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Economic Policy Uncertainty and Analyst Behaviors: Evidence from China

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This paper documents the significant impact of local and external economic policy uncertainty (EPU) on China's information environment. Specifically, during periods of high local uncertainty, analyst earnings forecast accuracy declines, while analyst dispersion and coverage increase. Both analyst upgrade and downgrade recommendations decrease during such periods. External policy uncertainty exerts significant, though varying, cross-country effects on Chinese analysts' behaviors. Time-series analyses reveal that several key economic, political, and market events or reforms notably influence the impact of EPU on analyst behaviors in China. In particular, sentiment mitigates the impact of EPU on analyst accuracy, disperiosn, and coverage.

Key Words: Economic Policy Uncertainty; Analysts Forecast Accuracy; Forecast Dispersion; Analyst Coverage; Recommendations.

JEL Classification Numbers: E6, F49, G18, G24.

1. INTRODUCTION

As key information intermediaries, sell-side financial analysts play a vital role in interpreting and disseminating firm-level information related to investment and financing decisions, thereby shaping investor perceptions and influencing capital market outcomes (Chen, Zhu, Han, Chen, and Liu 2022).

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A large number of studies document the impact of macroeconomic uncertainty on various corporate dimensions, including firms' demand for liquidity, management earnings forecasts, audit fees, accounting quality, and the comparability of financial statements (e.g., Baum, Caglayan, Ozkan, and Taiavera 2006; Kim, Pandit, and Wasley 2016; Chen, Duh, Wu, and Yu 2019; Dhole, Liu, Lobo, and Mishra 2021; El Ghoul, Guedhami, Kim, and Yoon 2021). Moreover, prior research has explored how macroeconomic uncertainty shapes firms' information environment by examining analyst behavior across both international (Hope and Kang 2005) and U.S. contexts (Chourou et al. 2020).

However, relatively little research has explored how local and external economic policy uncertainty (EPU) influences analyst behavior in emerging capital markets. Understanding the information environment in these markets is particularly important, as they have undergone rapid economic development and attracted significant attention from global investors, including U.S. pension funds.

Given the growing prominence of EPU in the decision-making processes of corporate managers[1] and financial market participants (e.g., Bradley, Gokkaya, Liu, and Xie 2017; Kaviani, Kryzanowski, Maleki, and Savor 2020), we focus on China, an emerging market that differs significantly from developed markets in terms of institutional infrastructure, legal systems, political environment, and investor behavior (Xiang, Tian, Yang, and Liu 2014). Specifically, we investigate the extent to which macro-level economic policy uncertainty alters the behavior of sophisticated market participants, namely, financial analysts.

This study differs from prior research in several key aspects. First, unlike traditional proxies for macroeconomic uncertainty such as the CBOE Volatility Index, GDP forecast dispersion, presidential election cycles, or government turnover (Baloria and Mamo 2017; Yu et al. 2020), we adopt a more comprehensive measure: the Economic Policy Uncertainty (EPU) index developed by Baker, Bloom, and Davis (2016). The EPU index captures policy-related economic uncertainty by incorporating information from news coverage, tax code provisions, and disagreement among economic forecasters. It reflects uncertainty across multiple dimensions of the economy, markets, and regulatory policy, and enables cross-sectional and time-series analyses (Brogaard and Detzel 2015).

Second, our analysis focuses on China, an emerging market with unique institutional features. Compared to developed economies, China exhibits distinct characteristics in terms of government intervention during periods

[1]PriceWaterhouseCoopers 19th Annual Global CEO Survey, January 2016, available at https://www.pwc.com/gx/en/ceo-survey/2016/landing-page/pwc19th-annual-global-ceo-survey.pdf

of uncertainty, market structure, and investor behavior (e.g., Xiang et al. 2014).

Third, we offer a more holistic view of analyst behavior by examining both earnings forecasts and stock recommendations. While existing studies focus on the effects of macro uncertainty on analysts' forecast performance, particularly earnings forecast accuracy and dispersion (e.g., Hope and Kang 2005; Baloria and Mamo 2017; Chourou et al. 2020; Zhu, Lin, Chen, and Han 2023), relatively few have explored its influence on stock recommendations (e.g., Lin 2018). It is important to include both forecasts and recommendations because they predict firms' prospect differently[2].

We examine the impact of economic policy uncertainty (EPU) on the behavior of analysts covering firms listed on the Shanghai and Shenzhen Stock Exchanges. Our analysis focuses on five analyst-related metrics that reflect firm's information environment: earnings forecast accuracy, forecast dispersion, analyst coverage, and the number of upward and downward stock recommendation revisions. We employ the most recent EPU index for Mainland China to capture variations in economic policy uncertainty.

Our main findings are as follows. Higher levels of EPU are associated with lower earnings forecast accuracy and greater forecast dispersion, consistent with the notion that macroeconomic uncertainty increases the difficulty of analysts' forecasting tasks, consistent with those in the US (Chourou et al. 2020). In addition, we find that analyst coverage increases with rising EPU, while both the number of upgrade and downgrade recommendations decline. These results suggest that during periods of heightened policy uncertainty, analysts become more cautious. Although they intensify firm coverage, they refrain from issuing definitive buy or sell signals. This pattern is consistent with prior evidence showing that analysts tend to underreact to negative macroeconomic signals (Hugon, Kumar, and Lin 2016). We also show that in time series, some important events could influence the impact of China EPU on analysts' behaviors. In particular, investor sentiment plays a significant role in mitigating or strengthing the impact of China EPU on analysts' behaviors.

We further examine the external cross-country effects of economic policy uncertainty (EPU) on analyst behavior in mainland China. Specifically, we investigate whether and how policy uncertainty in the U.S., Europe, Hong Kong, and at the global level influences the forecasting and recommen-

[2]Literature documents differences and inconsistencies between earnings forecasts and stock recommendations, although both are produced by financial analysts. For example, forecast-based investment strategies generate better outcomes than recommendation-based strategies (Bradshaw 2004; Barniv, Hope, Myring, and Thomas 2010). Analysts who produce accurate forecasts do not always issue profitable stock recommendations (Ertimur, Sunder and Sunder 2007).

dation activities of Chinese financial analysts. Our results reveal notable cross-border spillovers.

Specifically, we find that European EPU is positively associated with analyst forecast dispersion, coverage, and the number of downgrade recommendations, while negatively associated with the number of upgrade recommendations. In contrast, U.S. EPU increases forecast dispersion, analyst coverage, and the number of both upgrades and downgrades, but reduces forecast accuracy. Global EPU exhibits patterns similar to China's EPU: it negatively affects forecast accuracy and both recommendation upgrades and downgrades, while positively affecting forecast dispersion and analyst coverage. Overall, our findings suggest that policy uncertainty has significant cross-country effects on analyst behavior.

This study offers several important contributions to the literature. First, while most existing research focuses on analysts' earnings forecast accuracy and dispersion, we provide a more comprehensive analysis by examining five analysts' behaviors including stock recommendations. Our results suggest that policy uncertainty has comprehensive impact on various dimenisions of analsyts' behaviors.

Second, we document the influence of local and external policy uncertainty on local analyst behavior, highlighting the similar and different impact of local and external policy uncertainty on local analysts' behaviors. In parituclar, we show that overall, external EPU exhibits behavioral impacts similar to those of local policy uncertainty, underscoring the interconnectedness of global financial information environments.

Last, we also show that the impact of policy uncertainty on analsyts' behaviors varies in time series. Some important events could influence the impact of policy uncertainty. In particular, we show investor sentiment plays a significant role in mitigating or strengthing the impact of China EPU on analysts' behaviors, emphasizing the interaction effect of investor sentiment and uncertainty on financial markets (e.g., Birru and Young, 2022).

The remainder of the paper is structured as follows: Section 2 outlines the hypotheses, Section 3 covers the methodological approach, Section 4 reviews the empirical findings, and Section 5 offers a summary and conclusion.

