflect more firm specific information impounded in prices. Others (e.g. Pontiff, 1996; Mashruwala et al., 2006; Li et al., 2014; among others) have argue that synchronicity and idiosyncratic volatility capture noise or mispricing. If so, low synchronicity and high idiosyncratic volatility should be associated with less informative prices. Still others have argued that higher synchronicity reflect more informative prices (Chan and Chan, 2015). Recent studies (Morck et al., 2013; Bartram et al., 2012) suggest that both information and noise are captured by these measures and it is an empirical question as to whether noise or information dominates. Given the controversy, it is important to employ other measures of information to validate the results obtained through using synchronicity and idiosyncratic volatility (Li et al., 2014). In this paper, we employ several alternative measures of firm specific information such as turnover and trading volume as robustness. In addition, we also investigate firms' disclosure practices such as the quantity and quality of firm information disclosures. To the extent that results using these other measures are consistent with those using synchronicity and idiosyncratic volatility, it lends more validity to using these measures for information environment.

[14] We thank the referee for pointing this out.

Table 2
Summary statistics and correlation analysis.

Panel A: Summary statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7) MSChange = 1	(8)	(9) MSChange = 0	(10)	(11)	(12)
	N	Mean	Sd	Min	Median	Max	Mean	Median	Mean	Median	MeanDiff	Chi2
r2	21146	0.420	0.182	0.023	0.423	0.847	0.433	0.437	0.412	0.415	0.020***	39.316***
SYN	21146	−0.403	0.916	−3.727	−0.311	1.711	−0.340	−0.254	−0.439	−0.343	0.099***	39.316***
Idio	21146	0.041	0.014	0.008	0.040	0.082	0.039	0.038	0.042	0.041	−0.003***	141.557***
MSChange	21146	0.365	0.481	0.000	0.000	1.000						
MS_ChangeTimes	21146	0.503	0.730	0.000	0.000	3.000						
MS_BothChange	21146	0.122	0.327	0.000	0.000	1.000						
MS_AbnormalChange	21146	0.039	0.193	0.000	0.000	1.000						
MS_Non-LocalSuccession	21146	0.197	0.397	0.000	0.000	1.000						
Size	21146	21.600	1.234	18.760	21.440	26.050	21.550	21.410	21.620	21.460	−0.069***	6.248**
Lev	21146	0.485	0.243	0.050	0.480	1.820	0.486	0.482	0.484	0.479	0.002	0.343
Roa	21146	0.034	0.069	−0.323	0.034	0.237	0.035	0.035	0.034	0.034	0.001	0.617
MB	21146	0.977	0.922	0.000	0.697	18.450	0.957	0.685	0.988	0.704	−0.031**	3.718*
StdSale	21146	0.605	0.296	0.088	0.598	1.773	0.598	0.586	0.609	0.605	−0.011***	11.653***
Turnover	21146	5.374	3.988	0.639	4.255	19.810	5.215	4.021	5.465	4.370	−0.251***	31.188***
Sigma	21146	0.028	0.014	0.000	0.026	0.744	0.027	0.026	0.028	0.027	−0.001***	69.816***
LnBeta2	21146	−0.108	0.677	−3.726	0.012	1.092	−0.120	−0.007	−0.102	0.020	−0.018*	8.407***
FiscalRev	21146	0.094	0.044	0.007	0.084	0.362	0.090	0.081	0.096	0.086	−0.006***	22.544***
Ind_Diver	21146	0.764	0.232	0.326	0.804	1.000	0.760	0.783	0.766	0.807	−0.006*	17.426***
Pro_Diver	21146	1.335	0.556	0.693	1.099	2.996	1.315	1.099	1.347	1.386	−0.031***	10.651***
Ind_Volatility	21146	0.063	0.019	0.035	0.058	0.219	0.062	0.056	0.063	0.058	−0.001***	135.805***
Pol_Sensitive_Year	21146	0.205	0.404	0.000	0.000	1.000	0.263	0.000	0.172	0.000	0.091***	247.598***

Panel B: Correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	−0.422***	0.053***	−0.074***	−0.01	−0.168***	0.240***	−0.031***	−0.091***	0.021***	0.545***	−0.124***	−0.110***	−0.079***	−0.004	0.139***
2	−0.407***	1	−0.095***	−0.184***	0.066***	−0.018***	−0.285***	0.096***	0.624***	0.740***	0.167***	0.066***	0.063***	−0.007	0.575***	−0.041***
3	0.052***	−0.088***	1	−0.023***	0.004	0.003	−0.018***	−0.024***	−0.045***	−0.060***	−0.018***	−0.051***	−0.016**	−0.025***	−0.087***	0.108***
4	−0.092***	−0.210***	−0.027***	1	0.289***	0.101***	0.532***	−0.002	−0.181***	−0.124***	−0.173***	0.193***	−0.020***	0.309***	0.013*	−0.004
5	−0.026***	0.105***	0.003	0.172***	1	−0.411***	0.496***	0.041***	−0.074***	0.063***	−0.01	−0.039***	−0.105***	0.089***	0.052***	−0.024***
6	−0.126***	−0.049***	0.007	0.156***	−0.445***	1	−0.352***	−0.061***	0.024***	−0.056***	−0.207***	0.097***	0.063***	0.058***	0.041***	0.018***
7	0.131***	−0.221***	−0.016**	0.524***	0.381***	−0.193***	1	0.016**	−0.260***	−0.163***	0.018***	−0.030***	−0.064***	0.114***	−0.115***	−0.067***
8	−0.042***	0.112***	−0.018***	−0.019***	0.072***	−0.067***	0.011	1	0.053***	0.086***	0.044***	0.070***	0.011	0.049***	0.098***	0.019***
9	−0.063***	0.563***	−0.030***	−0.196***	−0.081***	0.007	−0.235***	0.043***	1	0.671***	0.265***	0.035***	0.083***	−0.036***	0.581***	−0.032***
10	0.044***	0.421***	−0.027***	−0.082***	0.044***	−0.011	−0.074***	0.064***	0.335***	1	0.354***	0.022***	0.007	−0.005	0.692***	0.025***
11	0.653***	0.136***	−0.013*	−0.183***	−0.007	−0.170***	−0.014**	0.031***	0.230***	0.167***	1	−0.006	−0.017**	−0.033***	0.088***	−0.012*
12	−0.121***	0.057***	−0.060***	0.211***	−0.057***	0.089***	0.023***	0.070***	0.023***	0	−0.007	1	0	0.222***	0.085***	0.010
13	−0.097***	0.039***	−0.012*	−0.007	−0.074***	0.049***	−0.020***	0.011	0.059***	−0.025***	−0.026***	−0.017**	1	−0.041***	0.044***	−0.008
14	−0.088***	−0.030***	−0.027***	0.378***	0.076***	0.066***	0.152***	0.031***	−0.059***	−0.017**	−0.060***	0.231***	−0.043***	1	0.049***	−0.011
15	0.079***	0.506***	−0.048***	0.002	0.064***	0.026***	−0.057***	0.078***	0.434***	0.455***	0.083***	0.038***	−0.015**	0.015**	1	−0.048***

(*continued on next page*)

Table 2 (*continued*)

Panel B: Correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16	0.143***	−0.014**	0.108***	−0.004	−0.027***	0.021***	−0.064***	0.014**	0.034***	0.039***	−0.007	0.004	−0.007	−0.010	0.109***	1

This table reports the summary statistics and correlations of all variables used in the paper. Panel A reports the summary statistics. Panel B reports the Pearson (bottom left) and the Spearman (top right) correlation coefficients. In Panel B, Variable *1* to *16* proxy *SYN, Idio, MSChange, Size, Lev, Roa, MB, StdSale, Turnover, Sigma, LnBeta2, FiscalRev, Ind_Diver, Pro_Diver*, *Ind_Volatility* and *Pol_Sensitive_Year*, respectively. The definitions of all variables are provided in Appendix A.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

4. Results

4.1. Summary statistics and correlation analysis

Panel A of Table 2 tabulates summary statistics for key variables used in the analysis. Columns (2)–(6) of Panel A report the summary statistics of the full sample. The mean (median) full sample r^2 is 0.420 (0.423), which indicates that China has a high stock price synchronicity and much higher than the r^2-squared estimated by using U.S. data during the same period, with its mean (median) of 0.222 (0.150) from 2003 to 2012. The mean (median) full sample *SYN* and *Idio* are −0.403 (−0.311) and 0.041 (0.040), respectively. The mean full sample *MSChange* is 0.365, i.e. 36.5% of the firm years experience a local leadership change from 2000 to 2014, a rather high frequency. This suggests that the Chinese listed firms are often faced with political uncertainties. Columns (7)–(10) of Panel A of Table 2 present the mean/median of variables in subsamples of firm years with and without political turnover. Column (11) reports the differences in mean and the *t*-test results between columns (7) and (9), i.e. firm years with and without local political leadership turnovers. Column (12) reports the Wilcoxon scores of tests of difference in median. Compared with the subsample of firms years without local political leadership turnover, the average r^2 and *SYN* (*Idio*) for firms years that experience political turnover are significantly higher (lower). Similarly, the median r^2 and *SYN* (*Idio*) are significantly larger (lower) in the subsample with political turnover than without. The summary statistics suggest that firms experiencing political turnovers are more likely to have an opaque information environment than other firms.

Panel B of Table 2 tabulates *Pearson* and *Spearman* correlations for key variables used in the analysis. We find that *MSChange* are significantly and positively (negatively) correlated with *SYN* (*Idio*), which suggest that firms faced with political turnovers are more likely to have a poor information environment compared with other firms.

4.2. Main results

Table 3 reports the main regression results of the impact of political turnovers on firms' information environment. Column (1) presents the results of a simple regression of *SYN* on *MSChange,* and column (2) presents the results of a multiple regression in which the control variables and the fixed effect controls are added to the model. In the multiple regression, *MSChange* is positively associated with *SYN*, i.e. firms facing political turnovers have higher stock price synchronicity. The estimated coefficient of *MSChange* is 0.065 and significant at the 1% level in column (2). Column (3) presents the results of a simple regression of *Idio* on *MSChange,* and column (4) presents the results of a multiple regression in which the control variables and the fixed effect controls are added to the model. In the multiple regression, *MSChange* is negatively associated with *Idio,* i.e. firms facing political turnovers have lower idiosyncratic volatility. The estimated coefficient of *MSChange* is −0.001 and is significant at the 1% level in column (4). Therefore, H1 is supported at conventional levels. Our results suggest that political uncertainties have an adverse impact on a firm's information environment by reducing the total amount of firm specific information provided to investors.

