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The Impact of Economic Policy Uncertainty on the Efficiency of Corporate Working Capital Management—The Evidence from China

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Abstract

As China's economic development has entered a new era, economic policy regulation has become more and more frequent. While the government transform and restructure the economic development pattern through policy regulation, the uncertainty brought by the policy also has a negative effect on the investment and operation of the private sector. However, working capital management, as an important part of enterprise operation, has received little attention. From the perspective of economic policy uncertainty, this paper uses a sample of the listed non-financial enterprises of Shanghai and Shenzhen stock markets from 2000 to 2010 to study the impact of uncertainty on the efficiency of enterprise working capital management. We found that uncertainty has a negative impact on the efficiency of working capital management.

Keywords

Economic Policy Uncertainty, Working Capital Management

1. Introduction

Since the outbreak of the financial crisis in 2008, governments have stepped up their control over their economies to avoid slowing down their economic development. For example, the Fed has eased the contraction of the US credit market through continuous interest rate cuts and new liquidity tools. Japan has set up an "emergency comprehensive policy" to mitigate the impact of the shock. China also launched a "four trillion" strong stimulus policy to ensure stimulate the economy. In recent years, as the downward pressure on the global economic growth has increased, policy regulation has become more and more normal. Because the government's regulation of policies has unpredictability for enterprises

and there is a time lag in the transmission of information during the process of policy promulgation and implementation, the uncertainty brought by it will have an exogenous impact on the actual operation of enterprises. Therefore, while the government has adopted the fiscal policy, monetary policy and industrial policy to restructure the economic, the economic policy uncertainty brought by frequent policy adjustment also had a negative effect on the investment operation of enterprises and the private sector. When the enterprises are under the environment of economic policy uncertainty, the enterprise may have to make corrections to the original strategic and tactical plan in response to policy changes, such as retaining a higher proportion of cash assets, delaying or canceling adjustments to their investment plans (Julio and Yook, 2012 [1]; Chunfang C, 2013 [2]; Xu Yekun, Xianhang Qian and Wei'an Li, 2013 [3]). Moreover, the regulations adopted by the government would slow down and weaken the competitiveness of the enterprise in the future, which has an adverse impact on the production and operation of the enterprise.

In the ever-changing business environment, the requirement for the survival of the company drives managers to optimize the efficiency of the operating structure and stand out from the peers. As the working capital is an important part of the overall operation of the enterprise, few scholars have studied its impact under policy uncertainty. The academic community's research on the micro level of enterprises has focused on long-term investment decision analysis, while ignoring short-term liquidity management such as corporate working capital management. Working capital management is as important as long-term investment decisions. Only when short-term working capital is sufficient to support liabilities, can companies more effectively expand their scale through financing channels. Working capital management includes a series of corporate financial strategic decisions on the scale, structure, financing sources, structure and management efficiency of working capital. The choice of the enterprise's working capital management strategy not only represents the structural disposal of the company's short-term liquidity, but also reflects the strategic planning of the enterprise after weighing its own risk and profitability. For example, the proportion of investment in working capital will affect the actual operating conditions of the enterprise. Excessive working capital occupation will weaken the profitability of the enterprise and affect the long-term investment ability of the enterprise under the condition of limited external financing. Too little working capital will expose companies to short-term debt repayment pressures caused by the volatility of operating returns. At the same time, the efficiency of the company's working capital management also reflects the financial health and reputation of the company, which in turn affects the company's financing capacity and financing costs.

After nearly 40 years of reform and opening, China's economic development has made great achievements, becoming the world's second largest economy and the two-way investment ranks in the forefront of the world. In the process of development, it not only benefits from the institutional policy advantages brought

