

# Economic Policy Uncertainty and Corporate Information Disclosure: Evidence from the China Stock Market

Runqing Tian\*

Xiamen University, Xiamen, China.

\*Corresponding author: runqingtian@stu.xmu.edu.cn

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**Abstract:** The purpose of this paper is to explore the impact of economic policy uncertainty (EPU) on corporate information disclosure quality. Evidence shows that there is a significantly negative impact of EPU on firms' information disclosure quality. This result continues to hold after conducting a series of robustness checks. In addition, it can be found that the EPU effect is more prominent in state-owned-enterprises and the firms audited by the Big 4 auditors. Overall, the findings of this research provide a new perspective of the consequence of EPU on firm behaviors.

## 1. Introduction

Since Fama pioneered the capital market information effectiveness hypothesis, the quality of information disclosure of listed companies has always been the focus of academic attention. High-quality information disclosure is an important guarantee for maintaining the healthy development of capital markets, and it is also an effective mechanism for enhancing the transparency of listed companies' operations, reducing management moral hazard and curbing management self-interest motives [1]. Specifically, high-quality information disclosure helps to incorporate more company-specific information into stock prices, reduce the company's operational and financial risks, and increase its value. Similarly, high quality disclosure can provide a reasonable basis for market investors to identify the intrinsic value of the company and assess the market value, thus making more effective investment decisions [2, 3]. The large financial frauds repeatedly seen in public companies suggest that operational uncertainty caused by external economic policy uncertainty may make management's performance more variable once the firm is faced with it. Managers often choose to disclose matters that are favorable to them for their own interests, resulting in information asymmetry between investors and firms. Since investors possess only relative rationality, they are not willing to take excessive risks, which ultimately affects investors' confidence in the company. In this regard, the quality of information disclosure of listed companies and the mechanisms affecting information disclosure quality are still issues that need urgent attention from both academic and practical circles.

From the available research literature, the quality of information disclosure is influenced by a variety of factors, including corporate governance structure, financial condition, legal liability, and management incentives [4-7]. However, all of the above studies analyze the factors that affect corporate disclosure at the micro-level. Within an economy, market mechanisms and policy regulation complement each other, and the influence of macro-level government economic policies on actors cannot be ignored. In particular, in recent years, the global economic and political situation has intensified. The international economic situation has changed [8]. "Black swan" events have occurred frequently, and global economic growth is under downward pressure. In order to mitigate the impact of internal and external environmental changes on economic growth, governments have frequently introduced economic policies to strengthen intervention in financial markets and the real economy [9]. There is considerable attention to economic policy factors represented by economic policy uncertainty, which can reflect the risks arising from the unpredictability of changes in the direction and intensity of economic policies due to changes in the macroeconomic environment such as economic outlook,

expectations of industry prospects and external information environment [10]. This uncertainty risk can impact the quality of corporate disclosure, preventing companies from accurately disclosing their long-term plans and short-term plans, which in turn exposes investors to certain market investment risks. Therefore, it becomes necessary to examine the level of corporate information disclosure from the perspective of government economic policies. Therefore, unlike the existing studies, this paper analyzes the impact on corporate disclosure from economic policy uncertainty, which is the market policy environment faced by listed companies, using a sample of the Chinese stock market.

The main reasons for the selection of China's capital market in this paper are as follows. (1) economic restructuring is one of the main threads running through the history of China's economic development, showing a distinct phase evolution trajectory and systematic policy logic [11]. In order to adapt to the needs of reform and development, economic policies have been frequently adjusted and the economic policy uncertainties triggered are prominent. It is due to the characteristics of China's economic and political system that the role of economic policy uncertainty is more prominent in China compared to other countries, and the transmission of policies to the economy is more pronounced. (2) China's capital markets started late compared to those of developed Western countries, and the effectiveness of capital markets is seriously lacking [12]. An efficient market should be one that reflects all information rationally and adequately without any significant information omissions or errors, and the effectiveness of the market is closely related to information disclosure [13]. Therefore, the Chinese stock market can provide a better market environment for this paper to explore economic policy uncertainty and the disclosure behavior of listed companies.

With Chinese capital market data, this paper selects the indicator of economic policy uncertainty to represent changes in the macroeconomic environment. The relationship between this indicator and the quality of corporate information disclosure is also studied to explore the impact of economic policy uncertainty on corporate information disclosure, in an attempt to fill the gap in the existing body of literature. The results of the study indicate that increased economic policy uncertainty reduces the level of corporate information disclosure. After a series of robustness tests, the conclusions of this paper still hold.