4.3. Robustness[15]

We conduct robust tests in this section. Our tests involve matched sample approach and using alternative specifications and measures of explanatory variables and dependent variables.

4.3.1. Matched sample approach

As a robustness check, we use the matched sample approach to control for firm level characteristics that may have not been controlled in our main model. For each firm year that experiences political uncertainty (treatment firm year), we match a firm year that does not experience political turnover, is located in the same industry and province (control firm year), and has the closest amount of total assets. In addition, we also use the propensity score matching (PSM) approach to select control firms. We use the same control variables in Eq. (1) to do the first stage regression of PSM. Thus, we compare two groups of firms that have otherwise similar fundamentals but differ in that the treatment group experiences political uncertainty due to local leadership turnover and the control group does not. This approach has the advantage of controlling for firm characteristics that may be associated with the dependent variable but are missed in Eq. (1). We estimate Eq. (1) using the two groups and report the results in Panel A of Table 4. Columns (1) and (2) are the results from the year/industry/province/total assets matched sample. Columns (3) and (4) are the results from the PSM approach sample. We show that *SYN* is positively associated with *MSChange* and *Idio* is negatively associated with *MSChange*, similar to our main results reported in Table 3.

[15] In unreported analysis, we also use instrumental variable (IV) estimation to address the potential endogeneity problem between political uncertainty and the information environment. Specifically, we use the average age of local political leaders as the instrumental variable and conduct a 2SLS estimation (Xu et al., 2016). We obtain robust results. However, political leaders' age may not be a suitable IV because it may affect both the likelihood of leadership turnover (i.e. retirement) and firms' information disclosure decisions because firms may infer the likelihood of leadership change from a leader's age and strategize their information disclosure accordingly. Thus, the assumptions of IV are violated. In fact, it is difficult to find a good IV in general (Larcker and Rusticus, 2010) and in the context of our study, any variable that has predictive power on political turnovers will also likely affect firms' information disclosure strategies if the variable is observable by the firms and if the firms are concerned about political costs. Therefore, we would interpret the results of IV estimation with caution.

Table 3
Political uncertainty and firms' information environment.

	(1) *SYN*	(2) *SYN*	(3) *Idio*	(4) *Idio*
MSChange	0.058***	0.065***	−0.001***	−0.001***
	(5.29)	(9.81)	(−8.92)	(−10.28)
Size		−0.013*		−0.001***
		(−1.93)		(−10.93)
Lev		−0.558***		0.012***
		(−23.42)		(21.66)
Roa		−0.324***		0.002*
		(−4.48)		(1.66)
MB		0.170***		−0.003***
		(12.63)		(−11.02)
StdSale		−0.068***		0.002***
		(−5.60)		(6.90)
Turnover		−0.054***		0.001***
		(−29.70)		(32.35)
Sigma		−6.408***		0.145***
		(−3.15)		(3.87)
LnBeta2		0.964***		−0.000
		(96.59)		(−1.28)
FiscalRev		−0.302		0.006
		(−1.56)		(1.56)
Ind_Diver		−0.069***		0.001
		(−3.60)		(1.47)
Pro_Diver		−0.023**		0.000**
		(−2.56)		(2.25)
Ind_Volatility		−2.349***		0.046***
		(−4.68)		(4.46)
Pol_Sensitive_Year		0.842***		−0.011***
		(35.53)		(−24.64)
Constant	−0.623***	0.767***	0.041***	0.051***
	(−9.88)	(5.15)	(33.93)	(16.86)
Ind & Pro & Year	√	√	√	√
N	21146	21146	21146	21146
R^2_adj	0.24	0.73	0.35	0.54
F	123.307***	521.433***	195.371***	278.591***

The regressions in this table address the question whether political uncertainty affects firms' information environment. The dependent variables are proxies of the firms' information environment (*SYN* and *Idio*). The main explanatory variable is *MSChange*, which measures political uncertainty. The sample covers all firms in the Chinese stock markets from 2000 to 2014. The definitions of all variables are provided in Appendix A. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

4.3.2. Alternative explanatory variable specifications

We also use alternative specifications of political turnover for robustness. In a Chinese municipality, the party secretary and the mayor could have a different impact on local businesses. Hence, we separately test the effect of the turnover of the municipal party secretary and the mayor in relationship to the dependent variables. The results are reported on columns (1)–(4) in Panel B of Table 4. Turnovers of both the party secretary (*SChange*) and the mayor (*MChange*) affect the information environment of the firms, confirming our choice of using the turnovers of both leaders as politically uncertain events.

4.3.3. Alternative dependent variable

Finally, there is an ongoing debate as to whether r^2 and idiosyncratic volatility capture information or noise. (See our discussion in footnote 13). Li et al. (2014) suggest that r^2 and idiosyncratic volatility measures may contain noises and recommend researchers triangulate results by using more measures of information environment such as liquidity. So we employ several other market based measures. Boone and White (2015) find that lower information asymmetries facilitate information production and improve stock liquidity. If political turnover worsens the information environment, the firm's stock liquidity may also be reduced. Following Boone and White (2015), we use three alternative definitions of the dependent variables. The first variable is *Turnover*, which is the average weekly stock turnover rate of firm *i* in year *t*. The second variable is *Volume*, which is a firm's trading volume, defined as the logged value of the total number of shares traded in a given year. The third variable is *DollarVolume*, which is a firm's trading amount, defined as the logged value of the total amount of shares traded in a given year. The results reported in Panel C of Table 4 show that our results are robust to these alternative definitions.

Table 4
Robust tests.

Panel A: Matched sample approach

	(1) Matched by total assets	(2)	(3) PSM	(4)
	SYN	Idio	SYN	Idio
MSChange	0.053***	−0.001***	0.060***	−0.001***
	(3.65)	(−4.19)	(8.30)	(−8.54)
Size	−0.030***	−0.001***	−0.016**	−0.001***
	(−2.65)	(−4.78)	(−2.32)	(−9.50)
Lev	−0.646***	0.013***	−0.557***	0.011***
	(−14.15)	(14.16)	(−21.13)	(19.99)
Roa	−0.476***	0.007**	−0.282***	0.002
	(−3.27)	(2.07)	(−3.30)	(1.14)
MB	0.233***	−0.004***	0.178***	−0.003***
	(13.45)	(−11.40)	(12.35)	(−11.04)
StdSale	−0.105***	0.003***	−0.058***	0.001***
	(−3.84)	(4.79)	(−4.32)	(5.04)
Turnover	−0.055***	0.001***	−0.057***	0.001***
	(−20.69)	(20.75)	(−23.88)	(27.07)
Sigma	−3.738**	0.072**	−7.092**	0.168***
	(−2.29)	(2.10)	(−2.43)	(3.21)
LnBeta2	0.968***	0.000	0.977***	−0.000**
	(71.55)	(1.15)	(78.11)	(−1.97)
FiscalRev	−0.268	0.007	−0.250	0.006
	(−0.74)	(0.95)	(−1.17)	(1.41)
Ind_Diver	−0.036	0.000	−0.079***	0.001*
	(−0.98)	(0.30)	(−3.61)	(1.82)
Pro_Diver	−0.037**	0.001	−0.021**	0.000**
	(−2.13)	(1.50)	(−2.18)	(2.37)
Ind_Volatility	−5.570***	0.095***	−2.584***	0.053***
	(−3.96)	(3.02)	(−4.12)	(4.28)
Pol_Sensitive_Year	0.983***	0.002	0.829***	−0.011***
	(12.24)	(1.02)	(30.69)	(−20.81)
Constant	1.168***	0.043***	0.883***	0.047***
	(4.41)	(7.63)	(5.73)	(15.25)
Ind & Pro & Year	√	√	√	√
N	7660	7660	15442	15442
R^2_adj	0.73	0.54	0.72	0.57
F	181.730***	81.626***	386.269***	242.539***

Panel B: Alternative explanatory variables

	(1) SYN	(2) Idio	(3) SYN	(4) Idio
MChange	0.048***	−0.001***		
	(6.62)	(−5.89)		
SChange			0.059***	−0.001***
			(7.90)	(−9.18)
Size	−0.013*	−0.001***	−0.013*	−0.001***
	(−1.93)	(−10.92)	(−1.95)	(−10.91)
Lev	−0.558***	0.012***	−0.557***	0.012***
	(−23.41)	(21.63)	(−23.37)	(21.60)
Roa	−0.322***	0.002	−0.321***	0.002
	(−4.46)	(1.62)	(−4.44)	(1.62)
MB	0.170***	−0.003***	0.170***	−0.003***
	(12.63)	(−11.04)	(12.65)	(−11.04)
StdSale	−0.068***	0.002***	−0.068***	0.002***
	(−5.60)	(6.90)	(−5.61)	(6.92)
Turnover	−0.054***	0.001***	−0.054***	0.001***
	(−29.62)	(32.27)	(−29.68)	(32.32)
Sigma	−6.406***	0.145***	−6.424***	0.146***
	(−3.14)	(3.87)	(−3.15)	(3.87)
LnBeta2	0.963***	−0.000	0.964***	−0.000
	(96.47)	(−1.25)	(96.63)	(−1.31)
FiscalRev	−0.313	0.006	−0.266	0.005
	(−1.62)	(1.61)	(−1.37)	(1.35)
Ind_Diver	−0.068***	0.001	−0.069***	0.001

(*continued on next page*)

Table 4 (*continued*)

Panel B: Alternative explanatory variables

	(1) SYN	(2) Idio	(3) SYN	(4) Idio
	(−3.58)	(1.46)	(−3.61)	(1.49)
Pro_Diver	−0.022**	0.000**	−0.022**	0.000**
	(−2.55)	(2.25)	(−2.54)	(2.23)
Ind_Volatility	−2.375***	0.046***	−2.398***	0.047***
	(−4.72)	(4.50)	(−4.76)	(4.55)
Pol_Sensitive_Year	0.855***	−0.011***	0.836***	−0.011***
	(36.20)	(−25.37)	(35.25)	(−24.24)
Constant	0.782***	0.051***	0.781***	0.051***
	(5.25)	(16.74)	(5.25)	(16.79)
Ind & Pro & Year	√	√	√	√
N	21146	21146	21146	21146
R^2_*adj*	0.73	0.54	0.73	0.54
F	518.478***	276.968***	520.776***	275.854***