about by the reform and opening, but the regulation of the government's "tangible hand" as a compensation for market failures is also one of the backings to smooth economic shocks and promote stable economic development. As China's economic development has fully entered the new normal of speed-shifting and power conversion, the urgency of transforming the economic development mode and improving the quality and structure of development required by the scientific development goals has become more apparent. Against the background of the downward pressure on macroeconomic growth, China has successively carried out the Belt and Road initiative and the implementation of supply-side reforms to optimize the economic structure and upgrade the industrial structure. In 2018, China's economy is under great pressure in the face of continued investment decline and weak consumption, and the external environment is disrupted by the Sino-US trade war and the weak economic growth in Europe, the economic fundamentals are gradually weakening. In order to hedge the growth pressure, since the third quarter, policy objectives gradually shifting risk prevention to steady growth, has become the central task of this year. With the shift of policy objectives, the trend of the monetary policy has also been adjusted, and the monetary policy has shifted from neutral to moderately neutral. By the end of 2018, a total of four reductions in the year to release liquidity, and through the targeted placement of special funds and new settings to medium-term lending facilities to reduce the financing costs of SMEs. On the financial front, the government issued a series of tax incentives to stimulate private investment. With the acceleration of the frequency of policy regulation in recent years, the external uncertainty of the policy will also have a far-reaching impact on the business decision-making of China's enterprise level. Moreover, under the external environment of de-leveraging, the frequent increase of corporate defaults has undoubtedly increased the difficulty of refinancing. The channels for small and medium-sized enterprises to finance traditional credit, bonds and equity pledges have also been narrowed, and the level of corporate working capital management has been narrowed. The requirements are further improved. According to survey on the working capital management of listed companies in China by Wang Zhuquan, the operating management of listed companies in China has excessive working capital occupation, excessive dependence on short-term debt financing and low efficiency of working capital turnover. Therefore, for domestic enterprises, working capital management is of great significance.

From this point of view, this paper studies the impact of economic policy uncertainty on the efficiency of enterprise working capital management, and reflects the impact of economic policy uncertainty on the production and operation of enterprises from the perspective of working capital.

2. Literature Review and Hypotheses

2.1. Working Capital Management

Working capital is initially defined as the funds other than fixed assets held by

an enterprise. As scholars extending the definition, they gradually developed into two concepts based on working capital and net working capital proposed by E. Brigham (1972) [4]. Working capital refers to the sum of current assets held by the enterprise, including: cash, accounts receivable, accounts payable, inventory, etc., reflecting the investment of enterprises in short-term assets. Net working capital refers to the difference between the current assets held by the enterprise and the current liabilities, which reflects the short-term solvency of the enterprise to a certain extent.

The working capital management study began with Guthmann's (1934) [5] impact on corporate working capital through the US recession between 1929 and 1932, and the academic community gradually began to focus on the field of working capital management. Before the 1970s, the academic community mainly focused on the optimization of working capital for single project, and assessed the efficiency of working capital management through the liquidity of a certain account's current assets. Indicators included: accounts receivable turnover period (turnover days), inventory turnover period (turnaround days) and so on. However, the single consideration of a certain indicator has certain limitations, and does not consider the connection between the indicators, thus separating the overall working capital management assessment of the enterprise. At the same time, early performance appraisal also tends to ignore the part of current liabilities in working capital, making it difficult to fully reflect the assessment. To dynamically reflect corporate working capital turnover, Gitman (1974) [6] introduced the concept of cash cycle (CCC), which defined the cash cycle as the first cash outflow from the production of the product to the point where the product was sold and eventually received cash inflows. CCC is defined as: cash cycle = raw material cycle + production cycle + inventory cycle + accounts receivable cycle − accounts payable cycle. Richards and Laughlin (1980) [7] proposed that the traditional static assessment method of cash flow analysis through liquidity ratio has the drawback of ignoring cash flow inflow and outflow time, and continues to further standardize the cash cycle, defined as: cash cycle = accounts receivable turnover period + inventory turnover period − accounts payable turnover period, and has become a more commonly used indicator for subsequent cash cycle measurement studies. Gentry (1990) [8] proposed a weighted cash cycle (WCCC), stating that the traditional cash cycle only focuses on the length of time that funds are occupied in the cycle, regardless of the amount of money invested by the product throughout the operating cycle. The weighted ratio is determined by taking the proportion of the final product value in each fund occupation stage, thereby obtaining a weighted cash cycle, taking into account the cash flow while taking into account the amount of funds occupied by each part of the cycle. Viskari, Ruokola and Pirttilä (2012) [9] revised the weighted cash cycle and proposed a modified cash cycle (ACCC) to solve the problem of the weighted cash cycle to the required operating capital when the single order and the customer's negative operating profit occurred. The Boston Consulting

Group (BCG) proposed the Working Capital Production (WCP) indicator, defined as annual sales/total working capital, to measure whether the company has invested enough working capital to support its sales. From a financing perspective, management wants to maintain a low level of working capital to avoid raising more cash to run the business. This can be achieved by, for example, reducing credit sales credits to customers, implementing immediate production and sales system feedback, avoiding excessive inventory product investment and extending upstream supplier billing periods. Conversely, if the ratio is small, it means that the company has a large amount of accounts receivable and inventory goods, which means that the company has taken up too much money in its operations.