The main contributions of this paper are as follows: (1) first, it enriches the literature related to the factors influencing corporate information disclosure. Since most scholars' research on the quality of corporate information disclosure mainly focuses on the level of internal corporate management, financial status, and laws and regulations, there is little literature that illustrates the research at the level of macroeconomic environment and lacks comprehensive consideration of the characteristic factors of external factors. Therefore, the findings of this paper expand the relevant research between the external macroeconomic environment and internal corporate management. This paper proposes a new way of thinking about the impact of corporate information disclosure based on previous studies. (2) Second, it also enriches the research on the comprehensive influencing factors of corporate information disclosure level. While existing studies mainly focus on a single factor on the level of corporate disclosure, this paper provides a broader research perspective and empirical findings on corporate disclosure by introducing the interaction term between economic policy uncertainty and state-owned enterprises and between economic policy uncertainty and the Big Four audit firms. (3) In addition, the findings of this paper provide insights into how government departments and regulators can better promote listed companies to improve their information disclosure level.

The remainder of the paper is structured as follows: Section 2 briefly reviews relevant literature and the testable hypotheses of this paper; Section 3 defines the variables and constructing the empirical model; Section 4 presents the empirical research results and makes relevant analysis; finally, the conclusions of this paper are presented in the last section, and the corresponding policy recommendations are made.

## **2. Literature Review and Hypothesis Development**

How economic policy uncertainty affects the quality of corporate disclosure, a priori the impact of this adverse external shock on the quality of corporate disclosure is often negative. This uncertainty

can put enterprises in a less anticipatory economic policy uncertainty increases can make business risks become greater. Management performance changes fluctuate greatly, thus leading to the distortion of disclosed information. As the volatility of the macroeconomic environment increases, the uncertainty of enterprises' production and operating environment also increases, making it more difficult to make predictions about future operations. Companies are unable to accurately formulate long-term development plans, and short-term plans and budgets are subject to frequent changes due to policy changes, making their internal operations in an unstable environment and increasing their operational risk [14].

In addition, operational uncertainty leads to an increase in the volatility of a firm's future earnings level and cash flow, which increases its financial risk [15]. Also, economic policy uncertainty on changes in corporate financial decisions can significantly reduce the information content of surpluses, affecting the persistence and predictability of surpluses, making it difficult for investors to accurately anticipate changes in surpluses and obtain excess stock returns, reducing the information content of surpluses [16]. The increase in operational and financial risk leads to selective disclosure or embellishment of disclosure data to conceal the risk of uncertainty from the outside world, when companies' financial reports are greatly reduced. Based on the above analysis, this paper proposes the following hypotheses.

**Hypothesis 1:** Increased economic policy uncertainty has reduced the level of corporate disclosure.

A priori, the quality of financial reports audited by the Big 4 is more reliable and the quality of information disclosed is higher [17, 18, 19, 20]. However, in the Chinese market, which faces a higher risk of economic uncertainty, it is questionable whether the Big Four have maintained a high level of information quality. In the regulated Chinese market, the Big Four are able to rely on their extensive political connections and are rarely subject to legal sanctions or administrative penalties in China [21]. More audit revenue means more political and business connections for the firm. Thus, the more likely the firm is to lower its audit standards and audit quality requirements to capture more profits, which leads to lower quality of its audits. The reason why some high-risk firms hire Big 4 audits may be to seek shelter from the Big 4 and avoid penalties from regulators. This leads to the speculation that there may be a possibility that the Big 4 may reduce the quality of corporate disclosure in order to earn more profits in the face of economic policy uncertainty. Therefore, this paper proposes a second research hypothesis.

**Hypothesis 2:** The negative effect of economic policy uncertainty on the level of disclosure is more pronounced among listed companies audited by the Big 4 international accounting firms.

State-owned enterprises have a stronger sense of social responsibility and policy burden than non-state-owned enterprises [22]. Economic policy uncertainty leads to an increase in the interval of information volatility and an increase in information ambiguity [23]. In the face of increased information volatility and increased information ambiguity, state-owned enterprises are willing to disclose less quality information than non-state-owned enterprises due to the stronger policy burden of state-owned enterprises. In addition, in state-owned enterprises, executive positions are directly appointed by the government and are more stable, with a low degree of market-based competition. With the gradual accumulation of years of service and experience, the more resources the executive controls and the more power he or she holds [24]. Then, it is easy for state-owned enterprises to form a fixed way of communication and expressing opinions, and the possibility of forming the authority effect of leaders is higher than that of non-state-owned enterprises. Therefore SOEs are more likely to find legal loopholes, pay less attention to the quality of information disclosure, and form personal interest maximization.