2. HYPOTHESIS DEVELOPMENT

We begin by examining the effect of macroeconomic uncertainty on analyst behavior related to earnings forecasts, with a focus on forecast accuracy, dispersion, and analyst coverage. Macroeconomic uncertainty reflects conditions under which investors face ambiguity regarding the probabilities of future outcomes, including stock price movements. During periods of

heightened uncertainty, increased volatility in firms' operations makes forecasting more challenging. Prior studies document that earnings forecasts tend to be less accurate during periods of adverse macroeconomic conditions, such as recessions (Jacob 1997), U.S. presidential elections (Baloria and Mamo 2017), and local political transitions in China (Yu et al. 2020). Building on this literature, we expect that analyst forecast accuracy will similarly deteriorate under elevated macroeconomic uncertainty. Accordingly, we propose the following hypothesis:

Hypothesis 1: Macro-economic uncertainty is negatively related to analysts' earnings forecast accuracy.

Macroeconomic uncertainty also affects analysts' forecast dispersion, which is measured as the standard deviation of earnings forecasts issued by all analysts covering a given firm in a particular year (Al Guindy 2021). According to Grossman and Stiglitz (1980), the degree of information asymmetry influences both the cost of acquiring information and the quality of information obtained. Elevated macroeconomic uncertainty increases information asymmetry among analysts and imposes greater complexity on the forecasting process. Consequently, forecast dispersion is likely to rise as analysts differ in their interpretations and processing of uncertain information. Such variation may stem from factors including analysts' forecasting experience, political orientation, portfolio complexity, the reputation of their brokerage firms, and prior industry expertise (Clement 1999; Gilson et al. 2001; Malloy 2005; Jiang, Kumar, and Law 2016; Bradley et al. 2017). Accordingly, we propose the following hypothesis:

Hypothesis 2: Macro-economic uncertainty is positively related to analysts' forecast dispersion.

The macroeconomic environment may also influence analyst coverage, defined as the number of analysts following a given firm. Prior research suggests that heightened uncertainty increases investor demand for analyst research to support valuation and investment decisions. For instance, Amiram, Landsman, and Owens (2018) find that during periods of elevated market, industry, and firm-level uncertainty, analysts' forecasts become less accurate but more timely — generating stronger market reactions. This suggests that investors value the timeliness of information, even when accuracy declines under uncertainty. Moreover, firms are aware of the heightened information asymmetry in uncertain environments and actively seek ways to improve information dissemination. Kirk (2011) documents that firms facing higher uncertainty are more likely to engage fee-based analyst research services to increase coverage. Expanded analyst coverage reduces information asymmetry, improves investor access to firm-specific information, facilitates capital market participation, and ultimately lowers the cost of capital (Bushee and Miller 2012; Easley and O'Hara 2004). Accordingly, we propose the following hypothesis:

Hypothesis 3: Macro-economic uncertainty is positively related to analysts' coverage.

We next explore how macroeconomic uncertainty influences analysts' behavior regarding upward and downward revisions of stock recommendations. Bradshaw (2004) finds that analysts' recommendation revisions are positively associated with changes in long-term growth expectations, while Kneller and Young (2001) document a negative relationship between macroeconomic uncertainty and long-term growth forecasts. Taken together, these findings suggest that macroeconomic uncertainty should be negatively (positively) associated with upward (downward) recommendation revisions.

However, analysts' stock recommendations are influenced by factors beyond fundamental valuation. Private interactions with management, potential conflicts of interest related to underwriting business, and compensation incentives can shape analysts' behavior (Soltes 2014; Brown, Call, Clement, and Sharp 2015). As a result, analysts may be reluctant to issue downgrades even in unfavorable conditions (Westphal and Clement 2008). Simultaneously, elevated uncertainty about firms' long-term prospects may discourage analysts from issuing upgrades.

Therefore, we expect that macroeconomic uncertainty will reduce both upward and downward stock recommendation revisions, reflecting analysts' increased caution under uncertain conditions. Based on this reasoning, we propose the following hypothesis:

Hypothesis 4: Macro-economic uncertainty is negatively related to recommendation upgrades and downgrades.

3. METHODOLOGICAL ISSUES

3.1. Modelling

To examine the relationship between analyst performance and macro uncertainty, we use the following model:

$$\text{Analyst Performance}_{i,t} = \alpha \text{Macro\_Uncertainty}_{i,t} + \beta \text{Controls}_{i,t} + \varepsilon_{i,t}$$

where Macro_Uncertainty is measured with the EPU index, developed by Baker et al. (2016). We employ the weighted average of the economic policy uncertainty indices in the most recent two months to represent measures of macroeconomic uncertainty (EPU).[3] The dependent variables consist of five different measures of analyst performance. These variables are listed and defined in Appendix 1.

[3]We derive similar results from using different estimates of the policy uncertainty index in the formation period.

To isolate the effect of economic policy uncertainty (EPU) on analyst behavior, we control for other macroeconomic and firm-level variables that may influence analysts' forecasting and recommendation activities. Specifically, we include investor sentiment and market uncertainty, both of which have been shown to significantly affect forecast accuracy (Walter and Willis 2013; Amiram, Landsman, Owens, and Stubben 2018). Investor sentiment (Sentiment) is proxied by the Consumer Confidence Index, following Lemmon and Portniaguina (2006) and Schmeling (2009). Market uncertainty (MKT Volatility) is measured as the standard deviation of monthly returns on the Shanghai Stock Exchange (SSE) Composite Index over the prior 12 months.

We also incorporate firm-specific characteristics, as prior studies have shown that analyst behavior is influenced by factors such as firm size, growth opportunities, equity issuance, and perceived mispricing (Barth et al. 2001). Accordingly, we control for return on assets (ROA), leverage (Leverage), growth opportunities (Smooth), and firm age (Age). All regressions include year and industry fixed effects. Detailed variable definitions are provided in Appendix 1.

3.2. Data and sample

We obtain data from Compustat and IBES. For each firm-year observation, we retain data only if both stock recommendations and one-year-ahead earnings forecasts are available. We restrict the sample to firms listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange in mainland China. The final sample comprises 16,886 firm-year observations for 1,893 firms spanning the period from 2000 to 2018. Appendix 2 provides details on the sample selection process.

Panel A of Table 1 presents the descriptive statistics for the variables. The average forecast accuracy is -0.013, and the median is -0.007. The average forecast dispersion is 0.00018, with a median of 0.00011. On average, firms are followed by three analysts, based on the mean of the natural logarithm of coverage (1.624); the median number of analysts is five, with a corresponding median log value of 1.609. On average, there are 1.02 upward revisions and 1.018 downward revisions in stock recommendations, based on mean log values of 0.02 and 0.018, respectively. The average ROA is 0.062, and the median is 0.053. Leverage averages 0.466, with a median of 0.459. The average growth rate is 0.008, and the median is 0.000. The average consumer confidence index is 4.598, and the median is 4.590. Market volatility, measured as the standard deviation of returns on the SSE index over the past twelve months, averages 0.014, with a median of 0.012.

Panel B of Table 1 reports the correlation matrix for all variables. The correlation between the China Mainland EPU and forecast accuracy is negative, suggesting that greater policy uncertainty makes earnings forecasts

TABLE 1.