Panel C: Alternative dependent variables

	(1) Turnover	(2) Volume	(3) DollarVolume
MSChange	−0.009***	−0.106***	−0.103***
	(−11.20)	(−15.17)	(−17.04)
Size	−0.015***	0.568***	0.612***
	(−18.29)	(45.36)	(55.73)
Lev	−0.019***	0.111**	0.028
	(−5.55)	(1.97)	(0.73)
Roa	−0.014	−1.915***	0.423***
	(−1.43)	(−14.21)	(4.15)
MB	−0.002***	−0.165***	−0.359***
	(−3.06)	(−12.46)	(−18.34)
StdSale	−0.006***	0.029	0.001
	(−3.41)	(1.56)	(0.10)
Turnover		0.070***	0.089***
		(29.75)	(47.46)
Sigma	0.687***	3.222***	4.145***
	(3.67)	(4.26)	(3.73)
LnBeta2	0.017***	0.093***	0.042***
	(15.31)	(9.45)	(4.68)
FiscalRev	−0.018	−0.450	0.081
	(−0.57)	(−1.19)	(0.30)
Ind_Diver	0.009***	−0.184***	−0.094***
	(2.88)	(−4.52)	(−3.16)
Pro_Diver	−0.001	0.037*	0.087***
	(−0.54)	(1.84)	(5.68)
Ind_Volatility	0.440***	0.974**	1.621***
	(5.27)	(2.02)	(3.70)
Pol_Sensitive_Year	−0.053***	−0.668***	−0.767***
	(−24.62)	(−29.41)	(−37.40)
Constant	0.404***	3.782***	5.112***
	(20.77)	(14.31)	(22.17)
Ind & Pro & Year	√	√	√
N	21146	21146	21146
R^2_*adj*	0.44	0.72	0.83
F	216.486***	443.835***	854.654***

Panel D: Deleting firms from the four provincial level cities in China (Beijing, Shanghai, Tianjin, and Chongqing)

	(1) SYN	(2) Idio
MSChange	0.065***	−0.001***
	(9.38)	(−10.17)
Size	−0.018***	−0.001***
	(−2.58)	(−9.43)
Lev	−0.552***	0.011***
	(−22.87)	(21.19)

(*continued on next page*)

Table 4 (*continued*)

Panel D: Deleting firms from the four provincial level cities in China (Beijing, Shanghai, Tianjin, and Chongqing)		
	(1) SYN	(2) Idio
Roa	−0.277***	0.002
	(−3.71)	(1.32)
MB	0.176***	−0.003***
	(11.69)	(−10.28)
StdSale	−0.064***	0.002***
	(−5.06)	(6.33)
Turnover	−0.054***	0.001***
	(−29.44)	(32.17)
Sigma	−6.118***	0.141***
	(−3.04)	(3.78)
LnBeta2	0.967***	−0.000
	(95.22)	(−1.48)
FiscalRev	−0.343*	0.007
	(−1.75)	(1.63)
Ind_Diver	−0.071***	0.001
	(−3.55)	(1.61)
Pro_Diver	−0.023**	0.000***
	(−2.47)	(2.68)
Ind_Volatility	−2.580***	0.051***
	(−4.91)	(4.60)
Pol_Sensitive_Year	0.840***	−0.011***
	(34.67)	(−24.16)
Constant	0.894***	0.047***
	(5.67)	(14.89)
Ind & Pro & Year	√	√
N	19432	19432
R^2_adj	0.73	0.54
F	486.941***	258.337***

This table reports the results of robust tests. The definitions of all variables are provided in Appendix A. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

4.3.4. Removing provincial level cities from the sample

Four Chinese cities, Beijing, Shanghai, Tianjin, and Chongqing, are administratively equivalent to provinces in status. As a result, their leaders are equal to provincial leaders and one level above the other municipal leaders in our sample. These leaders are closely observed and have the potential to be promoted to national levels[16]. In this regard, the impact of these leaders on local businesses may not be of the same nature as that of other municipal leaders on firms. For robustness, we remove firms in the four provincial level cities and re-estimate Eq. (1). The results, reported on Panel D of Table 4, are similar to the main results in Table 3.

5. Cross-sectional analyses: severity of Uncertainty and firms' susceptibility to political Influence

5.1. Is the information environment more affected when political uncertainty is more severe?

Political turnovers can be of various causes, some more innocuous (e.g. promotion or retirement) than others (e.g. dismissals) for the affected firms. Hence, some types of turnovers create more severe uncertainty for firms than other types. If political uncertainty adversely affects the amount of information provided about a firm, the effect should be stronger when the turnover type is of a more severe nature. We examine the following turnover scenarios that indicate a more serious degree of uncertainty: multiple changes in top municipal leadership positions in a single year, the concurrent changes of both top municipal leaders (the party secretary and the mayor), abnormal leadership turnovers in cases where the departing leaders have been demoted, dismissed, arrested for corruption or resigned, and the new leader having no prior local connections. *MS_ChangeTimes* measures the number of times the top two local leaders have changed in a given year. Multiple changes in top leadership likely create more uncertainty for local businesses. *MS_BothChange* is an indicator variable that equals 1 if both the party secretary and the mayor have changed in a given year, and 0 otherwise. When both leaders are replaced in the same year, local businesses face more uncertainty because their investment in political connections is completely disrupted. *MS_AbnormalChange* is a dummy variable that equals 1 if the turnover is caused by any

[16] An example is Jiang Zemin, the party secretary of Shanghai, who was later promoted to the position of party secretary of the CCP, the most powerful post in China.

Table 5
Cross-sectional analysis: Severity of political uncertainty and firms' information environment.

	(1) *SYN*	(2) *Idio*	(3) *SYN*	(4) *Idio*	(5) *SYN*	(6) *Idio*	(7) *SYN*	(8) *Idio*	(9) *SYN*	(10) *Idio*
MS_Change	0.063***	−0.001***	0.067***	−0.001***	0.038***	−0.001***	0.062***	−0.001***	0.047***	−0.001***
	(3.74)	(−4.30)	(8.14)	(−8.90)	(5.57)	(−5.44)	(6.48)	(−4.57)	(4.34)	(−2.60)
MS_ChangeTimes	0.039***	−0.001***								
	(9.18)	(−9.63)								
MS_BothChange			0.045***	−0.001***					0.028***	−0.000
			(4.58)	(−4.60)					(2.65)	(−1.51)
MS_AbnormalChange					0.257***	−0.006***			0.246***	−0.005***
					(14.94)	(−16.54)			(13.44)	(−14.22)
MS_NonLocalSuccession							0.057***	−0.002***	0.010	−0.001***
							(6.97)	(−10.04)	(1.10)	(−3.92)
Size	−0.013*	−0.001***	−0.013*	−0.001***	−0.014**	−0.001***	−0.013*	−0.001***	−0.014**	−0.001***
	(−1.93)	(−10.93)	(−1.95)	(−10.91)	(−2.05)	(−10.82)	(−1.94)	(−10.91)	(−2.03)	(−10.84)
Lev	−0.557***	0.012***	−0.557***	0.012***	−0.557***	0.012***	−0.556***	0.011***	−0.557***	0.012***
	(−23.40)	(21.62)	(−23.38)	(21.60)	(−23.51)	(21.74)	(−23.30)	(21.52)	(−23.47)	(21.67)
Roa	−0.323***	0.002*	−0.320***	0.002	−0.314***	0.002	−0.317***	0.002	−0.315***	0.002
	(−4.48)	(1.65)	(−4.43)	(1.60)	(−4.38)	(1.53)	(−4.40)	(1.56)	(−4.40)	(1.53)
MB	0.170***	−0.003***	0.170***	−0.003***	0.171***	−0.003***	0.170***	−0.003***	0.171***	−0.003***
	(12.63)	(−11.02)	(12.65)	(−11.05)	(12.71)	(−11.12)	(12.61)	(−10.98)	(12.69)	(−11.07)
StdSale	−0.068***	0.002***	−0.068***	0.002***	−0.067***	0.002***	−0.068***	0.002***	−0.067***	0.002***
	(−5.60)	(6.91)	(−5.60)	(6.90)	(−5.52)	(6.80)	(−5.60)	(6.89)	(−5.52)	(6.81)
Turnover	−0.054***	0.001***	−0.054***	0.001***	−0.054***	0.001***	−0.054***	0.001***	−0.054***	0.001***
	(−29.67)	(32.30)	(−29.60)	(32.25)	(−29.62)	(32.28)	(−29.66)	(32.30)	(−29.61)	(32.27)
Sigma	−6.419***	0.145***	−6.418***	0.145***	−6.453***	0.146***	−6.424***	0.146***	−6.450***	0.146***
	(−3.15)	(3.87)	(−3.15)	(3.87)	(−3.15)	(3.87)	(−3.16)	(3.87)	(−3.15)	(3.87)
LnBeta2	0.964***	−0.000	0.964***	−0.000	0.965***	−0.000	0.964***	−0.000	0.965***	−0.000
	(96.67)	(−1.29)	(96.47)	(−1.27)	(96.68)	(−1.49)	(96.66)	(−1.34)	(96.70)	(−1.52)
FiscalRev	−0.286	0.006	−0.285	0.006	−0.355*	0.007*	−0.211	0.004	−0.326*	0.006
	(−1.48)	(1.48)	(−1.47)	(1.47)	(−1.84)	(1.88)	(−1.08)	(0.88)	(−1.69)	(1.53)
Ind_Diver	−0.068***	0.001	−0.069***	0.001	−0.066***	0.001	−0.068***	0.001	−0.066***	0.001
	(−3.58)	(1.45)	(−3.59)	(1.47)	(−3.47)	(1.33)	(−3.58)	(1.44)	(−3.46)	(1.32)
Pro_Diver	−0.022**	0.000**	−0.022**	0.000**	−0.023***	0.000**	−0.023**	0.000**	−0.023**	0.000**
	(−2.53)	(2.22)	(−2.53)	(2.23)	(−2.59)	(2.28)	(−2.56)	(2.26)	(−2.57)	(2.27)
Ind_Volatility	−2.379***	0.046***	−2.411***	0.047***	−2.365***	0.046***	−2.351***	0.046***	−2.379***	0.046***
	(−4.74)	(4.52)	(−4.78)	(4.56)	(−4.67)	(4.46)	(−4.65)	(4.42)	(−4.71)	(4.46)
Pol_Sensitive_Year	0.843***	−0.011***	0.849***	−0.011***	0.854***	−0.011***	0.855***	−0.011***	0.853***	−0.011***
	(35.63)	(−24.75)	(35.89)	(−25.11)	(36.22)	(−25.41)	(36.13)	(−25.39)	(36.06)	(−25.37)
Constant	0.772***	0.051***	0.791***	0.051***	0.804***	0.050***	0.771***	0.051***	0.796***	0.051***
	(5.18)	(16.82)	(5.31)	(16.70)	(5.42)	(16.63)	(5.17)	(16.87)	(5.35)	(16.73)
Ind & Pro & Year	√	√	√	√	√	√	√	√	√	√
N	21146	21146	21146	21146	21146	21146	21146	21146	21146	21146
R^2_adj	0.73	0.54	0.73	0.54	0.73	0.54	0.73	0.54	0.73	0.54
F	521.153***	277.237***	517.910***	274.873***	526.846***	276.193***	522.311***	276.435***	515.544***	270.243***