In non-SOEs, the executive selection is less subject to government intervention and is better marketed [25]. Executives and companies are communities of interest and highly identify with the values of the company. To ensure the related interests, executives of non-state enterprises have more stringent requirements for the company's accounting information disclosure when faced with higher uncertainty of economic policies. On the contrary, SOEs have a lower level of information disclosure when they face higher economic policy uncertainty. Therefore, this paper proposes the following research hypothesis.

**Hypothesis 3:** The negative effect of economic policy uncertainty on the level of information disclosure is more pronounced among state-owned enterprises.

### 3. Research Design

#### 3.1 Variable definition and explanation

##### 3.1.1 Dependent variable: information disclosure quality

The explanatory variable is the quality of corporate information disclosure. Firstly, following Kim and Verrecchia (2001), this paper adopts the KV index to measure information disclosure quality of listed firms. When the information disclosure is more adequate, the fewer investors rely on the volume information, and the more they rely on the company's information disclosure, so the slope coefficient of return to the volume will be larger. The obvious advantage of using KV metric method is that KV variables respond to market information, which is the objective evaluation of investors on the degree of information asymmetry. KV values can truly reflect the actual effect of listed companies' information disclosure and include both mandatory information disclosure and voluntary information disclosure, which can be a complete measure of the variables of information disclosure quality of listed companies. KV metric method model is as follows.

$$\ln \left| \frac{\Delta P_t}{P_{t-1}} \right| = \alpha + \beta(Vol_t - Vol_0) + \mu_i \quad (1)$$

$$KV = \beta \times 1000000$$

Where  $P_t$  is the closing price on day t;  $Vol_t$  is the number of shares traded on day t, and  $Vol_0$  is the annual average daily trading volume.  $\beta$  is obtained from the regression of least squares (without considering the case that  $\beta$  is negative and there are less than 100 trading days in the year).  $\beta$  is smaller, and the KV value is smaller, which means that the company's information disclosure is more adequate. To make the empirical analysis more convenient, the opposite of KV, KVindex, is used, i.e., the KVindex value is inversely proportional to the quality of the firm's disclosure. In addition, the data of trading days in the sample that make the model  $\Delta P_t = 0$  not meaningful are excluded.

In addition, this paper uses accrual surplus management to measure the quality of information disclosure. Surplus management is the behavior of company management to subjectively change surplus information to maximize their own interests. It is the subjectivity of this indicator that can indirectly measure the level of corporate disclosure quality. The greater room for management to manipulate surplus indicates a lower corporate disclosure quality and poorer information transparency. First, the total absolute value of accrued surplus management (AbsDA) for the past three years calculated by the Jones model is used to measure information transparency [26]. The larger the AbsDA, the worse the information transparency. The following formula is used to perform the annual return of the company by industry.

$$\frac{TA_{i,t}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{\Delta SALES_{i,t}}{Assets_{i,t-1}} + k_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t} \quad (2)$$

Where  $TA_{i,t}$  is the total accrual of enterprise i in year t, and  $TA_{i,t} = EBXI_{i,t} - CFO_{i,t}$ .  $EBXI_{i,t}$  is operating profit;  $CFO_{i,t}$  is net cash flow from operating activities in the cash flow statement;  $Assets_{i,t-1}$  represents total assets lagged by one year;  $\Delta SALES_{i,t}$  represents incremental operating income;  $PPE_{i,t}$  is (net fixed assets/total assets). Then the estimated regression coefficients are substituted into the following equation,

$$NA_{i,t} = \hat{k}_1 \frac{1}{Assets_{i,t-1}} + \hat{k}_2 \frac{\Delta SALES_{i,t}}{Assets_{i,t-1}} + \hat{k}_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t} \quad (3)$$

and estimate the accrued surplus management accrual

$$DA_{i,t} = \frac{TA_{i,t}}{Assets_{i,t-1}} - NA_{i,t} \quad (4)$$

Due to the positive and negative numerical characteristics of surplus management itself and the exclusion of year interference, the transparency of information is measured by the sum of the accrued surplus management's absolute values for the past three years, with the following formula.

$$\text{AbsDA} = \text{Abs}(DA_{t-1}) + \text{Abs}(DA_{t-2}) + \text{Abs}(DA_{t-3}) \quad (5)$$