Descriptive Statistics

Panel A: Descriptive Statistics

Variable	N	Mean	Std Dev	10th Pctl	25th Pctl	50th Pctl	75th Pctl	90th Pctl
Accuracy	12018	−0.013	0.021	−0.028	−0.014	−0.007	−0.003	−0.002
Dispersion	12343	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Logfollow	14081	1.624	0.667	0.693	1.099	1.609	2.079	2.565
Lognumrecup	14828	0.020	0.117	0.000	0.000	0.000	0.000	0.000
Lognumrecdown	14828	0.018	0.111	0.000	0.000	0.000	0.000	0.000
China Mainland EPU	15186	5.228	0.649	4.481	4.700	5.193	5.549	6.294
HK EPU	15186	5.148	0.397	4.644	4.828	5.124	5.519	5.633
US EPU	15186	4.813	0.255	4.505	4.662	4.806	4.973	5.139
European EPU	15186	5.161	0.345	4.862	4.987	5.144	5.402	5.579
Global EPU	15186	4.904	0.362	4.554	4.683	4.885	5.111	5.467
Market Capitalization	15186	2.778	0.925	1.701	2.153	2.687	3.328	3.999
ROA	15186	0.062	0.053	0.008	0.026	0.053	0.087	0.126
Leverage	15186	0.466	0.231	0.162	0.282	0.459	0.635	0.776
Growth	15186	0.009	0.017	0.000	0.000	0.000	0.014	0.031
MKT Volatility-China Mainland	15186	0.014	0.008	0.005	0.009	0.012	0.018	0.026
Sentiment	15186	4.598	0.022	4.577	4.582	4.590	4.605	4.647

TABLE 1—*Continued*

Panel B: Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1)	Accuracy	−0.511	0.060	0.007	−0.013	−0.005	0.095	−0.048	0.029	−0.003	0.121
(2)	Dispersion	1.000	0.147	0.018	0.043	0.063	0.038	0.052	0.063	0.064	0.149
(3)	Logfollow	0.147	1.000	0.031	−0.033	−0.015	0.022	−0.039	−0.029	0.031	0.502
(4)	Lognumrecup	0.018	0.146	1.000	0.031	−0.033	−0.015	0.022	−0.039	−0.029	0.090
(5)	Lognumrecdown	0.043	0.139	0.031	1.000	−0.050	−0.035	0.026	−0.051	−0.041	0.090
(6)	China Mainland EPU	0.063	0.057	−0.033	−0.050	1.000	0.605	0.456	0.835	0.950	0.057
(7)	HK EPU	0.038	0.080	−0.015	−0.035	0.605	1.000	0.381	0.642	0.622	0.099
(8)	US EPU	0.052	0.102	0.022	0.026	0.456	0.381	1.000	0.541	0.594	−0.080
(9)	Europe EPU	0.063	0.103	−0.039	−0.051	0.835	0.642	0.541	1.000	0.934	0.093
(10)	Global EPU	0.064	0.078	−0.029	−0.041	0.950	0.622	0.594	0.934	1.000	0.059
(11)	Market Capitalization	0.149	0.502	0.090	0.090	0.057	0.099	−0.080	0.093	0.059	1.000

Panel A reports the summary statistics of the main variables used in our regression analyses, including the mean, deviation error (SD), 10th percentile (10%), 25th percentile (25%), median, 75th percentile (75%), and 90th percentile (90%) in the full sample. All variables are defined in Appendix 1. Panel B reports the correlation of variables.

more difficult. In contrast, the correlation between EPU and analyst cover-

age is positive, indicating that more analysts tend to follow firms in periods of heightened uncertainty. The EPU is also positively correlated with forecast dispersion, upward revisions, and downward revisions, implying that macroeconomic uncertainty increases the divergence among analyst forecasts and prompts more frequent recommendation revisions. Untabulated results show a positive correlation between EPU and both market capitalization and the consumer confidence index, suggesting that economic policy uncertainty exerts a greater influence on larger firms.

Moreover, the Hong Kong (HK) EPU index shows a positive correlation with forecast accuracy, forecast dispersion, and analyst coverage for firms listed in both mainland China and Hong Kong. However, it is negatively correlated with both recommendation upgrades and downgrades. These correlation patterns mirror those observed for the China Mainland EPU. In addition, the EPU indices for China Mainland, Hong Kong, Europe, the United States, and the global economy are all positively correlated with one another. This underscores the interconnectedness of global markets and indicates that macroeconomic uncertainty in one region is often reflected across other regions, highlighting the role of globalization in shaping analysts' behavior.

4. EMPIRICAL RESULTS AND DISCUSSIONS

4.1. China EPU and Analyst Behaviors

Table 2, Panel A presents the regression results examining the impact of mainland China EPU on various dimensions of analyst behavior, while controlling for macro-level and firm-level variables. In Column 1, the coefficient on China EPU is −0.001, indicating that greater macroeconomic uncertainty is associated with lower earnings forecast accuracy. This finding supports Hypothesis 1 and is consistent with Chourou et al. (2020), who documented similar evidence in the U.S. context. Column 2 shows a coefficient of 0.001 on China EPU, indicating a significant positive relationship between macroeconomic uncertainty and analyst forecast dispersion, thereby supporting Hypothesis 2. This result suggests that analysts' views diverge more when economic uncertainty is elevated, echoing findings from Chourou et al. (2020) on the China EPU. In Column 3, the coefficient on China EPU is 0.060, again statistically significant, providing support for Hypothesis 3. This result implies that analyst coverage increases during periods of heightened uncertainty, potentially reflecting increased investor demand for guidance and greater incentives for analysts to supply it. Columns 4 and 5 report significant negative coefficients of −0.005 and −0.006 on the number of recommendation upgrades and downgrades, respectively. These findings support Hypothesis 4, suggesting that during uncertain periods, analysts are reluctant to adjust recommendations — ei-

ther upward or downward — possibly due to concerns about firms' future prospects and the desire to maintain good relationships with corporate management.

TABLE 2.

China Mainland Economic Policy Uncertainty and Analyst Behaviors

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.161^{***}	0.003^{***}	14.500^{***}	0.515^{**}	0.560^{***}
	(-3.87)	(6.89)	(13.2)	(2.33)	(2.66)
China Mainland EPU	-0.001^{***}	0.001^{***}	0.060^{***}	-0.005^{***}	-0.006^{***}
	(-4.26)	(8.50)	(7.46)	(-3.11)	(-4.60)
Market Capitalization	0.003^{***}	0.001^{***}	0.351^{***}	0.012^{***}	0.011^{***}
	(13.7)	(9.07)	(60.9)	(10.6)	(9.67)
ROA	0.065^{***}	0.001^{***}	2.138^{***}	0.045^{**}	0.124^{***}
	(16.2)	(2.61)	(20.9)	(2.22)	(6.39)
Leverage	-0.014^{***}	0.001^{***}	0.063^{***}	0.014^{***}	0.014^{***}
	(-15.4)	(11.8)	(2.66)	(3.06)	(3.19)
Growth	0.059^{***}	0.001	-0.048	-0.079	-0.131^{**}
	(4.86)	(1.38)	(-0.16)	(-1.25)	(-2.16)
MKT Volatility	-0.065^{**}	0.001^{***}	-6.218^{***}	-0.181	0.106
	(-2.51)	(3.94)	(-9.63)	(-1.4)	(0.87)
Sentiment	0.033^{***}	-0.001^{***}	-3.087^{***}	-1.109^{**}	-0.119^{***}
	(3.65)	(-7.24)	(-12.9)	(-2.26)	(-2.60)
Firm age	-0.001^{***}	0.001^{***}	-0.002^{**}	-0.001^{***}	0.001^{**}
	(-7.79)	(15.1)	(-2.30)	(-3.73)	(-2.51)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1089	0.0696	0.2926	0.0120	0.0161

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on economic policy uncertainty (EPU) index in China Mainland. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Overall, the results suggest that macroeconomic uncertainty in mainland China complicates analysts' forecasting tasks, leading to reduced accuracy and greater dispersion in forecasts. At the same time, analysts appear more cautious with stock recommendations, possibly reflecting reputational considerations and client relationship management. These findings are in line with evidence from the U.S. (Chourou et al., 2017), further reinforcing the global nature of analysts' responses to economic uncertainty.

4.2. Cross-Country Impacts of Policy Uncertainty on Analyst Behaviors

As globalization progresses, economies around the world are becoming increasingly interconnected. Rapach, Strauss, and Zhou (2023) document that lagged U.S. market returns can predict equity returns in several non-U.S. markets. Similarly, Brogaard et al. (2019) demonstrate that U.S. political uncertainty, especially around election cycles, significantly affects asset prices globally. Given China's pivotal role in the world economy, it is critical to assess whether policy uncertainty in other major economies affects the behavior of analysts covering Chinese firms. We examine the cross-border influence of economic policy uncertainty (EPU) from the U.S., Europe, Hong Kong, and the global economy on analyst behaviors in mainland China.