The regressions in this table address the question of whether a firm's information environment is more affected when political uncertainty is more pronounced. The dependent variables are proxies of the firm's information environment (*SYN* and *Idio*). The main explanatory variables are *MS_ChangeTimes, MS_BothChange, MS_AbnormalChange* and *MS_LocalSuccession* which measure the severity of political uncertainty. The sample covers all firms in the Chinese stock markets from 2000 to 2014. The definitions of all variables are provided in Appendix A. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

of the following, and 0 otherwise: The party secretary or the mayor is demoted, dismissed, arrested for corruption or resigned in a given year. In the Chinese political arena, these events indicate serious disapproval by higher level leaders with the conduct and performance of the departing officials and usually mean the end of their political careers. As a result, the incoming leaders would most likely scrutinize the relationship (*guanxi*) networks of the departing officials, thus creating more uncertainties for firms invested in such networks. Lastly, *MS_Non-LocalSuccession* is an indicator variable that equals 1 if the incoming leader does not have any previous connections with the region under his/her administration, and zero otherwise. A new leader with no roots in the region may build a new relationship network, thus creating more uncertainty for the incumbent firms that may be left out of the new network.

We include these variables that measure different degrees of severity of political uncertainty in Eq. (1) in addition to *MSChange*. The results are reported in Table 5. We find that after adding these variables, *MSChange* is still significantly associated with *SYN* or *Idio*. More importantly, the variables that measure the severity of political uncertainty are all significantly and negatively associated with firms' information environment. We also pool the various types of political turnovers in the same model. The pooled model results are presented in columns (9)–(10) of Table 5. The only type we have left out of the pooled model is *MS_ChangeTimes* (the

number of changes in top municipal leadership in a given period) because it is highly correlated with *MS_BothChange* (both the party secretary and the major are changed). The Pearson correlation coefficient between the two variables is 0.78. In the pooled model, *MSChange* is still significant with the predicted signs, indicating that even for firms that experience less severe types of leadership change, the information environment is still worsened. All the severe types of turnovers have the predicted signs and are generally significant. The only exception is that *MS_Nonlocalsuccession* (incoming leaders does not have any prior local connections) is not significantly associated with synchronicity although the coefficient has the predicted sign.

5.2. Are politically dependent firms more susceptible to the effects of political uncertainty?

If political uncertainty adversely affects the amount of information provided about a firm, the effect should be stronger for firms that are more politically dependent. Thus we examine whether firms that are more reliant on or susceptible to political influences are more likely to be affected by political uncertainty. We use three measures to partition our sample into subsamples that vary in political dependency. Piotroski et al. (2015) find that firms that are controlled by the government are more likely to be influenced by political events. So we use two cross-sectional factors similar to Piotroski et al. (2015). The first partitioning variable is whether the firms is owned by the state (*SOE*), which equals 1 if the firm is stated-owned, and 0 otherwise. The second partitioning variable is *GovSubsidy*, which equals 1 if the firm receives government subsidies in the previous year, and zero otherwise.

Research has shown that strong capital environment forces have the ability to serve as a constraint on political influences. There is evidence that firms cross-listed in exchanges characterized by strong investor protections experience an improvement in corporate governance and financial reporting practices (Hail and Leuz, 2009). Many Chinese firms are cross-listed on the Hong Kong Stock Exchange (HKEx) which is generally regarded as having strong investor protections. Also, some Chinese firms issue so-called "B-shares" that are marketed to foreign investors. The existence of B-share securities increases the firm's exposure to sophisticated, transparency-demanding foreign investors compared to firms only trading in the A-share market (for domestic investors only). We posit that firms that cross-listed on the HKEx or issue B-shares would have a better information environment than firms that only issue A-shares to domestic investors. Following Piotroski et al. (2015), we construct a third partitioning variable, *HB*, which equals 1 if the firm is cross-listed on the Hong Kong stock market or issues a class of China B-shares, and zero otherwise.

The results of the subsample regression tests are reported in Table 6. Columns (1)–(4) show the results of subsamples partitioned by *SOE*. We find that *MSChange* is positively (negatively) associated with *SYN* (*Idio*) at the 1% significance level in subsamples of state-owned enterprises (*SOE* = 1). However, the estimated coefficients of *MSChange* are not statistically significant in non-state-owned firms (*SOE* = 0). Columns (5)–(8) show the results of subsamples partitioned by *GovSubsidy*. We find that *MSChange* is positively (negatively) associated with *SYN* (*Idio*) at the 1% significance level for the subsamples of firms that receive government subsidies (*GovSubsidy* = 1). However, the estimated coefficients are not significant in subsamples of firms that do not receive government subsidies (*GovSubsidy* = 0). Columns (9)–(12) show the results of subsamples partitioned by *HB*. We find that *MSChange* is significantly and positively (negatively) associated with *SYN* (*Idio*) at conventional levels for firms that only issue A-shares to domestic investors. However, *MSChange* is not significantly associated with *SYN* or *Idio* in subsamples of firms that cross-listed on the HKEx or firms that issue B-shares (*HB* = 1). These results support hypothesis H3 and suggest that politically dependent firms are more susceptible to the adverse impact of political uncertainties on their information environment.

6. Channel analyses: firms' accounting and disclosure practices and information supplied by intermediaries

The influence of political uncertainty on the supply of value relevant information can be effected through various channels: firms' accounting and disclosure practices and information intermediaries.

6.1. Firms' accounting and disclosure practices during periods of political uncertainty

We first examine whether firms' accounting and disclosure practices are channels through which its information environment is affected by turnovers of political leaders. Firms are the most important providers of value relevant information about themselves through mandatory and voluntary disclosures. They are not only the biggest source of information but probable also the lowest cost provider. A firm's decision to disclosure value relevant information could affect the total amount of information made available to investors. On the other hand, firms are strategic in disclosing private information about themselves. They could withhold or obfuscate information for strategic reasons including, but not limited to, political ones. As such, firms affect the information environment through their accounting and disclosure choices by altering both the amount and the quality of information provided to investors. We examine the following accounting and disclosure practices: discretionary accounting accruals, management voluntary forecasts, and information disclosure quality. Firms with abnormal levels of accruals, less frequent management voluntary forecasts, or lower disclosure quality, are more likely to create a worse information environment.

We first examine the effect of political uncertainty on discretionary accounting accruals. We use six widely used discretionary accrual measures[17]. The first measure is *AbsDA* which is the absolute value of discretionary accruals of the Jones model (Jones, 1991). The second is *DA* which is the signed value of discretionary accruals of the Jones model (Jones, 1991). Our third measure is *AbsMDA* which is the absolute value of discretionary accruals of the modified Jones model (Dechow et al., 1995). The fourth measure

[17] We also use comprehensive earnings quality variables following Biddle et al. (2009) and Chen et al. (2011). The results are robust.

Table 6
Cross-sectional analysis: Firms' susceptibility to political uncertainty and their information environment.