### 3.1.2 Explanatory variables

The explanatory variable is economic policy uncertainty (EPU). The most used measure of economic policy uncertainty is the index proposed by Baker et al. 2016. The index was developed by three scholars from Stanford University and the University of Chicago and is mainly used to capture economic and policy uncertainty in major economies worldwide. The total index of economic policy uncertainty for the U.S. in Baker et al. (2016) is the weighted sum of four sub-indices: the 1/2 news index, the 1/6 tax law code failure index, the 1/6 CPI forecast differential, and the 1/6 federal/local state government spending forecast. The weighted sum of the four sub-indices of the difference. In this paper, the same method of calculating China's economic uncertainty index published in Baker et al. (2016) is selected. Only a single factor of the news index is used to constitute the China EPU, which is constructed based on text retrieval and filtering methods by selecting the South China Morning Post in Hong Kong as the news report retrieval platform. Based on this index, Chinese scholars have studied the relationship between economic policy uncertainty and variables, such as business credit [27, 28], firm investment behavior [29], capital structure [30], and corporate financialization [31]. The index reflects the degree of uncertainty of various economic policies in China more comprehensively. It has better continuity and time-variability, which can measure economic policy uncertainty more accurately [32]. Therefore, this paper adopts the economic policy uncertainty index constructed and continuously updated by Baker et al (2016) with the South China Morning Post in Hong Kong, China as the analyzed object as the explanatory variable, and transforms monthly economic policy uncertainty into annual economic policy uncertainty through the annual arithmetic mean calculation method for empirical research analysis.

### 3.1.3 Other control variables

In this paper, firm size, Tobin's value, book-to-market ratio, return on assets, leverage ratio, and board size are selected as control variables in the regressions. (1) Firm size (*SIZE*), uses the natural logarithm of the firm's total assets at the end of the year; (2) *TOBIN*, which represents corporate investment and growth opportunities, is expressed using the ratio of the sum of market value of equity and market value of net debt to total assets; (3) Book-to-market ratio (*BTM*) represents the book-to-market ratio; (4) Return on Assets (*ROA*) represents the relationship between corporate profitability and the efficiency of asset utilization, expressed as the ratio of net income to total assets; (5) Leverage (*LEV*), representing the financial risk of the enterprise, means that the higher the leverage ratio, the greater the financial risk of the enterprise; (6) Board size (*BOARD*) is measured by the total number of directors. In addition, this paper also introduces year trends with dummy variables in the regressions, as well as dummy variables for industry and region.

## 3.2 Data sources

This paper investigates the impact of economic policy uncertainty on corporate disclosure quality using a sample drawn from the China Securities Market and Accounting Research (CSMAR) database and the RESSET database, which includes all companies listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange. The variable measuring economic policy uncertainty uses the Economic Policy Uncertainty Index (EPU Index) jointly published by Stanford University and the University of Chicago. The sample interval is from 2010-2018. Considering the availability of data and the impact of data quality on the research results, this paper treats the sample as follows before the empirical analysis: (1) exclude ST-type listed companies in the observation period; (2) exclude financial and insurance companies; (4) exclude listed companies in the current year and listed

companies with serious missing important financial data. The final empirical study regression sample size of 1% of the tailing treatment totaled 13,002.

### 3.3 Modeling

In order to investigate the impact of economic policy uncertainty on the quality of corporate disclosure, the following equation (6) is constructed.

$$KVindex_{i,t} = \beta_0 + \beta_1 EPU_{i,t} + \sum_k \gamma_k Control_{k,i,t} + year, industry fixed effects + \varepsilon_{i,t} \quad (6)$$

Where  $KVindex_{i,t}$  measures the quality of information disclosure of firm  $i$  in year  $t$ ;  $EPU_{i,t}$  measures the level of economic uncertainty of firm  $i$  in year  $t$ ;  $Control_{k,i,t}$  is the set of control variables defined above. Also, year and industry fixed effects are controlled in order to exclude the effects of time and industry-specific characteristics on the model. If hypothesis 1 holds, the coefficient  $\beta_1$  in the model is significantly positive, i.e., the greater the risk of economic policy uncertainty, the higher the KVindex, and the poorer the quality of corporate disclosure.