TABLE 3.

U.S. Economic Policy Uncertainty and Analyst Behaviors in China

	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.086^{**}	0.002^{***}	9.352^{***}	0.392^{*}	0.426
	(−2.01)	(3.97)	(8.40)	(1.71)	(2.00)
U.S. EPU	-0.005^{***}	0.001^{***}	0.346^{***}	0.010^{***}	0.011^{***}
	(−6.42)	(9.65)	(17.00)	(2.46)	(2.90)
Market Capitalization	0.003^{***}	0.001^{***}	0.360^{***}	0.012^{***}	0.011^{***}
	(13.20)	(9.74)	(63.00)	(10.80)	(9.90)
ROA	0.068^{***}	0.001	1.929^{***}	0.041^{*}	0.119^{***}
	(16.90)	(1.36)	(19.00)	(2.00)	(6.10)
Leverage	-0.014^{***}	0.001^{***}	0.037	0.014^{***}	0.014^{***}
	(−14.9)	(11.00)	(1.60)	(3.05)	(3.20)
Growth	0.042^{***}	0.001^{***}	0.858	-0.137^{**}	-0.204^{***}
	(3.60)	(4.50)	(2.90)	(−2.30)	(−3.50)
MKT Volatility	-0.077^{***}	0.001^{***}	-4.818^{***}	−0.021	0.299^{***}
	(−2.97)	(4.22)	(−8.00)	(−0.20)	(2.40)
Sentiment	0.021^{**}	-0.001^{***}	-2.280^{***}	-0.098^{***}	-0.109^{***}
	(2.25)	(−4.97)	(−10.00)	(−2.00)	(−2.30)
Firm age	-0.001^{***}	0.001^{***}	−0.001	-0.001^{***}	-0.001^{**}
	(−8.57)	(16.3)	(−1.00)	(−3.90)	(−2.80)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1106	0.0711	0.3046	0.0118	0.0155

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on US economic policy uncertainty (EPU) index in the China mainland. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Table 3 presents the effects of U.S. EPU on analyst behavior in China. Column 1 indicates that higher U.S. EPU significantly reduces forecast accuracy, suggesting that uncertainty in the U.S. impairs analysts' ability

to generate precise forecasts for Chinese firms. Column 2 shows a significant positive impact of U.S. EPU on forecast dispersion, while Column 3 demonstrates a similar positive effect on analyst coverage. These results are consistent with those reported for China EPU in Table 2. However, Columns 4 and 5 reveal that U.S. EPU increases both upward and downward recommendation revisions, in contrast to the domestic EPU findings where analysts were more hesitant to adjust recommendations. This suggests that U.S. policy uncertainty may encourage analysts to reassess firm fundamentals more actively, potentially due to perceived global spillovers.

TABLE 4.

European Economic Policy Uncertainty and Analyst Behaviors in China

	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.151^{***}	0.002^{***}	11.440^{***}	0.839^{***}	11.440^{***}
	(-3.52)	(4.39)	(10.20)	(3.68)	(10.20)
European EPU	0.001	0.001^{***}	0.165^{***}	-0.016^{***}	0.165^{***}
	(-0.15)	(8.77)	(10.20)	(-5.23)	(10.20)
Market Capitalization	0.003^{***}	0.001^{***}	0.348^{***}	0.013^{***}	0.348^{***}
	(13.90)	(8.51)	(60.40)	(11.10)	(60.40)
ROA	0.065^{***}	0.001^{**}	2.216^{***}	0.038^{*}	2.216^{***}
	(16.20)	(3.25)	(21.60)	(1.84)	(21.60)
Leverage	-0.014^{***}	0.001^{***}	0.084^{***}	0.012^{**}	0.084^{***}
	(-15.20)	(12.40)	(3.54)	(2.57)	(3.54)
Growth	0.045^{***}	0.001	-0.386	-0.029	-0.386
	(3.63)	(1.04)	(-1.24)	(-0.45)	(-1.24)
MKT Volatility	-0.042	0.001^{***}	-4.763^{***}	-0.356^{***}	-4.763^{***}
	(-1.54)	(5.19)	(-7.06)	(-2.63)	(-7.06)
Sentiment	0.029^{***}	-0.001^{***}	-2.552^{***}	-0.166^{***}	-2.552^{***}
	(3.20)	(-5.19)	(-10.60)	(-3.41)	(-10.60)
Firm age	-0.001^{***}	0.001^{***}	-0.002^{**}	-0.001^{***}	-0.002^{**}
	(-8.17)	(15.10)	(-2.54)	(-3.54)	(-2.54)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1076	0.0699	0.2950	0.0132	0.2950

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on European economic policy uncertainty (EPU) index in China mainland. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Table 4 examines the impact of European EPU on analyst behavior in China. Column 1 reports an insignificant coefficient on forecast accuracy, suggesting no clear impact. However, Column 2 reveals a significant positive relationship between European EPU and forecast dispersion, while Column 3 shows increased analyst coverage. These findings are broadly

consistent with the results for China EPU. Notably, Column 4 shows a significant negative effect on recommendation upgrades, while Column 5 indicates a positive relationship with downgrades. These patterns suggest that European uncertainty leads to more pessimistic outlooks among analysts but does not influence forecast accuracy in the same way as domestic uncertainty.

TABLE 5.

Global Economic Policy Uncertainty and Analyst Behaviors in China

	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.140^{***}	0.003^{***}	13.30^{***}	0.605^{***}	0.660^{***}
	(-3.35)	(5.86)	(12.10)	(2.73)	(3.13)
Global EPU	-0.002^{***}	0.001^{***}	0.140^{***}	-0.009^{***}	-0.009^{***}
	(-3.91)	(9.05)	(9.48)	(-3.02)	(-3.29)
Market Capitalization	0.003^{***}	0.001^{***}	0.351^{***}	0.012^{***}	0.011^{***}
	(13.80)	(9.04)	(70.00)	(10.70)	(9.75)
ROA	0.065^{***}	0.001^{***}	2.151^{***}	0.045^{**}	0.124^{***}
	(16.20)	(2.71)	(21.00)	(2.19)	(6.38)
Leverage	-0.014^{***}	0.001^{***}	0.067^{***}	0.014^{***}	0.014^{***}
	(-15.40)	(11.80)	(2.84)	(3.01)	(3.16)
Growth	0.058^{***}	0.001	-0.229	-0.081	-0.147^{**}
	(4.77)	(1.22)	(-0.74)	(-1.27)	(-2.42)
MKT Volatility	-0.071^{***}	0.001^{**}	-5.415^{***}	-0.214	0.092
	(-2.68)	(4.74)	(-8.22)	(-1.62)	(0.73)
Sentiment	0.029^{***}	-0.001^{***}	-2.917^{***}	-0.125^{***}	-0.138^{***}
	(3.25)	(-6.53)	(-12.30)	(-2.60)	(-3.03)
Firm age	-0.001^{**}	0.001^{***}	-0.002^{**}	-0.001^{***}	-0.001^{***}
	(-7.87)	(15.10)	(-2.41)	(-3.76)	(-2.61)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1087	0.0703	0.2942	0.0120	0.0156

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on global economic policy uncertainty (EPU) index in China Mainland. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Table 5 assesses the effects of global EPU on analyst behavior. The results closely mirror those of China EPU. Column 1 shows that global EPU significantly reduces forecast accuracy, while Column 2 documents a significant increase in dispersion. Column 3 shows that global EPU is positively associated with analyst coverage, suggesting heightened demand for information during global uncertainty. Columns 4 and 5 report negative coefficients for both upgrades and downgrades, indicating that analysts

become more cautious in changing recommendations when facing global economic uncertainty.

TABLE 6.