	(1) *SOE = 1*	(2)	(3) *SOE = 0*	(4)	(5) *GovSubsidy = 1*	(6)	(7) *GovSubsidy = 0*	(8)	(9) *HB = 1*	(10)	(11) *HB = 0*	(12)
	SYN	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*
MSChange	0.093***	−0.002***	0.035	−0.000	0.076***	−0.002***	0.041	−0.000	0.028	−0.000	0.073***	−0.002***
	(10.29)	(−10.13)	(1.21)	(−0.87)	(9.91)	(−10.52)	(1.20)	(−0.88)	(0.99)	(−0.97)	(10.61)	(−10.94)
Chow-Test	*(1) vs (3)*		*(2) vs (4)*		*(5) vs (7)*		*(6) vs (8)*		*(9) vs (11)*		*(10) vs (12)*	
	*Chi2 = 16.18, p = 0.00****		*Chi2 = 4.36, p = 0.04***		*Chi2 = 5.31, p = 0.02***		*Chi2 = 9.13, p = 0.00****		*Chi2 = 2.84, p = 0.09**		*Chi2 = 2.67, p = 0.10**	
Size	−0.014*	−0.002***	−0.027**	−0.001***	−0.008	−0.002***	−0.009	−0.002***	0.022	−0.002***	−0.021***	−0.001***
	(−1.66)	(−9.40)	(−2.46)	(−4.35)	(−1.02)	(−9.79)	(−0.97)	(−8.17)	(1.44)	(−7.09)	(−3.20)	(−9.48)
Lev	−0.654***	0.013***	−0.457***	0.010***	−0.631***	0.013***	−0.442***	0.009***	−0.356***	0.007***	−0.572***	0.012***
	(−19.26)	(18.25)	(−15.43)	(14.07)	(−20.08)	(20.10)	(−12.13)	(10.83)	(−3.74)	(3.37)	(−23.79)	(22.43)
Roa	−0.261**	0.000	−0.390***	0.005**	−0.543***	0.006***	−0.093	0.000	−0.564**	0.003	−0.290***	0.002
	(−2.48)	(0.11)	(−3.87)	(2.21)	(−5.99)	(2.96)	(−0.90)	(0.20)	(−2.17)	(0.67)	(−3.92)	(1.38)
MB	0.161***	−0.002***	0.207***	−0.004***	0.161***	−0.003***	0.180***	−0.003***	0.073***	−0.001**	0.195***	−0.003***
	(10.32)	(−8.92)	(7.25)	(−6.42)	(10.24)	(−8.97)	(11.23)	(−8.80)	(3.05)	(−2.11)	(15.80)	(−13.88)
StdSale	−0.091***	0.002***	−0.042**	0.002***	−0.074***	0.002***	−0.052**	0.001***	−0.056	0.003***	−0.070***	0.002***
	(−5.52)	(5.72)	(−2.41)	(4.21)	(−5.26)	(6.04)	(−2.51)	(3.30)	(−1.22)	(3.06)	(−5.69)	(6.44)
Turnover	−0.058***	0.001***	−0.050***	0.001***	−0.050***	0.001***	−0.062***	0.001***	−0.035***	0.001***	−0.055***	0.001***
	(−13.10)	(14.87)	(−27.59)	(28.64)	(−17.63)	(18.74)	(−18.37)	(19.03)	(−5.42)	(6.25)	(−30.87)	(33.50)
Sigma	−8.473	0.213**	−5.123***	0.106***	−11.927***	0.239***	−2.364	0.076***	−15.474***	0.329***	−5.957***	0.136***
	(−1.56)	(2.44)	(−3.20)	(2.99)	(−3.08)	(3.00)	(−1.46)	(3.03)	(−3.64)	(3.94)	(−3.04)	(3.80)
LnBeta2	0.953***	0.000	0.968***	−0.001**	0.974***	−0.000*	0.971***	−0.000	0.938***	−0.000	0.957***	−0.000
	(41.89)	(0.33)	(78.63)	(−2.32)	(81.77)	(−1.95)	(68.29)	(−0.13)	(52.03)	(−0.21)	(87.04)	(−0.67)
FiscalRev	−0.101	0.009*	−0.492*	0.005	−0.445**	0.009**	0.246	−0.005	1.079	−0.020	−0.340*	0.007*
	(−0.38)	(1.67)	(−1.87)	(0.82)	(−2.11)	(2.20)	(0.63)	(−0.57)	(1.21)	(−1.19)	(−1.73)	(1.66)
Ind_Diver	−0.086***	0.001**	−0.027	−0.000	−0.075***	0.001*	−0.060*	0.000	−0.113*	0.002	−0.061***	0.000
	(−3.45)	(2.10)	(−0.94)	(−0.68)	(−3.48)	(1.71)	(−1.74)	(0.54)	(−1.90)	(1.21)	(−3.08)	(1.06)
Pro_Diver	−0.031***	0.000*	0.003	0.000	−0.010	0.000	−0.060***	0.001**	−0.039	−0.000	−0.020**	0.000**
	(−2.68)	(1.93)	(0.22)	(0.34)	(−1.02)	(1.18)	(−3.53)	(2.07)	(−1.22)	(−0.35)	(−2.19)	(2.57)
Ind_Volatility	−2.099***	0.046***	−2.588***	0.042***	−2.371***	0.048***	−2.541***	0.046**	−6.244***	0.122***	−1.940***	0.038***
	(−3.10)	(3.56)	(−3.70)	(2.63)	(−4.00)	(4.04)	(−2.78)	(2.39)	(−3.76)	(3.28)	(−3.88)	(3.72)
Pol_Sensitive_Year	0.812***	−0.011***	0.896***	−0.013***	0.793***	−0.010***	0.684***	0.008***	1.179***	−0.004	0.838***	−0.011***
	(28.24)	(−20.24)	(14.84)	(−10.73)	(24.79)	(−16.49)	(13.32)	(6.83)	(6.58)	(−1.27)	(35.28)	(−24.29)
Constant	0.913***	0.050***	0.843***	0.046***	0.873***	0.048***	0.414*	0.061***	−0.387	0.081***	0.925***	0.046***
	(4.56)	(12.55)	(3.58)	(9.43)	(4.98)	(13.76)	(1.78)	(12.00)	(−0.94)	(9.85)	(6.32)	(15.59)
Ind & Pro & Year	√	√	√	√	√	√	√	√	√	√	√	√
N	12686	12686	8460	8460	15117	15117	6029	6029	1510	1510	19636	19636
R^2_adj	0.70	0.59	0.76	0.46	0.74	0.52	0.73	0.61	0.84	0.61	0.71	0.54
F	336.497***	201.922***	244.555***	87.999***	415.988***	184.160***	210.493***	124.015***	117.178***	35.442***	444.799***	262.513***

The regressions in this table address the question whether political uncertainty has a larger impact on firms that are politically dependent. The dependent variables are proxies for firms' information environment (*SYN* and *Idio*). The main explanatory variable is *MSChange*, which measures political uncertainty. SOE is equal to 1 if a firm is stated-owned firm, and 0 otherwise. *GovSubsidy* is equal to 1 if the firm *i* receives government subsidies in year t, and zero otherwise. HB is equal to 1 if the firm *i* is cross-listed on the Hong Kong stock market or issued a class of B-shares on the Chinese stock market, and zero otherwise. The sample covers all firms in the Chinese stock markets from 2000 to 2014. The definitions of variables are provided in Appendix A. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

Table 7
Channel analysis: Firms' accounting and disclosure practices.

	(1) *AbsDA*	(2) *DA*	(3) *AbsMDA*	(4) *MDA*	(5) *AbsDD*	(6) *DD*	(7) *ManForecast*	(8) *IDQ*
MSChange	0.003***	−0.004**	0.004***	−0.004**	0.004***	−0.005***	−0.022***	−0.136**
	(2.91)	(−2.42)	(3.07)	(−2.40)	(3.56)	(−3.22)	(−3.13)	(−2.56)
Size	−0.006***	0.001	−0.007***	0.002**	−0.007***	−0.001	−0.100***	0.368***
	(−6.73)	(1.26)	(−7.25)	(2.03)	(−7.82)	(−0.57)	(−13.13)	(6.54)
Lev	0.082***	−0.046***	0.084***	−0.037***	0.076***	−0.043***	0.010	−1.153***
	(18.20)	(−8.41)	(18.66)	(−6.62)	(16.81)	(−8.19)	(0.38)	(−5.92)
Roa	0.036***	0.317***	0.025*	0.382***	−0.007	0.423***	−0.662***	7.506***
	(2.61)	(16.44)	(1.80)	(19.76)	(−0.50)	(23.90)	(−8.09)	(10.61)
MB	−0.006***	0.002	−0.007***	0.002	−0.007***	0.003**	0.008	−0.036
	(−5.34)	(1.63)	(−5.81)	(1.13)	(−6.00)	(2.43)	(0.79)	(−0.57)
StdSale	0.021***	0.010***	0.021***	0.011***	0.016***	0.005	0.028*	−0.121
	(7.97)	(2.66)	(8.20)	(3.02)	(6.55)	(1.61)	(1.85)	(−1.31)
Turnover	0.000	0.001**	0.000	0.001***	0.000	0.001***	0.018***	−0.004
	(0.62)	(2.30)	(0.56)	(2.70)	(1.25)	(3.93)	(9.93)	(−0.38)
Sigma	0.302***	−0.002	0.309***	0.051	0.223***	−0.071	1.184***	−3.302*
	(2.91)	(−0.01)	(3.04)	(0.34)	(2.59)	(−0.67)	(2.96)	(−1.66)
LnBeta2	−0.006***	−0.000	−0.007***	−0.001	−0.006***	0.001	−0.012*	0.011
	(−5.47)	(−0.22)	(−5.52)	(−0.63)	(−5.70)	(0.86)	(−1.84)	(0.22)
FiscalRev	−0.003	−0.084**	0.006	−0.080**	0.019	−0.055	−0.306	1.885
	(−0.10)	(−2.16)	(0.18)	(−2.08)	(0.62)	(−1.60)	(−1.04)	(1.06)
Ind_Diver	0.009***	−0.003	0.009***	−0.002	0.011***	−0.001	0.289***	0.185
	(2.86)	(−0.88)	(2.91)	(−0.52)	(3.90)	(−0.32)	(10.05)	(1.09)
Pro_Diver	−0.003**	−0.001	−0.003**	0.001	−0.001	0.002	0.002	−0.052
	(−2.13)	(−0.30)	(−2.10)	(0.34)	(−0.87)	(1.11)	(0.15)	(−0.66)
Ind_Volatility	0.332***	0.046	0.328***	0.116	0.250***	0.034	0.403	0.694
	(3.98)	(0.38)	(3.91)	(0.99)	(3.50)	(0.32)	(0.84)	(0.22)
Pol_Sensitive_Year	−0.005	0.009	−0.007	0.011*	−0.000	0.012**	0.078***	−0.286**
	(−1.28)	(1.43)	(−1.61)	(1.91)	(−0.04)	(2.19)	(7.52)	(−2.36)
Constant	0.147***	−0.033	0.156***	−0.068**	0.162***	−0.000	1.785***	−6.190***
	(6.83)	(−1.25)	(7.23)	(−2.56)	(8.03)	(−0.02)	(10.22)	(−4.65)
Ind & Pro & Year	√	√	√	√	√	√	√	√
N	21146	21146	21146	21146	21146	21146	21146	10195
R^2_adj / R^2_P	0.10	0.05	0.10	0.06	0.09	0.09	0.38	0.18
F / *Chi2*	15.679***	12.717***	16.342***	14.855***	13.661***	21.985***	145.357***	1032.422***

The regressions in this table address the question of whether firms' accounting and disclosure practices are affected by political uncertainty. The dependent variables are proxies of firms' accounting and disclosure practices. They include *AbsDA, DA, AbsMDA, MDA, AbsDD, DD, ManForecast, IDQ* and *KV*. The main explanatory variable is *MSChange*. The definitions of variables are provided in Appendix A. The sample covers all firms in the Chinese stock markets from 2000 to 2014. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets in columns (1)–(7) and the z-statistics are shown in brackets in column (8).

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

is *MDA* which is the signed value of discretionary accruals of the modified Jones model (Dechow et al., 1995). Our fifth measure is *AbsDD* which is the absolute value of the residual of the Dechow and Dichev (2002) model. The sixth measure is *DD* which is the signed value of the residual of the Dechow and Dichev (2002) model. For *AbsDA*, *AbsMDA* and *AbsDD*, higher value means higher level of abnormal accruals. For *DA*, *MDA* and *DD*, lower (higher) value suggests downward (upward) earnings management. The detailed description on how to construct these variables is provided in Appendix B. We estimate the same regression models as in model (1), by replacing the dependent variables with the six accrual measures. The results are reported in Table 7. In columns (1), (3) and (5), regression results show that *MSChange* is significantly and positively associated with *AbsDA*, *AbsMDA* and *AbsDD*. This is consistent with the notion that firms facing political uncertainty increase the use of discretionary accruals to manage earnings. In columns (2), (4) and (6), regression results show that *MSChange* is significantly and negatively associated with *DA*, *MDA* and *DD*, suggesting that firms' use discretionary accruals to manage their earnings downward. This is consistent with the political cost explanation that firms depress reported earnings to minimize rent extraction from new, unknown political leaders.