In addition, in order to verify the combined effect of economic policy uncertainty and Big 4 audited enterprises and economic policy uncertainty and SOEs on corporate information disclosure in Hypothesis 2, the interaction terms  $EPU_t \times BIG4_t$  and  $EPU_t \times SOE_t$  are added to equation (6) to obtain equation (7) and (8), respectively.

$$KVindex_{i,t} = \beta_0 + \beta_1 EPU_{i,t} + \beta_2 EPU_{i,t} \times BIG4_{i,t} + \beta_3 BIG4_{i,t} + \sum_k \gamma_k Control_{k,i,t} + year, industry fixed effects + \varepsilon_{i,t} \quad (7)$$

$$KVindex_{i,t} = \beta_0 + \beta_1 EPU_{i,t} + \beta_2 EPU_{i,t} \times SOE_{i,t} + \beta_3 SOE_{i,t} + \sum_k \gamma_k Control_{k,i,t} + year, industry fixed effects + \varepsilon_{i,t} \quad (8)$$

The remaining variables are defined in the same way as equation (6). Under the year and industry fixed effects, if hypothesis 2 and hypothesis 3 hold, the coefficients  $\beta_2$  of the interaction terms  $EPU_t \times BIG4_t$  and  $EPU_t \times SOE_t$  in the model should be significantly negative, indicating that the stronger the economic uncertainty faced by the Big Four audited companies, the lower the level of corporate disclosure, and the stronger the economic uncertainty faced by state-owned companies, the lower the level of corporate disclosure.

## 4. Empirical Results

### 4.1 Descriptive Statistics

Taking the sample involved in the basic model regression as an example, the statistical analysis is shown in Table 1. It can be seen that the mean value of the KVindex index is -0.469 with a range of values from -1.001 to -0.120. The mean value of the EPU is 2.680 with a range of values from 0.989 to 4.605 and a standard deviation of 1.303, indicating more frequent and uncertain economic policy adjustments. For the firm-level control variables, firm assets take the natural logarithm i.e., firm size has a range of values from 20.580 to 26.187; TOBIN index has a mean value of 2.086 and a standard deviation of 1.182; book-to-market ratio BTM has a mean value of 0.592 and a standard deviation of 0.232; return on assets ROA has a mean value of 0.044; leverage LEV is 0.390; the mean value of Board Size BOARD is 2.134.

Table 1. Descriptive Statistics of Variables

Variable	Obs	Mean	Std.dev.	Min	Median	Max
$KVindex_t$	13,002	-0.469	0.185	-1.001	-0.444	-0.120
$EPU_t$	13,002	2.680	1.303	0.989	2.444	4.605
$SIZE_t$	13,002	22.622	1.108	20.580	22.47	26.187
$TOBIN_t$	13,002	2.086	1.182	0.916	1.698	7.236
$BTM_t$	13,002	0.592	0.232	0.138	0.589	1.092
$ROA_t$	13,002	0.044	0.050	-0.164	0.041	0.190
$LEV_t$	13,002	0.390	0.198	0.044	0.379	0.840
$BOARD_t$	13,002	2.134	0.198	1.609	2.197	2.708

Table 1 shows the descriptive statistics for each variable, including the mean, standard deviation, median, minimum and maximum values.

## 4.2 Correlation Analysis

The results in Table 2 show that  $EPU_t$  and  $KVindex_t$  have a significant negative correlation at the 1% level with a correlation coefficient of -0.165. This result indicates that economic policy instability reduces corporate disclosure quality and provides preliminary evidence for hypothesis 1. In addition, the correlation between other control variables and the quality of corporate disclosure is as expected, which indicates that these variables also affect the quality of corporate disclosure. Therefore, it is necessary to control for these potential influencing factors in further research.

Table 2. Variable Correlation Coefficient Statistics

	$KVindex_t$	$EPU_t$	$SIZE_t$	$TOBIN_t$	$BTM_t$	$ROA_t$	$LEV_t$	$BOARD_t$
$KVindex_t$	-	0.142** *	0.283** *	0.163** *	0.163** *	0.139** *	-0.001	0.024** *
$EPU_t$	0.165** *	-	0.063** *	0.120** *	0.120** *	0.024** *	-0.015*	0.112** *
$SIZE_t$	0.275** *	0.042** *	-	0.079** *	0.079** *	0.002	0.460** *	0.200** *
$TOBIN_t$	0.142** *	0.136** *	-0.013	-	1.000** *	0.289** *	0.349** *	0.150** *
$BTM_t$	0.162** *	0.145** *	0.159** *	0.854** *	-	0.289** *	0.349** *	0.150** *
$ROA_t$	0.147** *	0.031** *	0.048** *	0.216** *	0.249** *	-	0.404** *	0.011
$LEV_t$	0.006	-0.016*	0.473** *	0.293** *	0.365** *	0.367** *	-	0.156** *
$BOARD_t$	0.013	0.111** *	0.231** *	0.137** *	0.162** *	0.024** *	0.159** *	-

Table 2 reports the Pearson correlations between the regression variables. The lower triangular cells report Pearson correlation coefficients, and the upper triangular cells are Spearman rank correlation coefficients. The superscript asterisks \*\*\*, \*\*, and \* indicate two-tailed statistical significance at the 1, 5, and 10% levels, respectively (\*\*\*)  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ).