Hong Kong Economic Policy Uncertainty and Analyst Behaviors in China

	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.140^{***}	0.003^{***}	13.30^{***}	0.605^{***}	0.660^{***}
	(-3.35)	(5.86)	(12.1)	(2.73)	(3.13)
Hong Kong EPU	-0.002^{***}	0.001^{***}	0.140^{***}	-0.009^{***}	-0.009^{***}
	(-3.91)	(9.05)	(9.48)	(-3.02)	(-3.29)
Market Capitalization	0.003^{***}	0.001^{***}	0.351^{***}	0.012^{***}	0.011^{***}
	(13.8)	(9.04)	(70.0)	(10.7)	(9.75)
ROA	0.065^{***}	0.001^{***}	2.151^{***}	0.045^{**}	0.124^{***}
	(16.2)	(2.71)	(21.00)	(2.19)	(6.38)
Leverage	-0.014^{***}	0.001^{***}	0.067^{***}	0.014^{***}	0.014^{***}
	(-15.4)	(11.8)	(2.84)	(3.01)	(3.16)
Growth	0.058^{***}	0.001	-0.229	-0.081	-0.147^{**}
	(4.77)	(1.22)	(-0.74)	(-1.27)	(-2.42)
MKT Volatility	-0.071^{***}	0.001^{**}	-5.415^{***}	-0.214	0.092
	(-2.68)	(4.74)	(-8.22)	(-1.62)	(0.73)
Sentiment	0.029^{***}	-0.001^{***}	-2.917^{***}	-0.125^{***}	-0.138^{***}
	(3.25)	(-6.53)	(-12.3)	(-2.60)	(-3.03)
Firm age	-0.001^{**}	0.001^{***}	-0.002^{**}	-0.001^{***}	-0.001^{***}
	(-7.87)	(15.10)	(-2.41)	(-3.76)	(-2.61)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1087	0.0703	0.2942	0.0120	0.0156

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on Hong Kong economic policy uncertainty (EPU) index in China Mainland. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Table 6 focuses on the impact of Hong Kong EPU, which is particularly relevant due to the region's geographic proximity and economic integration with mainland China. The results align closely with those for China EPU. Column 1 shows that Hong Kong EPU negatively affects forecast accuracy, while Column 2 reveals a significant positive impact on forecast dispersion. Column 3 shows increased analyst coverage. In Columns 4 and 5, both upward and downward recommendation revisions decline significantly. These patterns underscore the strong influence of Hong Kong EPU on analyst behavior in China, likely driven by close financial, economic, and political ties.

To further explore global influences, we examine the World Uncertainty Index (WUI) developed by Ahir, Bloom, and Furceri (2022), based on

Economist Intelligence Unit country reports from 143 countries. The WUI captures broad-based global uncertainty and has been adopted in recent research (e.g., Liu and Gao, 2022).

TABLE 7.

World Uncertainty Index and Analyst Behaviors in China

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.181^{***}	0.003^{***}	17.059^{***}	0.462^{**}	0.488^{**}
	(-4.27)	(7.44)	(15.34)	(2.06)	(2.29)
China Mainland EPU	-0.010^{***}	0.0002^{***}	0.986^{***}	-0.028^{**}	-0.037^{***}
	(-3.63)	(5.99)	(14.11)	(-2.01)	(-2.78)
Market Capitalization	0.003^{***}	0.000^{***}	0.349^{***}	0.012^{***}	0.011^{***}
	(13.89)	(8.66)	(60.89)	(10.73)	(9.80)
ROA	0.064^{***}	0.000^{***}	2.243^{***}	0.043^{**}	0.121^{***}
	(15.93)	(3.01)	(21.92)	(2.10)	(6.22)
Leverage	-0.014^{***}	0.000^{***}	0.097^{***}	0.014^{***}	0.013^{***}
	(-15.61)	(12.19)	(4.10)	(2.89)	(2.95)
Growth	0.048^{***}	0.000^{***}	0.225	-0.126^{**}	-0.189^{***}
	(4.08)	(3.43)	(0.76)	(-2.06)	(-3.25)
MKT Volatility	-0.083^{***}	0.001^{***}	-3.142^{***}	-0.215	0.058
	(-2.96)	(4.47)	(-4.54)	(-1.54)	(0.44)
Sentiment	0.036^{***}	-0.001^{***}	-3.645^{***}	-0.101^{**}	-0.108^{**}
	(3.94)	(-7.56)	(-15.02)	(-2.07)	(-2.33)
Firm age	0.000^{***}	0.000^{***}	-0.002^{**}	-0.001^{***}	0.000^{***}
	(-8.05)	(15.44)	(-2.36)	(-3.91)	(-2.73)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	120,18	12,343	14,081	14,828	14,828
R^2	0.1085	0.0668	0.2996	0.0116	0.0154

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on the World Uncertainty Index (WUI) in China Mainland. WUI is constructed based on reports in 143 countries. We divide the original WUI index by 10,000. All other variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Table 7 presents the effects of WUI on analyst behavior in China. Column 1 indicates that forecast accuracy decreases significantly during periods of high world uncertainty. Column 2 shows a significant increase in forecast dispersion, and Column 3 documents a rise in analyst coverage. In Columns 4 and 5, negative coefficients for both recommendation upgrades and downgrades suggest analysts are more conservative in their revisions during high global uncertainty. These results closely mirror those for China EPU, indicating that global uncertainty, as captured by WUI, significantly influences analyst behavior in the Chinese market.

4.3. Time Series Analysis

In this section, we examine how various economic and political reforms or events and stock market crashes affect analyst behaviors in China.

4.3.1. The Split-Share-Structure Reform

We examine how Economic Policy Uncertainty (EPU) affects firms' information environments following the split-share structure reform in China, which occurred between 2005 and 2007. This reform granted official trading rights to the previously non-tradable state-owned shares of listed state-owned enterprises (SOEs). Prior to the reform, these shares were restricted from trading in the secondary market due to implicit agreements. As a landmark event in China's capital market development, the reform is widely regarded as the beginning of secondary privatization. For instance, Liao, Liu, and Wang (2014) document that SOEs experienced significant improvements in profits and output following the reform.

We hypothesize that the increased tradability of SOE shares has made firms' information environments more responsive to government policy changes, including policy uncertainty. To test this, we focus on a subsample of firms listed on mainland China's stock exchanges, covering the period from 2001 to 2009. This timeframe ensures a balanced number of observations before and after the reform.

We construct a dummy variable, PostReform, which equals 1 for years after 2007 (when the reform was fully implemented) and 0 for years before 2005 (prior to the reform). To assess whether the effect of EPU changed after the reform, we include the interaction term PostReform * Mainland EPU in regressions, where the dependent variables are: analyst forecast accuracy, forecast dispersion, analyst coverage, and the number of upward and downward recommendation revisions. We control for industry fixed effects and use the same control variables as in our main analyses.

Table 8 presents the regression results. Column 1 shows a significant positive coefficient on PostReform * Mainland EPU in the forecast accuracy regression, indicating that forecast accuracy becomes more strongly associated with EPU after the reform. Column 2 shows an insignificant negative coefficient for the interaction term in the forecast dispersion regression, suggesting no significant change in forecast dispersion post-reform. Column 3 reports a significant negative coefficient for the interaction term in the analyst coverage regression, indicating that higher EPU is associated with reduced analyst coverage following the reform. Column 4 shows a significant negative coefficient in the regression for the number of upward recommendation revisions, implying fewer upward revisions are issued un-

TABLE 8.
Economic Policy Uncertainty and Analyst Behaviors Before and After the Split-Share-Structure Reform