Next we examine the effect of political uncertainty on voluntary management forecasts. Because voluntary management forecasts contain important firm specific information that may affect investors' decisions and analysts' forecast accuracy (Patell, 1976; Penman, 1980; Williams, 1996; Graham et al., 2005; Cotter et al., 2006), they are an important part of a firm's information environment. Following prior research, we construct a variable, *ManForecast*, which is equal to the logged value of the number of the firm's total voluntary management forecasts. We estimate model (1) by replacing the dependent variable with *ManForecast.* The results are reported in column (7) of Table 7. We find that *MSChange* is significantly and negatively associated with *ManForecast*, suggesting that political uncertainty significantly reduces management's voluntary forecasts.

Finally, we assess the impact of political uncertainty on the quality of a firm's information disclosure. Since 2001, the Shenzhen

Stock Exchange has had an official system and standard to evaluate the annual financial reporting disclosure quality of the listed firms. The evaluation system is based on the timeliness of disclosure, the accuracy of disclosure, full disclosure, and the legality of disclosure. The Shenzhen Stock Exchange ranks all listed firms into four classes: outstanding (A), good (B), pass (C) and fail (D). Accordingly, we construct a variable, *IDQ*, which equals 1 if the information disclosure quality of firm *i* in year *t* is at least good (A or B), and zero otherwise (C or D). For the subsample of firms listed on the Shenzhen Stock Exchange, we estimate model (1) by replacing the dependent variable with *IDQ*. The results are reported in column (8) of Table 7. We find that *MSChange* is significantly and negatively associated with *IDQ*, suggesting that political uncertainty significantly reduces the quality of information disclosure by the firms.

Overall, the results are consistent with the explanation that the adverse impact of political uncertainties on the information environment is at least partially effected through firms' accounting and disclosure choices. Specifically, firms may be reacting to political uncertainty by increasing their use of discretionary accruals to manage earnings, especially to depress earnings. Firms also may be reducing the frequency and quality of their information disclosures.

6.2. Information intermediaries' supply of value relevant information during periods of political uncertainty

Firms are not the only source of supply of value relevant information. Another important source is information intermediaries such as financial analysts or the news media. Both financial analysts and the media have vast resources that enable them to acquire, process, and disseminate private information about the firms. In the context of our inquiry, financial analysts and the media are important channels through which political uncertainty affects the information environment. During periods of political uncertainty, as investors demand more information, financial analysts and the media could increase their information acquisition and provision about the firms. The additional costs could be compensated by increased investor followings and readership, and enhanced reputation.

We use analyst revisions as a proxy for analysts' acquisition and dissemination of value relevant firm information. Specifically, we use these three proxies: *Revision_Num*, defined as the logged value of the total number of analyst forecast revisions for firm *i* in year t; *Revision_MeanNum*, defined as the logged value of the total number of analyst forecast revisions divided by the total number of analysts for firm *i* in year *t*; and *Revision_MaxNum*, defined as the logged value of the max number of analyst forecast revisions for firm *i* in year *t*. We use these variables as the dependent variables in Eq. (1). The results are presented in columns (1)–(3) of Table 8.

Similarly, we use the frequency of media coverage of a firms as a proxy for the media's efforts in acquiring and disseminating value relevant firm information. We obtain news articles written about the listed firms in Chinese newspapers over the period 2000 to 2014 from the *China Core Newspapers Full-text Database* (CCND)[18]. We define *MediaCoverage* as the logged value of the total number of media stories for firm *i* in year *t* and use the variable as the dependent variable in Eq. (1). The results are presented in column (4) of Table 8.

In summary, the results in Table 8 show that the coefficients on *MSChange* are positive and statistically significant at conventional levels when proxies for financial analysts and the media's information provision are used as dependent variables. This is consistent with the notion that during periods of political uncertainty, information intermediaries would increase their production and dissemination of value relevant information about the firm. Therefore, these intermediaries are channels through which political uncertainty affect the information environment.

The results in Table 8 suggest a moderating effect of information intermediaries such as financial analysts and the media on firms' information environment during periods of political uncertainty. We conduct additional analyses to ascertain this effect by adding two variables *Analyst_Dum* (equals 1 if the number of analyst following is above median and zero otherwise) and *Media_Coverage_Dum* (equals 1 if the number of media stories about the firm is above median and zero otherwise) to our model and interact both variables with *MSChange* in the main model. The results are shown in Table 9. We find that the coefficient on the interaction term is negative (positive) and significant when synchronicity (idiosyncratic volatility) is the dependent variable. This is consistent with the notion that information intermediaries have a moderating effect on the information environment during periods of political uncertainty, i.e. firms with more financial analysts following or media coverage experience less loss in firm specific information during political leadership turnovers. We also test whether increased activities by information intermediaries are able to compensate for the loss of information. However, F-test rejects the hypothesis that $MSChange + MSChange * Analyst\_Dum = 0$, i.e. political leader turnover has no effect on information environment for firms with above average analyst followings. Similarly, our tests reject the hypotheses that $MSChange + MSChange * Media\_Coverage\_Dum = 0$ and $MSChange + MSChange * Analyst\_Dum + MSChange * Media\_Coverage\_Dum = 0$. In sum, our evidence shows that although information intermediaries have a moderating effect on firms' information environment, they are not able to negate the loss of information during periods of political uncertainty.

7. Alternative explanation: the effect of real activities

Real activity is likely to be decreased during periods of political uncertainty (e.g. Julio and Yook, 2012). Therefore, we need to take into consideration that the reduction in information disclosure could be an attendant result of the reduction in real activity.[19] We

[18] CCND has collected major Chinese newspapers since 2000 and is continually updated. Included in CCND are 618 Chinese newspapers, and a total of 14,820,359 full text pages. The website is: http://oversea.cnki.net/kns55/.

[19] We thank the reviewer for pointing this out.

Table 8
Channel analysis: Information intermediaries (financial analysts and the media).

	(1) *Revision_Num*	(2) *Revision_MeanNum*	(3) *Revision_MaxNum*	(4) *MediaCoverage*
MSChange	0.054***	0.023**	0.027***	0.062***
	(4.43)	(2.16)	(3.43)	(4.94)
Size	0.623***	0.490***	0.357***	0.554***
	(33.85)	(31.79)	(33.69)	(21.10)
Lev	−0.285***	−0.263***	−0.208***	0.205**
	(−3.72)	(−4.25)	(−4.47)	(2.33)
Roa	3.543***	2.721***	2.172***	1.181***
	(14.77)	(14.36)	(15.09)	(5.20)
MB	−0.332***	−0.260***	−0.165***	−0.207***
	(−11.76)	(−12.45)	(−9.69)	(−6.90)
StdSale	−0.115***	−0.108***	−0.063***	−0.036
	(−3.58)	(−4.11)	(−3.17)	(−1.03)
Turnover	−0.022***	−0.011***	−0.007**	0.013***
	(−5.24)	(−3.12)	(−2.53)	(3.30)
Sigma	−0.084	−0.454	−0.085	0.347
	(−0.14)	(−0.94)	(−0.21)	(0.41)
LnBeta2	−0.019	0.001	−0.004	−0.086***
	(−1.23)	(0.07)	(−0.40)	(−4.60)
FiscalRev	−0.228	−0.122	−0.127	1.723**
	(−0.33)	(−0.21)	(−0.30)	(2.29)
Ind_Diver	0.530***	0.407***	0.282***	0.275***
	(7.24)	(6.88)	(6.49)	(3.29)
Pro_Diver	0.201***	0.149***	0.104***	0.136***
	(5.59)	(5.14)	(4.91)	(2.97)
Ind_Volatility	−2.321**	−2.239***	−1.363**	1.012
	(−2.51)	(−2.70)	(−2.41)	(1.17)
Pol_Sensitive_Year	−0.001	0.014	0.017	1.147***
	(−0.05)	(0.62)	(1.02)	(28.41)
Constant	−13.301***	−10.337***	−7.599***	−12.572***
	(−31.71)	(−29.27)	(−31.37)	(−21.96)
Ind & Pro & Year	√	√	√	√
N	21146	21146	21146	21146
R^2_adj	0.55	0.51	0.54	0.34
F	100.392***	82.985***	130.657***	61.609***

The regressions in this table address the question of whether financial intermediaries such as financial analysts and the media increase their supply of information during periods of political uncertainty. The dependent variables are proxies for analysts and the media's information production. They include *Revision_Num, Revision_MeanNum, Revision_MaxNum* and *MediaCoverage*. The main explanatory variable is *MSChange*. The definitions of variables are provided in Appendix A. The sample covers all firms in the Chinese stock markets from 2000 to 2014. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% levels.

** Significance at 5% level.

*** Significance at 1% level.

employ several methods to control for the level of real activity, using capital investment as a proxy, i.e. more (less) capital investment is associated with more (less) real activity. We include capital investment in *Year t* (year of the leadership turnover) and *Year t* − 1 in our main model and report the results in the first four columns of Table 10. The results show that after controlling for the level of real activities, *MSChange* is still significant with the predicted signs, indicating that the reduction in information during periods of political uncertainty cannot be fully attributable to the variations in real activities.

In addition, we split the sample based on firms' real activity levels and re-estimate the main model in columns (5)–(8) of Table 10. The results show that, *MSChange* is significant in both the high and low capital investment groups. Taken together, these results suggest that while real activity may affect the level of firm specific information, it does not fully explain the loss of information during politically uncertain periods.

8. Conclusion

Given the role information plays in financial decision making, it is important to understand whether and how political uncertainty affects the amount of information made available to investors. In this paper, we examine the information environment of Chinese listed firms during periods of local political leadership turnovers. We find evidence that political leadership turnover is associated with reduced net supply of firm specific information. We also find that the effect is concentrated in politically dependent firms and stronger when political uncertainty is more pronounced. Furthermore, we find that a probable channel of such a reduction in information is the decrease in the amount and the quality of disclosure made by the firms. At the same time, information intermediaries such as financial analysts and the news media increase their production of value relevant information to market

Table 9
The moderating effect of information intermediaries.