### 4.3 Single factor test

The full sample was divided into a low EPU group (low EPU group with values below 2.444) and a high EPU group (high EPU group with values above 2.444) based on the median EPU index of 2.444. The total sample size is 13002, the low EPU sample size is 7182 and the high EPU sample size is 5802. After examining the difference in the mean values of key variables between the two groups, according to the results in Table 3, it is found that the KV index value for the low EPU group is -0.428, and the KV index value for the high EPU group is -0.52, indicating that the KV index value is higher for the group with lower economic policy uncertainty. The KV index value of the group with higher economic policy uncertainty is lower. It further represents that the more uncertain the economic policy is, the worse the quality of corporate information disclosure, proving the previous hypothesis. In addition, the difference between the two groups' values is 0.091, and the t-value is 28.866, indicating that there is a significant difference between the two groups at 1% level of significance. At the same time, the following relationships can be drawn: the greater the economic policy uncertainty, the larger the firm size; the smaller the investment and growth opportunities represented by TOBIN; the larger the book-to-bill ratio; the smaller the return on assets; and the smaller the leverage ratio. The above results are largely consistent with expectations.

Table 3. Single-Factor Tests

	Low EPU	MeanL	High EPU	MeanH	MeanDiff	t-Value
$KVindex_t$	7182	-0.428	5820	-0.52	0.091	28.866***
$SIZE_t$	7182	22.53	5820	22.73	-0.202	-10.395***
$TOBIN_t$	7182	2.167	5820	1.986	0.181	8.725***
$BTM_t$	7182	0.58	5820	0.606	-0.027	-6.494***
$ROA_t$	7182	0.045	5820	0.043	0.002	2.393**
$LEV_t$	7182	0.392	5820	0.388	0.005	1.319
$BOARD_t$	7182	2.154	5820	2.109	0.046	13.089***

Table 3 reports tests for differences in means of regression variables for the low EPU group (below the median economic policy uncertainty) and the high EPU group (above the median economic policy uncertainty) subsamples. The sample is combined over the period 2010-2018 across the RKS, CSMAR, and RESSET databases.

### 4.4 Regression results

Table 4 shows the multiple regressions results, whose results fix the year and industry fixed effects. It can be seen that when all control variables are excluded, (1)  $EPU_t$  is significantly negative at the 1% significance level (regression coefficient of -0.018,  $t = -10.326$ ), and when all control variables are included; (2)  $EPU_t$  regression coefficient of -0.023,  $t = -12.534$ , and the negative relationship still exists at the 1% significance level and more significant. This means a strong negative relationship between economic policy uncertainty and corporate disclosure quality, i.e., the more uncertain the economic policy is, the lower the corporate disclosure quality is, which verifies that hypothesis 1 holds. In terms of control variables, it can also be seen that the larger the size of the enterprise, the fewer opportunities for growth of enterprise investment, the smaller the book value ratio, the larger the return on assets, and the smaller the leverage ratio, the lower the quality of information disclosure.



Table 4. Multiple Regression Results

Dependent variables $KVindex_t$	(1)	(2)
$EPU_t$	-0.018*** (-10.326)	-0.023*** (-12.534)
$SIZE_t$		-0.049*** (-21.774)
$TOBIN_t$		0.015*** (-4.823)
$BTM_t$		0.156*** (-10.218)
$ROA_t$		-0.347*** (-9.469)
$LEV_t$		0.047*** (-4.303)
$BOARD_t$		0.013 (-1.502)
Constant	-0.411*** (-21.690)	0.542*** (-11.154)
Year effects	YES	YES
Industry effects	YES	YES
Observations	13002	13002
Adjusted $R^2$	0.183	0.196

Table 4 reports the results of the impact of economic policy uncertainty on the level of corporate disclosure.

## 4.5 Stability test

### 4.5.1 Using individual fixed effects

The regressions were re-estimated using firm fixed effects in order to avoid potential problems posed by individual firms. On the basis of strictly controlling for year and industry fixed effects in the empirical study, stability tests were conducted by controlling individual firm fixed effects. The results are shown in Table 5 (1), where the  $EPU_t$  regression coefficient is -0.020, which is significantly negative at the 1% significance level, and the significance of the explanatory variables remains unchanged from above.