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-3.247^{***}	0.018^{***}	62.0^{***}	6.235^{***}	6.394^{***}
	(-8.74)	(6.33)	(10.89)	(4.32)	(4.01)
PostReform	-0.097^{**}	0.001	1.847^{***}	0.349^{**}	0.077
	(-2.13)	(0.77)	(2.82)	(2.13)	(0.43)
Mainland EPU	-0.016^{**}	0.001	0.312^{**}	0.045	0.008
	(-1.73)	(1.07)	(2.30)	(1.35)	(0.23)
PostReform $*$ EPU	0.023^{**}	-0.001	-0.415^{***}	-0.078^{**}	-0.018
	(2.30)	(-0.86)	(-2.86)	(-2.19)	(-0.46)
Market Capitalization	0.003^{***}	0.001^{***}	0.268^{***}	0.019^{***}	0.022^{***}
	(3.34)	(3.59)	(21.50)	(6.12)	(6.27)
ROA	0.132^{***}	0.001	1.281^{***}	0.011	0.103
	(8.58)	(1.37)	(5.31)	(0.18)	(1.55)
Leverage	-0.020^{***}	0.001^{***}	-0.017	0.008	-0.001
	(-5.12)	(5.28)	(-0.28)	(0.50)	(-0.02)
Growth	0.626	-0.004	12.176^{**}	0.301	0.866
	(1.63)	(-1.47)	(2.03)	(0.18)	(0.48)
MKT Volatility	0.266^{**}	0.001	2.325	0.001	-1.019^{*}
	(2.07)	(0.43)	(1.17)	(0.01)	(-1.89)
Sentiment	0.715^{**}	-0.004^{***}	-13.669^{***}	-1.400^{***}	-1.402^{***}
	(8.84)	(-6.51)	(-11.06)	(-4.45)	(-4.04)
Firm age	-0.001^{***}	0.001^{**}	0.008^{**}	-0.001	0.002^{*}
	(-3.09)	(5.03)	(2.33)	(-1.30)	(1.75)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	1499	1351	1639	1957	1957
R^2	0.2289	0.0870	0.4451	0.0827	0.0584

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on economic policy uncertainty (EPU) index in China Mainland before and after the split-share-structure reform between 2005 and 2007. PostReform is a dummy variable that equals 1 if a year is after year 2007, and equals 0 if a year is before year 2005. To keep the sample balanced, this analysis uses a partial sample between year 2001 to year 2004 and between year 2008 to year 2009.All other variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

der high EPU conditions after the reform. Column 5 shows an insignificant coefficient for the interaction term in the regression on downward recommendation revisions, indicating no meaningful change in this outcome post-reform.

Overall, these results suggest that the split-share structure reform altered how analysts respond to policy uncertainty. Specifically, while forecast accuracy increased in response to EPU, analyst coverage and upward recommendation revisions declined, with no significant changes observed in forecast dispersion or downward revisions.

4.3.2. The Government Stimulus

We also examine how economic policy uncertainty (EPU) affects firms' information environment following the implementation of China's 2009 stimulus package. In response to the global financial crisis, the Chinese government launched a stimulus package totaling 4 trillion RMB (approximately $586 billion), aimed at promoting economic growth through relaxed monetary policy and increased bank credit support for investment (Liu, Pan, and Tian, 2018; Chen, He, and Liu, 2020).

Prior research indicates that while the stimulus policy boosted corporate investment, its effects were not uniform — state-owned enterprises (SOEs) benefited more than non-state-owned enterprises (NSOEs), exacerbating disparities in loan access (Liu et al., 2018). Moreover, government-backed loans have been associated with suboptimal investment outcomes and a tendency toward overinvestment (Deng, Jiang, Li, and Liao, 2020). As a result, we anticipate a complex relationship between EPU and the corporate information environment during the post-stimulus period. Specifically, analysts may become more optimistic in their evaluations of firms influenced by policy support, but the precision of these forecasts may be questionable.

To test this, we construct a dummy variable, PostStimulus, which equals 1 for years after 2009 and 0 otherwise. We interact PostStimulus with China Mainland EPU to assess how the information environment has changed since the implementation of the stimulus. We regress this interaction term, along with PostStimulus and Mainland EPU individually, on several dependent variables: analyst forecast accuracy, forecast dispersion, analyst coverage, and the number of upward and downward recommendation revisions. The regressions control for industry fixed effects and include the same control variables as our main models.

Table 9 presents the results. Column (1) shows a significantly negative coefficient on PostStimulus $*$ Mainland EPU for forecast accuracy, indicating that the association between EPU and forecast accuracy has become stronger after the stimulus. Column (2) reports an insignificant positive coefficient on the interaction term for forecast dispersion. Column (3) re-

TABLE 9.

Economic Policy Uncertainty and Analyst Behaviors Before and After the Government Stimulus in 2009

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	-0.129^{***}	0.002^{***}	8.333^{***}	0.613^{**}	0.500^{**}
	(-3.04)	(3.34)	(6.92)	(2.54)	(2.23)
Post2009	0.036^{***}	0.000	-0.180	-0.082^{**}	-0.052
	(5.10)	(0.62)	(-0.94)	(-2.36)	(-1.63)
Mainland EPU	0.006^{***}	0.000	-0.068^{*}	-0.021^{***}	-0.016^{**}
	(3.98)	(1.16)	(-1.67)	(-2.83)	(-2.34)
Post2009 $*$ EPU	-0.007^{***}	-0.000	0.096^{**}	0.017^{**}	0.010
	(-4.66)	(-0.04)	(2.32)	(2.18)	(1.38)
Market Capitalization	0.002^{***}	0.000^{***}	0.347^{***}	0.0125^{***}	0.011^{***}
	(10.09)	(8.91)	(57.65)	(10.51)	(9.85)
ROA	0.068^{***}	0.000^{**}	2.320^{***}	0.031	0.090^{***}
	(17.44)	(2.11)	(21.43)	(1.46)	(4.61)
Leverage	-0.009^{***}	0.000^{***}	0.094^{***}	0.009^{*}	0.007
	(-10.42)	(10.44)	(3.81)	(1.85)	(1.62)
Growth	0.040^{***}	0.000	-0.890^{***}	-0.040	-0.068
	(3.46)	(0.77)	(-2.82)	(-0.62)	(-1.14)
MKT Volatility	0.066^{**}	0.001^{***}	-3.522^{***}	-0.340^{**}	-0.123
	(2.43)	(4.05)	(-4.91)	(-2.38)	(-0.94)
Sentiment	0.018^{**}	-0.000^{***}	-1.681^{***}	-0.113^{**}	-0.094^{*}
	(1.98)	(-3.73)	(-6.48)	(-2.17)	(-1.94)
Firm Age	-0.000^{***}	0.000^{***}	-0.003^{***}	-0.001^{***}	-0.000^{**}
	(-8.53)	(14.25)	(-3.77)	(-3.22)	(-2.53)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	11491	11832	13509	14237	14237
R^2	0.0977	0.0692	0.3028	0.0118	0.0148

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on economic policy uncertainty (EPU) index in China Mainland before and after 2009. PostStimulus is a dummy variable that equals 1 if a year is after year 2009, and equals 0 if a year is before year 2009. To keep the sample balanced, this analysis uses a partial sample between year 2000 to year 2008 and between year 2010 to year 2018.All other variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

veals a significantly positive coefficient for analyst coverage, suggesting that more analysts follow firms during periods of high EPU in the post-stimulus era. Column (4) shows a significantly positive coefficient on PostStimulus $*$ Mainland EPU for upward recommendation revisions, suggesting that analysts are more likely to issue upgrades during times with higher uncer-

tainty following the stimulus. These findings collectively indicate that the stimulus has introduced nuanced changes in the relationship between EPU and analyst behavior — leading to increased forecast accuracy and analyst coverage, while effects on dispersion and recommendation revisions vary.

4.3.3. The Anti-corruption Campaign in 2013

We examine whether economic policy uncertainty (EPU) has a differential impact on analyst behavior following the 2013 anti-corruption campaign, during which the Central Inspection Team (CIT) initiated site visits to investigate local corruption. Specifically, we explore how EPU affects the information environment before and after 2013. Li et al. (2021) find that analysts tend to be more optimistic in their earnings forecasts during CIT visit periods than in non-CIT periods. They attribute this optimism to local government pressure and the concealment of negative firm-specific news, rather than improvements in firms' fundamentals.

However, it remains unclear how EPU influences the information environment in the post-campaign period. On one hand, the anti-corruption campaign may improve the information environment. Corruption often fosters opaque relationships between firms and local governments, providing access to preferential resources. Since these connections are typically hidden from financial analysts, reducing corruption should mitigate information asymmetry and enhance transparency. On the other hand, the campaign itself may generate political uncertainty due to ongoing investigations and institutional reforms, thereby worsening the information environment.