	(1) *SYN*	(2) *Idio*	(3) *SYN*	(4) *Idio*	(5) *SYN*	(6) *Idio*
MSChange	0.100***	−0.002***	0.107***	−0.002***	0.128***	−0.0025***
	(10.50)	(−10.19)	(10.17)	(−9.81)	(9.74)	(−9.06)
Analyst_Dum	−0.082***	0.001***			−0.058***	0.001**
	(−8.35)	(4.56)			(−5.14)	(2.33)
*MSChange*Analyst_Dum*	−0.070***	0.001***			−0.043***	0.0009***
	(−5.33)	(4.22)			(−2.97)	(2.92)
Media_Coverage_Dum			−0.111***	0.002***	−0.110***	0.002***
			(−11.09)	(9.23)	(−10.97)	(9.28)
*MSChange*Media_Coverage_Dum*			−0.068***	0.001***	−0.055***	0.0008***
			(−4.90)	(3.79)	(−3.89)	(2.89)
Size	0.005	−0.002***	0.005	−0.002***	0.015**	−0.002***
	(0.72)	(−12.21)	(0.76)	(−13.15)	(2.21)	(−13.65)
Lev	−0.563***	0.012***	−0.548***	0.011***	−0.554***	0.011***
	(−23.76)	(21.71)	(−22.95)	(21.27)	(−23.24)	(21.31)
Roa	−0.183***	0.001	−0.273***	0.002	−0.201***	0.001
	(−2.58)	(0.51)	(−3.86)	(1.09)	(−2.86)	(0.52)
MB	0.160***	−0.003***	0.163***	−0.003***	0.158***	−0.002***
	(12.11)	(−10.62)	(12.48)	(−10.82)	(12.18)	(−10.60)
StdSale	−0.073***	0.002***	−0.067***	0.002***	−0.070***	0.002***
	(−6.07)	(7.15)	(−5.58)	(6.86)	(−5.79)	(6.96)
Turnover	−0.053***	0.001***	−0.053***	0.001***	−0.053***	0.001***
	(−29.20)	(32.06)	(−29.74)	(32.36)	(−29.57)	(32.30)
Sigma	−6.440***	0.146***	−6.358***	0.144***	−6.378***	0.145***
	(−3.14)	(3.86)	(−3.18)	(3.90)	(−3.17)	(3.90)
LnBeta2	0.956***	−0.000	0.957***	−0.000	0.956***	−0.000
	(96.64)	(−0.75)	(96.62)	(−0.62)	(96.47)	(−0.56)
FiscalRev	−0.269	0.006	−0.211	0.005	−0.203	0.005
	(−1.41)	(1.47)	(−1.10)	(1.18)	(−1.07)	(1.16)
Ind_Diver	−0.056***	0.000	−0.064***	0.001	−0.056***	0.000
	(−2.93)	(1.07)	(−3.33)	(1.25)	(−2.90)	(1.01)
Pro_Diver	−0.019**	0.000**	−0.019**	0.000*	−0.016*	0.000*
	(−2.22)	(2.03)	(−2.12)	(1.85)	(−1.88)	(1.71)
Ind_Volatility	−2.356***	0.046***	−2.298***	0.045***	−2.310***	0.045***
	(−4.68)	(4.46)	(−4.62)	(4.41)	(−4.63)	(4.42)
Pol_Sensitive_Year	0.173***	−0.001***	0.110***	−0.000	0.070***	0.000
	(7.63)	(−3.13)	(4.82)	(−0.65)	(2.99)	(0.32)
Constant	0.414***	0.056***	0.470***	0.056***	0.311**	0.058***
	(2.74)	(17.97)	(3.15)	(18.40)	(2.07)	(18.82)
Ind & Pro & Year	√	√	√	√	√	√
N	21146	21146	21146	21146	21146	21146
R^2_adj	0.73	0.54	0.74	0.55	0.74	0.55
F	520.679***	274.153***	531.308***	279.011***	522.818***	275.364***
F-Tests of the Equality of the Coefficient Estimates:						
(1) *MSChange* + *MSChange* * *Analyst_Dum* = 0						
	F (1, 2303) = 32.23 Prob > F = 0.000	F (1, 2303) = 40.97 Prob > F = 0.000			F (1, 2303) = 46.79 Prob > F = 0.000	F (1, 2303) = 44.43 Prob > F = 0.000

(*continued on next page*)

Table 9 (*continued*)

	(1) *SYN*	(2) *Idio*	(3) *SYN*	(4) *Idio*	(5) *SYN*	(6) *Idio*
(2) *MSChange + MSChange * Media_Coverage_Dum = 0*						
			F (1, 2303) = 20.49 Prob > F = 0.000	F (1, 2303) = 30.34 Prob > F = 0.000	F (1, 2303) = 25.91 Prob > F = 0.000	F (1, 2303) = 30.11 Prob > F = 0.000
(3) *MSChange + MSChange * Analyst_Dum + MSChange * Media_Coverage_Dum = 0*						
					F (1, 2303) = 10.25 Prob > F = 0.001	F (1, 2303) = 17.33 Prob > F = 0.000

The regressions in this table address the question whether information intermediaries (analysts and the media) have a moderating effect on firms' information environment during periods of political uncertainty. The dependent variables are proxies for firms' information environment (*SYN* and *Idio*). The main explanatory variable is *MSChange*, which measures political uncertainty. *Analyst_Dum* is equal to 1 if the number of a firm's analysts is larger than the median of the number of all listed firms' total analysts in year t, and zero otherwise. *Media_Coverage_Dum* is equal to 1 if the total number of media stories of a firm is larger than the median of the total number of media stories of all listed firms in year t, and zero otherwise. The sample covers all firms in the Chinese stock markets from 2000 to 2014. The definitions of variables are provided in Appendix A. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

Table 10
Additional analysis: alternative explanation.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					CapitalExp_Dum = 1		*CapitalExp_Dum* = 0	
	SYN	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*	*SYN*	*Idio*
MSChange	0.065***	−0.001***	0.066***	−0.001***	0.059***	−0.001***	0.070***	−0.001***
	(9.38)	(−9.64)	(8.80)	(−9.33)	(6.05)	(−6.13)	(6.92)	(−7.25)
CapitalExp $_{i,t}$	−0.064**	0.002***	−0.099***	0.003***				
	(−2.06)	(3.86)	(−2.94)	(4.11)				
CapitalExp$_{i,t-1}$			0.063**	−0.001				
			(2.09)	(−0.84)				
Chow-Test					*(5) vs (7)*		*(6) vs (8)*	
					Chi2 = 0.61, p = 0.43		*Chi2 = 0.97, p = 0.32*	
Size	−0.009	−0.002***	−0.012	−0.002***	−0.006	−0.001***	−0.010	−0.002***
	(−1.26)	(−9.91)	(−1.53)	(−9.71)	(−0.59)	(−8.13)	(−1.18)	(−8.83)
Lev	−0.530***	0.011***	−0.527***	0.011***	−0.506***	0.011***	−0.519***	0.011***
	(−20.78)	(19.89)	(−19.48)	(18.81)	(−13.50)	(14.18)	(−17.31)	(15.77)
Roa	−0.325***	0.002	−0.368***	0.002	−0.826***	0.009***	−0.109	−0.001
	(−4.22)	(1.15)	(−4.64)	(1.36)	(−6.43)	(3.54)	(−1.26)	(−0.37)
MB	0.156***	−0.002***	0.152***	−0.002***	0.135***	−0.002***	0.155***	−0.002***
	(10.52)	(−8.90)	(10.16)	(−8.53)	(6.39)	(−5.35)	(11.79)	(−9.82)
StdSale	−0.064***	0.002***	−0.066***	0.002***	−0.078***	0.002***	−0.056***	0.001***
	(−5.14)	(6.01)	(−4.99)	(5.52)	(−4.37)	(5.26)	(−3.41)	(3.88)
Turnover	−0.047***	0.001***	−0.049***	0.001***	−0.035***	0.001***	−0.054***	0.001***
	(−9.30)	(10.26)	(−9.28)	(10.29)	(−8.07)	(9.24)	(−10.62)	(11.67)
Sigma	−16.496**	0.320**	−15.366**	0.299**	−31.357***	0.633***	−11.469**	0.215**
	(−2.56)	(2.51)	(−2.42)	(2.37)	(−5.59)	(5.98)	(−2.04)	(1.98)
LnBeta2	0.990***	−0.000	0.981***	−0.000	1.029***	−0.001***	0.974***	−0.000
	(53.60)	(−1.26)	(52.45)	(−0.84)	(60.45)	(−3.72)	(53.45)	(−0.79)
FiscalRev	−0.205	0.003	−0.229	0.003	−0.229	0.007	0.077	−0.007
	(−1.02)	(0.76)	(−1.09)	(0.67)	(−0.98)	(1.52)	(0.28)	(−1.15)
Ind_Diver	−0.077***	0.001*	−0.084***	0.001*	−0.077***	0.001	−0.060**	0.001
	(−4.01)	(1.67)	(−4.08)	(1.86)	(−3.15)	(1.09)	(−2.30)	(1.03)
Pro_Diver	−0.019**	0.000*	−0.018*	0.000	−0.009	0.000**	−0.028**	0.000
	(−2.18)	(1.81)	(−1.89)	(1.47)	(−0.86)	(2.01)	(−2.16)	(0.45)
Ind_Volatility	−2.275***	0.044***	−2.450***	0.047***	−3.612***	0.068***	−1.179*	0.024*
	(−4.63)	(4.51)	(−4.27)	(4.13)	(−5.40)	(4.82)	(−1.83)	(1.92)
Pol_Sensitive_Year	0.649***	0.013***	0.906***	−0.004***	0.002	0.007***	−0.132***	0.010***
	(7.23)	(7.44)	(31.35)	(−8.44)	(0.05)	(8.33)	(−2.92)	(10.32)
Constant	1.053***	0.041***	0.836***	0.042***	2.211***	0.033***	1.547***	0.053***
	(6.80)	(13.20)	(5.24)	(13.22)	(10.23)	(7.87)	(7.65)	(12.63)
Ind & Pro & Year	√	√	√	√	√	√	√	√
N	18200	18200	15659	15659	9095	9095	9105	9105
R^2_*adj*	0.74	0.56	0.74	0.55	0.77	0.59	0.73	0.55
F	526.445***	236.507***	452.971***	201.752***	308.973***	147.370***	262.187***	128.251***

The regressions in this table address the question whether real activities during periods of political uncertainty provide an alternative explanation for the change in information environment. *CapitalExp* is the proxy for real activity. It equals capital expenditures scaled by beginning-of-year book value of total assets (Julio and Yook, 2012). *CapitalExp_Dum* is equal to 1 if a firm's capital expenditures are larger than the median of all listed firms' capital expenditures in year t, and zero otherwise. The main explanatory variable is *MSChange*, which measures political uncertainty. The definitions of variables are provided in Appendix A. The sample covers all firms in the Chinese stock markets from 2000 to 2014. All regressions include industry, province and year fixed effects. Robust standard errors are clustered at the firm level. The t-statistics are shown in brackets.

* Significance at 10% level.

** Significance at 5% level.

*** Significance at 1% level.

participants during periods of political uncertainty. However, since the net effect is still a reduction of total firm specific information, we conclude that political uncertainty cause a worsening of the information environment in China.