### 4.5.2 Adding the lagged term of the explained variable

In addition, in order to eliminate the possible effects of the pre-late correlation of the explanatory variables, the lagged term of corporate disclosure quality is added to the regression equation, and the results are shown in Table 5(2), the regression coefficient of  $EPU_t$  is -0.026, which is significantly negative at 1% level of significance, and the significance of the explanatory variables remains unchanged. The effect of EPU on KV is still significantly negative at a 1% significance level after considering the effect of two lagged terms of corporate disclosure quality, indicating that the damaging effect of economic policy uncertainty on disclosure quality is still relatively significant effect of lagged terms.

### 4.5.3 Remeasurement of explanatory variables

The  $KVindex$  is used above to measure economic policy uncertainty. In order to avoid the possible bias problem brought by the  $KVindex$  and to verify the robustness of the above results, the regression

is conducted using the accrual surplus management method, which measures the quality of corporate disclosure, along with the robust standard errors. The results are shown in Table 5 (3) for the test results of accrual surplus management as an indicator to measure the quality of corporate disclosure. The regression coefficient of  $EPU_t$  is 0.094, which is significantly positive at 1% significance level, indicating that the stronger the economic policy uncertainty, the larger the absolute value of accrued surplus management, and the lower the quality of corporate disclosure reflected by it. The obtained results are consistent with the quality of information disclosure measured by KVindex, proving the reliability of the above model.

Table 5. Stability Tests

Dependent variables	(1)	(2)	(3)
$EPU_t$	-0.020*** (-7.918)	-0.026*** (-11.142)	0.094*** (-5.585)
$SIZE_t$	-0.048*** (-8.715)	-0.043*** (-17.081)	-0.002*** (-2.738)
$TOBIN_t$	0.018*** (-5.502)	0.014*** (-4.123)	0.000 (-0.414)
$BTM_t$	0.119*** (-6.452)	0.149*** (-8.599)	-0.010** (-2.231)
$ROA_t$	-0.189*** (-4.066)	-0.330*** (-7.763)	0.024** (-2.218)
$LEV_t$	0.065*** (-3.299)	0.048*** (-3.819)	0.028*** (-7.344)
$BOARD_t$	0.019 (-1.167)	0.001 (-0.078)	-0.009*** (-3.000)
$KVindex_{t-1}$		0.048*** (-4.93)	
$KVindex_{t-2}$		0.064*** (-6.334)	
<i>Constant</i>	0.505*** (-4.304)	0.503*** (-9.271)	-0.002 (-0.051)
<i>Year effects</i>	YES	YES	YES
<i>Industry effects</i>	NO	YES	YES
<i>Firm effects</i>	YES	NO	NO
<i>Observations</i>	13002	13002	13002
<i>Adjusted R<sup>2</sup></i>	0.200	0.186	0.020

Table 5 reports robustness tests for individual fixed effects, the inclusion of lagged terms of the explanatory variables, and remeasurement of the explanatory variables, using robust standard errors.

#### 4.6 Heterogeneity Analysis

As a control, the combined effect of economic policy uncertainty and Big Four audited firms and economic policy uncertainty, and state-owned enterprises are examined. The nature of ownership (SOE) indicator is selected according to the nature of ownership of enterprises. The listed companies in the sample are classified as SOEs and non-SOEs according to the classification of the nature of ownership of listed companies in the CCER China Economic and Financial Database. In the empirical analysis of this paper, the value is 1 if the listed company is a state-owned enterprise and 0 otherwise;

whether the company is audited by Big 4 accounting firms (BIG4), the value is 1 if the company's annual report is audited by Big 4 accounting firms in the empirical analysis and 0 otherwise.

The results in Table 6 show that in the interaction model (1) of economic policy uncertainty and whether the firms are audited by Big 4, the regression coefficient of EPU is -0.022, which is significantly negative at 1% significance level. The regression coefficient of BIG4 is 0.064, which is significantly positive at 1% significance level, indicating that the firms audited by Big 4 have a higher level of information disclosure. The regression coefficient of  $EPU_t \times BIG4_t$  interaction term is -0.023, which is significantly negative at 1% level of significance, indicating that the disclosure level of companies facing economic uncertainty by Big 4 auditors is low, which validates hypothesis 2. One explanation is that in DeAngelo (1981) theory, when the auditor provides lower audit quality than expected, the auditor is penalized and thus loses the market. Increased economic policy uncertainty increases expected uncertainty, which may lead to lower disclosure quality for companies audited by the Big Four instead. A further explanation is based on the Chinese institutional context, i.e., a weak legal environment and a relationship-driven Chinese society. Faced with economic policy uncertainty that significantly reduces the content of surplus information, the large firms in the Big 4 are more likely to use political and business relationships to lower their audit standards and accommodate the surplus management practices of listed companies, thus leading to lower audit quality and lower quality of corporate disclosures.