To explore this, we construct a dummy variable, Post2013, which equals 1 for years after 2013 and 0 otherwise. We then interact Post2013 with Mainland EPU to capture changes in how EPU affects analyst behavior following the anti-corruption campaign. We regress this interaction term on various dependent variables related to the analyst information environment: analyst forecast accuracy, forecast dispersion, the number of analysts following a firm, and the number of upward and downward recommendation revisions. Industry fixed effects and the same control variables as used in the primary models are included.

Table 10 reports the regression results. Column 1 shows a significant positive coefficient on Post2013 $*$ Mainland EPU for forecast accuracy, indicating a weakened association between EPU and forecast accuracy after the campaign. Column 2 reveals a significant negative coefficient for forecast dispersion, suggesting reduced dispersion during periods of high EPU in the post-campaign era. Column 3 also reports a significant negative coefficient

TABLE 10.

Economic Policy Uncertainty and Analyst Behaviors Before and After the Anti-Corruption Campaign

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	0.041	0.001^{***}	6.453^{***}	0.563^{**}	0.177
	(0.92)	(3.25)	(5.52)	(2.34)	(0.78)
Post2013	-0.024^{***}	0.001^{***}	1.212^{***}	-0.098^{***}	-0.018
	(-6.68)	(7.34)	(12.9)	(-5.13)	(-1.01)
Mainland EPU	-0.006^{***}	0.000^{***}	0.249^{***}	-0.013^{***}	-0.003
	(-9.64)	(11.22)	(16.30)	(-4.35)	(-0.95)
Post2013 $*$ EPU	0.006^{**}	-0.000^{***}	-0.262^{***}	0.016^{***}	-0.001
	(7.69)	(-7.60)	(-14.00)	(4.23)	(-0.22)
Market Capitalization	0.003^{***}	0.001^{***}	0.363^{***}	0.014^{***}	0.012^{***}
	(11.83)	(8.69)	(60.10)	(11.60)	(10.80)
ROA	0.060^{***}	0.001^{***}	1.875^{***}	0.006	0.079
	(14.30)	(4.20)	(17.40)	(0.30)	(3.86)
Leverage	-0.014^{***}	0.001^{***}	0.064^{***}	0.008^{*}	0.009^{*}
	(-14.10)	(11.60)	(2.59)	(1.68)	(1.95)
Growth	0.011	0.001^{***}	1.985^{***}	0.073	0.103
	(0.87)	(2.82)	(6.00)	(1.06)	(1.58)
MKT Volatility	-0.050^{*}	0.001^{***}	-6.640^{***}	-0.138	0.082
	(-1.94)	(3.48)	(-10.40)	(-1.06)	(0.67)
Sentiment	-0.006	-0.001^{***}	-1.549^{***}	-0.110^{**}	-0.038
	(-0.64)	(-4.11)	(-6.18)	(-2.13)	(-0.79)
Firm age	-0.001^{***}	0.001^{***}	-0.001	-0.001^{***}	0.001
	(-9.29)	(14.30)	(-0.10)	(-2.60)	(-0.93)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	10818	11151	12759	13490	13490
R^2	0.1126	0.0735	0.3112	0.0172	0.0219

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on economic policy uncertainty (EPU) index in China Mainland before and after the Anti-Corruption Campaign since 2013. Post2013 equals 1 when a year is after 2013 and equals 0 when a year is before 2013. All other variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

for analyst following, implying that fewer analysts follow firms when EPU is high in the post-campaign era. Column 4 shows a significant positive coefficient for the number of upward recommendation revisions, suggesting that analysts are more likely to issue favorable recommendations under high EPU conditions after the campaign. Collectively, these findings highlight that the anti-corruption campaign altered analysts' responses to economic

policy uncertainty. The results suggest a weaker relationship between EPU and traditional analyst outputs after the anti-corruption campaign, such as forecast accuracy, forecast dispersion, and analyst coverage. However, the increase in upward recommendation revisions during periods of high EPU points to potentially strategic behavior by analysts in a more uncertain political environment.

Overall, our evidence indicates that while the anti-corruption campaign may have improved certain aspects of transparency, it also introduced new layers of political uncertainty that shaped analyst behavior in nuanced ways.

4.3.4. The 2015 Stock Market Crash

We investigate whether and how the information environment responds differently to Economic Policy Uncertainty (EPU) following the 2015 stock market crash. Prior research highlights a reciprocal relationship among EPU, the information environment, and stock price crash risk (e.g., Jin, Chen, and Yang, 2019), with firms operating in poorer information environments being more vulnerable to crash risk (Ning, 2018). Accordingly, we hypothesize that the 2015 crash may have influenced the sensitivity of the information environment to EPU.

To test this, we introduce a dummy variable, PostCrash, equal to 1 for years after 2015 and 0 otherwise. We interact PostCrash with mainland China's EPU index to capture changes in EPU's effect post-crash. Our analysis covers a balanced sample from 2012?2014 and 2016?2018, excluding the crash year. We regress this interaction term, along with PostCrash and EPU, on five dependent variables: analyst forecast accuracy, forecast dispersion, analyst coverage, and the number of upward and downward recommendation revisions. The regressions include industry fixed effects and the same control variables used in our baseline models.

Table 11 presents the results. Column 1 reports a significantly positive coefficient on PostCrash $*$ Mainland EPU in the forecast accuracy regression, indicating a stronger relationship between EPU and forecast accuracy after the crash. Column 2 shows an insignificant negative coefficient for forecast dispersion. Column 3 shows a significantly negative coefficient for analyst coverage, suggesting that higher EPU after the crash is associated with reduced analyst following. Column 4 presents an insignificant positive coefficient for upward revisions, implying a possible but statistically weak increase in such revisions during high EPU periods after the crash. Column 5 reveals a significantly negative coefficient for downward revisions,

TABLE 11.

Economic Policy Uncertainty and Analyst Behaviors before and after the Stock Market Crash

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	0.208^{***}	-0.001	-8.384^{***}	-0.364	-0.676^{***}
	(3.68)	(-1.01)	(-5.18)	(-1.21)	(-2.63)
Post2015	-0.006	0.000	0.580^{***}	-0.021	0.045^{*}
	(-1.05)	(0.13)	(3.75)	(-0.74)	(1.83)
Mainland EPU	-0.004^{***}	0.000^{***}	0.255^{***}	0.004	0.017^{***}
	(-5.22)	(4.07)	(12.00)	(1.14)	(5.06)
Post2015 $*$ EPU	0.003^{**}	-0.000	-0.184^{***}	0.001	-0.013^{***}
	(2.55)	(-1.03)	(-6.63)	(0.21)	(-2.96)
Market Capitalization	0.001^{***}	0.000^{***}	0.404^{***}	0.012^{***}	0.012^{***}
	(3.14)	(8.58)	(51.16)	(8.25)	(9.24)
ROA	0.085^{***}	0.000	1.903^{***}	0.026	0.038^{*}
	(17.61)	(0.52)	(14.35)	(1.06)	(1.82)
Leverage	-0.008^{***}	0.000^{***}	0.062^{**}	0.009^{*}	-0.002
	(-7.70)	(8.79)	(2.03)	(1.67)	(-0.47)
Growth	0.002	0.000^{***}	1.406^{***}	0.134^{*}	0.054
	(0.12)	(3.14)	(3.63)	(1.85)	(0.88)
MKT Volatility	-0.041	0.002^{***}	2.136^{**}	0.182	0.153
	(-1.04)	(5.06)	(2.00)	(0.92)	(0.90)
Sentiment	-0.044^{***}	0.000	1.654^{***}	0.071	0.125^{**}
	(-3.59)	(0.70)	(4.70)	(1.08)	(2.24)
Firm Age	-0.000^{***}	0.000^{***}	-0.002^{*}	-0.000^{**}	-0.000
	(-8.73)	(11.26)	(-1.82)	(-2.37)	(-0.90)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	7641	8001	8949	9117	9117
R^2	0.1162	0.0661	0.3155	0.0111	0.0183

This table presents the average estimated coefficients from regressions of measures of analyst behaviors on economic policy uncertainty (EPU) index in China Mainland before and after 2015. PostCrash is a dummy variable that equals 1 if a year is after year 2015, and equals 0 if a year is before year 2015. To keep the sample balanced, this analysis uses a partial sample between year 2012 to year 2014 and between year 2016 to year 2018. All other variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

indicating fewer negative recommendation revisions in times of high EPU post-crash.