Our results help to address two questions relevant to investors as well as researchers. First, does political uncertainty adversely affect the total amount of information supplied to investors? The answer seems to be yes in the Chinese market. Second, how do Chinese firms' information disclosure practice responds to political uncertainty? Our evidence suggests that firms tend to reduce voluntary information disclosure and lower the quality of mandatorily reported accounting information. Both findings have negative implications for investors of the Chinese stock market. The uncertainties documented in this paper are frequent, difficult to anticipate, and a regular feature of the Chinese political system. Our finding that such political uncertainty is associated with a net loss of value relevant information to investors (notwithstanding the moderating effect of information intermediaries) should be of particular concern. It is possible that the reduction in information disclosure significantly contributes to the opacity of the Chinese market and makes it less efficient.

Lastly, since our research setting is the highly politicized and less transparent Chinese market, our results may or may not extend to markets such as the U.S. where permanent legal institutions and mature market mechanisms prevent (or at least alleviate) the distortionary impact of political regimes and politicians. During periods of political turnovers (e.g. elections), the costs to firms to disclose value relevant information may be lower in the U.S. than in China. A higher degree of transparency in the U.S. should also alleviate the impact of political uncertainty. On the other hand, the same mechanisms through which political concerns influence firms' business decisions are nonetheless present in the U.S. In periods when political uncertainty is high and politicians (rightfully or not) are more willing to blame corporate decisions for the problems of the country (such as in the current political environment), the impact of politics on the information environment may yet be found in a market based economy such as the U.S., especially in certain politically sensitive industries (e.g. the healthcare, banking, energy, and the manufacturing industries). As such, a cross country comparison would be an interesting research undertaking.

Appendix A. Variable definitions

Variables	Definitions
MSChange	Equal to 1 if the mayor or the communist party secretary in the registration city of firm *i* in year *t* has changed (and zero otherwise).
MS_ChangeTimes	The number of times the top two local leaders have changed in a given year (and zero otherwise). Multiple changes in top leadership likely create more uncertainty for local businesses.
MS_BothChange	Equal to 1 if both the party secretary and the mayor have changed in a given year (and zero otherwise).
MS_AbnormalChange	Equal to 1 if the change of mayor or the communist party secretary is abnormal in year *t* (and zero otherwise). An abnormal change of mayor or communist party secretary could be one of four types: a demotion, a dismissal, and an arrest for corruption or a resignation.
MS_Non-LocalSuccession	Equal to 1 if the incoming leader does not have any previous connections with the region under his/her administration (and zero otherwise).
MChange	Equal to 1 if the mayor in the registration city of firm *i* in year *t* has changed (and zero otherwise).
SChange	Equal to 1 if the communist party secretary in the registration city of firm *i* in year *t* has changed (and zero otherwise).
SYN	A measure of stock synchronicity. $SYN = log[r2/(1-r2)]$, where r2 is the r-squared of the CAPM model estimated using weekly return data in year t.
Idio	Idiosyncratic volatility of firm *i* in year *t* is estimated by the variance of the residuals of the CAPM model using weekly returns data during year t.
Turnover	The average weekly stock turnover rate of firm *i* in year t.
Volume	A stock's trading volume, defined as the logged value of the total number of shares traded in a given year.
DollarVolume	A stock's trading amount, defined as the logged value of the total dollar value of shares traded in a given year.
AbsDA	The absolute value of discretionary accruals of the Jones model (Jones, 1991).
DA	Discretionary accruals of the Jones model (Jones, 1991).
AbsMDA	The absolute value of discretionary accruals of the modified Jones model (Dechow et al., 1995).
MDA	Discretionary accruals of the modified Jones model (Dechow et al., 1995).
AbsDD	The absolute value of discretionary accruals of the Dechow and Dichev (2002) model.
DD	Discretionary accruals of the Dechow and Dichev (2002) model.
ManForecast	The number of management voluntary forecasts which is equal to the logged value of the number of the firm's total manager voluntary forecasts.
IDQ	Equal to 1 if the disclosure quality of firm *i* in year *t* is evaluated as good or better (A or B), and zero otherwise (C or D).
Revision_Num	The logged value of the total number of analyst forecast revisions for firm *i* in year t.
Revision_MeanNum	The logged value of the total number of analyst forecasts revision divided by the total number of analysts for firm *i* in year t.
Revision_MaxNum	The logged value of the maximum number of analyst forecasts revision for firm *i* in year t.
MediaCoverage	The logged value of the total number of media stories for firm *i* in year t.
Size	Firm size (the logged value of the firm's total assets).
Lev	The firm's leverage ratio (total debts divided by total assets).
Roa	The firm's profitability ratio (net income divided by total assets).
MB	The market-to-book ratio (the total market value of equity divided by the total net assets).
StdSale	The standard deviation of firm *i*'s income from year t − 2 to year t.
Sigma	The buy-and-hold stock return of firm *i*'s income in year t.
LnBeta2	The logged value of beta squared of firm *i* in year t. Beta squared is the square of the average weekly market beta estimated from the market model (CAPM) using weekly returns for firm *i*.
FiscalRev	The fiscal revenue of city i, scaled by the GDP of city *i*.

Ind_Diver	The firms' degree of industry diversification, which is equal to the square sum of the ratio of each sales from industry *j* for firm *i* in year t, i.e $\Sigma\{(Sale_{i,j,t}/TotalSale_{j,t})^2\}$.
Pro_Diver	The firms' degree of geographic diversification, which is equal to the logged value of the total number of provinces in which firm *i* has at least one subsidiary corporation in year t.
SOE	Equal to 1 if the firm is stated-owned firm, and 0 otherwise.
HB	Equal to 1 if the firm *i* is cross-listed on the Hong Kong stock market or issued a class of B-shares on the Chinese stock market, and zero otherwise.
GovSubsidy	Equal to 1 if the firm *i* receives government subsidies in year t, and zero otherwise.
TAC	Measured as the change in non-cash current assets minus the change in current non-interest bearing liabilities, minus depreciation and amortization expenses for firm *i* at year t, scaled by lagged total assets.
Asset	Total assets in year t − 1.
$\triangle REV$	The annual change in revenues scaled by lagged total assets.
$\triangle REC$	The annual change in receivable scaled by lagged total assets.
PPE	Property, plant and equipment for firm *i* at year t, scaled by lagged total assets.
TCAC	Change in non-cash current assets minus the change in current non-interest bearing liabilities for firm *i* at year t, scaled by lagged total assets.
Cash Flow	Equal to the sum of income before extraordinary items and depreciation and amortization, scaled by lagged total assets.
Ind_Volatility	Following Boutchkova et al. (2012), *Ind_Volatility* is the average annualized industry return volatility calculated as industry average of firm standard deviations of weekly returns multiplied by the square root of 52, annual from 2000-2014.
Pol_Sensitive_Year	Equal to 1 if the year is 2002, 2007 and 2012 which is the year when the Communist Party of China holds the National Congress of the Communist Party of China (and zero otherwise).
CapitalExp	Equal to is defined as capital expenditures scaled by beginning-of-year book value of total assets following Julio and Yook (2012).
CapitalExp_Dum	Equal to 1 if a firm's capital expenditures is larger than the median of all listed firms' capital expenditures in year t, and zero otherwise.
Analyst_Dum	Equal to 1 if the number of a firm's analysts is larger than the median of the number of all listed firms' total analysts in year t, and zero otherwise.
Media_Coverage_Dum	Equal to 1 if the total number of media stories of a firm is larger than the median of the total number of media stories of all listed firms in year t, and zero otherwise.

Appendix B. Proxies for accounting information quality

We construct six widely used earnings quality variables to measure accounting information quality. Following Francis et al. (2005), we first estimate Eq. (B.1) for each industry with at least 20 observations in a given year based on the CSRC 2001 industry classification:

$$TAC_{i,t} = \beta_0(1/Asset_{i,t-1}) + \beta_1\Delta REV_{i,t} + \beta_2 PPE_{i,t} + \mu_{i,t} \tag{B.1}$$

$$NDACJones_{i,t} = b_0(1/Asset_{i,t-1}) + b_1\Delta REV_{i,t} + b_2 PPE_{i,t} + \mu_{i,t} \tag{B.2}$$

$$NDACDechow_{i,t} = b_0(1/Asset_{i,t-1}) + b_1(\Delta REV_{i,t} - \Delta REC_{i,t}) + b_2 PPE_{i,t} + \mu_{i,t} \tag{B.3}$$

$$AbsDA_{i,t} = |TAC_{i,t} - NDACJones_{i,t}| \tag{B.4}$$

$$AbsMDA_{i,t} = |TAC_{i,t} - NDACDechow_{i,t}| \tag{B.5}$$

TAC is measured as the change in non-cash current assets minus the change in current non-interest bearing liabilities, minus depreciation and amortization expense for firm *i* in year *t*, scaled by lagged total assets; $\triangle REV$ is the annual change in revenues scaled by lagged total assets; $\triangle REC$ is the annual change in receivable scaled by lagged total assets; *PPE* is property, plant and equipment for firm *i* in year *t*, scaled by lagged total assets. We then use the estimated regression coefficients (b_0, b_1, b_2) from Eq. (B.1) to Eq. (B.2) (Eq. (B.3)) and calculated non-discretionary accruals for *NDAC_Jones* (*NDAC_Dechow*). Finally, *AbsDA* (*AbsMDA*) is the absolute difference between total accruals and non-discretionary accruals as shown in Eq. (B.4) (Eq. (B.5)) and *DA* (*MDA*) is the difference between total accruals and non-discretionary accruals.

Our third measure is *AbsDD* which is equal to the absolute value of the residual of Dechow and Dichev (2002) model. A higher value of *AbsDD* meant a lower earnings quality. We estimate the following model:

$$TCAC_{i,t} = \beta_1 Cash\ Flow_{i,t-1} + \beta_2 Cash\ Flow_{i,t} + \beta_3 Cash\ Flow_{i,t+1} + \beta_4\Delta REV_{i,t} + \beta_5 PPE_{i,t} + \mu_{i,t} \tag{B.6}$$

TCAC is measured as the change in non-cash current assets minus the change in current non-interest bearing liabilities for firm *i* in year *t*, scaled by lagged total assets; *Cash Flow* is equal to the sum of income before extraordinary items and depreciation and amortization, scaled by lagged total assets; $\triangle REC$ and *PPE* are defined as above. We also estimated the Eq. (B.6) for each industry

with at least 20 observations in a given year based on the CSRC 2001 industry classification. Our key variable *Abs_DD* is the absolute values of residuals from regression Eq. (B.6) and *DD* is the values of residuals from regression Eq. (B.6).

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