In the interaction model (2) between economic policy uncertainty and state-owned enterprises, the regression coefficient of EPU is -0.021, which is negative at 1% significance level, and the regression coefficient of SOE is 0.019, which is positive at 1% significance level, indicating that state-owned enterprises have higher disclosure level. The regression coefficient of  $EPU_t \times SOE_t$  interaction term is -0.006, which is significantly negative at 1% level of significance, indicating that state-owned companies face economic uncertainty the lower the level of information disclosure, which validates Hypothesis 3. One explanation is that in the face of greater economic policy uncertainty, the information fluctuation interval increases, the level of information ambiguity increases, and due to the stronger policy burden of state-owned enterprises, state-owned companies are willing to disclose lower quality of information with non-state-owned enterprises. Another explanation is that in non-SOEs, executives and the firm are a community of interest and highly identify with the firm's values. To ensure relevant interests, executives of non-SOEs have more stringent requirements for the firm's accounting information disclosure when faced with greater economic policy uncertainty. On the contrary, when state-owned enterprises face stronger economic policy uncertainty, the authority effect of leaders and the characteristic of pursuing personal interest maximization make them pay less attention to information disclosure and reduce the level of information disclosure.

Table 6. Heterogeneity Analysis

Dependent variables KVindex	(1)	(2)
$EPU_t$	-0.022*** (-11.627)	-0.021*** (-10.407)
$BIG4_t$	0.064*** (4.18)	
$EPU_t \times BIG4_t$	-0.023*** (-4.346)	
$SOE_t$		0.019** (2.496)
$EPU_t \times SOE_t$		-0.006** (-2.295)
$SIZE_t$	-0.050*** (-21.054)	-0.049*** (-21.575)
$TOBIN_t$	0.015*** (4.928)	0.015*** (4.87)

<i>BTM<sub>t</sub></i>	0.156*** (-10.24)	0.158*** (-10.321)
<i>ROA<sub>t</sub></i>	-0.346*** (-9.458)	-0.342*** (-9.303)
<i>LEV<sub>t</sub></i>	0.048*** (-4.363)	0.046*** (-4.133)
<i>BOARD<sub>t</sub></i>	0.013 (-1.517)	0.012 (-1.373)
<i>Constant</i>	0.552*** (-10.828)	0.544*** (-10.999)
<i>Year effects</i>	YES	YES
<i>Industry effects</i>	YES	YES
<i>Observations</i>	13002	13002
<i>Adjusted R<sup>2</sup></i>	0.197	0.197

Table 6 reports the results of the heterogeneity analysis by introducing explanatory variables with SOEs and interaction terms audited by the Big 4.

## 5. Conclusions

In the current international political situation, the uncertainty of China's economic policies has been at a high level. Uncertainty at the macro level can be transmitted to the micro level, causing concern among companies and their stakeholders and affecting the quality of corporate disclosure, which is relatively little explored in academia.

The study finds that (1) increased uncertainty in economic policies reduces the level of corporate disclosure. The uncertainty of economic policy will make the business risk greater and make the change in management performance more volatile, which will lead to the distortion of disclosed information. Meanwhile, this paper tests the robustness of the results by using individual fixed effects, adding lagged terms of the explanatory variables, and using absolute values of accrued surplus management to re-measure the explanatory variables, respectively. (2) With interaction terms of economic policy uncertainty and Big Four auditing, the empirical results find that companies audited by Big 4 face a low level of economic uncertainty disclosure. The possible reasons are also explained from both the expected audit quality of the Big 4 and the relationship between Chinese government and business. (3) By adding the interaction term of economic policy uncertainty and SOEs, the empirical results find that SOEs face a low level of economic uncertainty disclosure. The possible reasons are also explained from two perspectives: the policy burden of SOEs and the characteristics of senior management.

The findings of this paper have strong policy implications. In the process of China's economic transformation, when the government and related departments frequently introduce or adjust economic policies, they need to consider the impact of economic policy fluctuations on corporate entities, avoid frequent changes in economic policies, and safeguard the long-term and stable nature of economic policies. When policy fluctuations are too frequent, and the direction of change is not clear, it is not conducive to providing high-quality information to enterprises, reducing information asymmetry to investors, and the steady development of the real economy and capital market. Enterprises need to improve the quality of information disclosure that the government and relevant departments improve the transparency and robustness of policy implementation and make a smooth transition between old and new policies.

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