Overall, these findings suggest that the 2015 stock market crash has influence over how analysts respond to economic policy uncertainty in China. Since the crash, forecast accuracy has become more sensitive to EPU, while

analyst coverage and the number of downward revisions have declined during periods of heightened uncertainty. This may reflect a more cautious or conservative stance among analysts, potentially aimed at mitigating further market volatility in a post-crash environment.

4.3.5. The Interaction Effect of Sentiment and Uncertainty

The existing literature documents that investor sentiment significantly influences the behavior of various market participants, including investors and firm managers (Huang et al., 2015; Jiang et al., 2019). Notably, Birru and Young (2022) find that uncertainty amplifies the predictive power of sentiment for market returns, suggesting an interaction effect between uncertainty and sentiment. Building on this, we investigate whether sentiment mitigates the impact of economic policy uncertainty (EPU) on analyst behavior in China. We hypothesize that investor sentiment mitigates the adverse effects of uncertainty on the information environment. In periods of elevated uncertainty, positive sentiment may buffer reactions to uncertainty-induced volatility. In other words, the higher the EPU, the stronger the mitigating role sentiment may play in shaping analyst behavior.

Table 12 reports the regression results, where we include the interaction term Sentiment * China EPU. Column (1) examines analyst forecast accuracy. The coefficient on Sentiment * China EPU is positive but statistically insignificant. Notably, the main effect of China EPU is also insignificant, in contrast to Table 2, Column (1), where China EPU has a significant positive coefficient. This suggests that sentiment dampens the impact of policy uncertainty on forecast accuracy. Column (2) presents results for forecast dispersion. The interaction term Sentiment * China EPU is significantly positive, while the coefficient on China EPU turns significantly negative. This contrasts with Table 2, Column (2), where China EPU exhibits a significantly positive effect without the interaction. These findings indicate that sentiment mitigates the positive association between EPU and forecast dispersion. Column (3) investigates analyst coverage as a proxy for the information environment. The interaction term is insignificant, and the main effect of China EPU also loses significance. This is again in contrast to the significant positive effect reported in Table 2, Column (3), further supporting the mitigating role of sentiment. Columns (4) and (5) assess the number of upward and downward stock recommendation revisions, respectively. In both cases, the coefficient on Sentiment * China EPU is significantly positive, while the main effect of China EPU is significantly

negative. This pattern suggests that sentiment attenuates the negative impact of policy uncertainty on analysts' recommendation behavior.

TABLE 12.

The Interaction of Sentiment and Uncertainty

	(1)	(2)	(3)	(4)	(5)
	Accuracy	Dispersion	Coverage	Upgrade	Downgrade
Intercept	0.176	0.011^{***}	9.344	8.899^{***}	3.667^{**}
	(0.49)	(2.88)	(0.98)	(4.61)	(2.00)
China Mainland EPU	−0.064	-0.001^{**}	1.014	-1.572^{***}	-0.587^{*}
	(−0.97)	(−2.06)	(0.57)	(−4.38)	(−1.72)
Sentiment	−0.040	-0.002^{***}	−1.975	-1.931^{***}	-0.794^{*}
	(−0.52)	(−2.92)	(−0.95)	(−4.60)	(−1.99)
Sentiment ∗ EPU	0.014	0.000^{***}	−0.207	0.340^{***}	0.126^{*}
	(0.95)	(2.10)	(−0.54)	(4.37)	(1.70)
Market Capitalization	0.003^{***}	0.000^{***}	0.351^{***}	0.012^{***}	0.011^{***}
	(13.67)	(9.09)	(60.88)	(10.64)	(9.67)
ROA	0.065^{***}	0.000^{**}	2.140^{***}	0.042^{**}	0.123^{***}
	(16.19)	(2.53)	(20.85)	(2.04)	(6.32)
Leverage	-0.014^{***}	0.000^{***}	0.063^{***}	0.015^{***}	0.014^{***}
	(−15.37)	(11.70)	(2.66)	(3.07)	(3.19)
Growth	0.059^{***}	0.000^{***}	−0.040	−0.093	-0.136^{**}
	(4.81)	(1.28)	(−0.13)	(−1.46)	(−2.25)
MKT Volatility	-0.060^{**}	0.001^{***}	-6.299^{***}	−0.041	0.158
	(−2.25)	(4.31)	(−9.50)	(−0.31)	(1.25)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	12018	12343	14081	14828	14828
R^2	0.1083	0.0692	0.2921	0.0127	0.0157

This table presents how sentiment affects the impact of economic policy uncertainty (EPU) index on analyst behaviors in China. All variables are defined in Appendix 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. T-statistics are in parentheses.

Taken together, these results provide consistent evidence that investor sentiment mitigates the effect of economic policy uncertainty on analysts' behavior and the broader information environment in China.

5. CONCLUSIONS

This paper investigates the impact of policy uncertainty on analyst behavior in mainland China. The results indicate that heightened policy uncertainty is associated with less accurate earnings forecasts, increased forecast dispersion, and greater analyst coverage. However, analysts ex-

hibit a general reluctance to adjust their stock recommendations — either upward or downward — during periods of high uncertainty. This hesitance suggests that analysts consider not only firms' future prospects but also the importance of maintaining favorable relationships with corporate management when macroeconomic uncertainty rises.

Furthermore, we provide robust evidence of cross-border policy uncertainty spillovers, demonstrating that uncertainty originating from the U.S., Europe, and the global economy significantly influences analyst behavior in China. This is likely attributable to China's integral position in global trade. Overall, our findings contribute to the literature on information environments in emerging markets and offer valuable insights for investors seeking to understand analyst behavior and information dynamics in these economies.

APPENDIX 1

Variable Definitions

Dependent Accuracy	Variables	Earnings forecast accuracy, which is calculated as − 1 times the absolute value of the difference between the mean analyst earnings forecast per share over a year and firms' actual earnings per share scaled by the price per share.
	Dispersion	Earnings forecast dispersion, which is calculated as the standard deviation of all individual analysts' earnings forecasts issued for a firm over a year. Individual analysts' earnings forecasts are obtained from I/B/E/S detail file.
	Logfollow	Analyst coverage (number of analysts following a firm in a year), which is measured as the natural logarithm of the summation of one and the number of analysts following a firm.
	Lognumrecup	Number of recommendations revised upward (upgrade), which is measured as the natural logarithm of the summation of one and the number of recommendations that have been revised upward.
	Lognumrecdown	Number of recommendations revised downward (downgrade), which is measured as the natural logarithm of the summation of one and the number of recommendations that have been revised downward.
Independent Variable	EPU	The weighted-average value of monthly EPU indices of the most recent two months. The EPU index is the Economic policy uncertainty index constructed by Baker et al. (2016).
Control Variables	Sentiment	Consumer confidence index, which is obtained from OECD.
	MKT Volatility	Stock market volatility, which is measured as the standard deviation of FTSE index over the past twelve months.
	ROA	Return on assets, which is calculated as the income before extraordinary items divided by average total assets.
	Leverage	Firm leverage, which is calculated as total long-term debt scaled by average total assets.
	Smooth	Income smoothing, which is measured as the standard deviation of earnings divided by the standard deviations of cash flows from operations, where earnings and cash flows are scaled by lagged total assets (Baik et al. 2017).
	Age	Firm age, which is calculated as the number of years firms appear in CSMAR.

APPENDIX 2

Sample Selection

All CSMAR firms with analyst data in China between 2000 and 2018	18544
Less: Observations with missing data on analyst behavior variables	318
Less: observations with missing data on firm control variables	657
Less: Observations with missing data on market sentiment data in China	648
Less: Observations with missing data on industry data	35
Final sample for main analysis	16,886

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