In terms of the impact of working capital management on corporate performance, scholars have done a lot of empirical research on this. In recent years, more and more scholars have begun to realize the important role of corporate working capital management in corporate profitability. A large part of the relevant literature uses the cash turnover cycle (CCC) as an analysis of the working capital turnover efficiency indicators. Kamath (1989) [10] found a negative correlation between the cash turnover cycle and corporate earnings through the practical experience of the retail industry. Shin and Soenen (1998) [11] used data from US listed manufacturing companies between 1975 and 1994 to find a significant negative relationship between cash flow cycles and corporate earnings. Wang (2002) [12] conducted a study of 1555 Japanese companies and 379 Taiwanese companies in 1986-1996 and found that the cash turnover cycle showed significant negative correlation with corporate ROE and ROA, but pointed out that the company's low inventory strategy may face inventory dragging sales trade-off. Similarly, in Yazdanfar D (2014) [13] for Swedish small and medium-sized enterprises, Singhania M, Sharma N and Rohit J Y (2014) [14] for Indian BSE 500 index sample companies and Pais MA and Gama P M (2015) [15] for Portuguese small and medium-sized enterprises similar effect was found.

2.2. Economic Policy Uncertainty

Uncertainty in economics refers to the outcome of a certain decision by government, which no one can know accurately in advance. Among the various sources of uncertainty, policy uncertainty is considered to be one of the sources of greater impact. Wen-Zhong W and Peng J (2016) [16] defined policy uncertainty as the political shock caused by major events such as political leader turnover, major policy adjustments, and war riots. Policy inaccuracy is largely reflected in the uncertainty of policy arrangements, which are the political demands of the relevant interest collectives and will be reflected through the formulation and adjustment of relevant systems and policies. How the system and policies will be formulated and how they work will be full of uncertainty. The academic community's policy uncertainty is mainly measured in three ways: major events, compilation of uncertainty indices and leadership turnover.

Compared to merely using significant events and leader turnover as dummy variables, some scholars measure political uncertainty more comprehensively by preparing uncertainty indicators. Baker S R, Bloom N and Davis S J (2016) [17] constructed the Economic Policy Uncertainty Index (EPU) based on three aspects: the coverage of economic policy uncertainty in the top ten newspapers, the reports by the Congressional Budget Office (CBO) that compile lists of temporary federal tax code provisions and Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters. At the same time, Baker S, Bloom N and Davis S J (2013) [18] used the data from the Hong Kong English newspaper SCMP (South China Morning Post) to construct China's political uncertainty index. They filtered the articles containing specific terms in SCMP, such as including "Fields such as "China", "Economy", "Uncertainty", then counted the number of articles in the South China Morning Post monthly, and standardized the data through the base period of 100 in January 1995. The uncertainty index constructed by Baker et.al has constructed a new perspective to measure uncertainty through the perspective of media reports, and has been widely used by scholars. Ko and Lee (2015) [19] found a significant negative correlation by studying the impact of the policy uncertainty index on global stock prices. Baker S R, Bloom N and Davis S J (2016) [17] discusses the policy uncertainty mechanism that the United States has proliferated since 1960 through its uncertainty index. Domestic scholars conducted empirical research through the China Policy Uncertainty Index. Feng-Yu LI and Mozhu Yang (2015) [20] found that uncertainty has a significant negative relationship with corporate investment. Huili Zhang and Youhong Wu (2014) [21], Feng-Yu LI and Yong-Dong S (2016) [22] proposed a significant positive correlation with corporate cash holdings. Bekiros S (2016) [23] verified the relationship between unemployment rate and policy uncertainty after the US World War II data, and found that in the economic recession environment, the uncertainty shock will have a greater impact on the unemployment rate. Tsai (2017) [24] studied the impact of policy inaccuracies on China's stock market and surrounding markets through China, the United States, Europe, and Japan through the EPU index. Demir and Gozgor (2018) [25] used the World Bank's data on outbound tourism to study the spillover effects of policy uncertainty on the demand for outbound tourism in countries, and found that rising policy uncertainty would significantly reduce the demand for outbound tourism in a country.

There are few studies directly on economic policy uncertainty and corporate working capital management. Micro-research on economic policy uncertainty focuses on financial decisions that reduce the impact of uncertainty. In the literature concerning the uncertainty of economic policy and working capital, domestic and foreign scholars have found that there is a significant positive correlation between uncertainty and corporate cash holdings through different samples (Huili Zhang and Youhong Wu, 2014 [21]; Xu N, Chen Q and Xu Y, 2016 [26]; Demir and Ersan, 2017 [27]). Hongjian Wang, Qingyuan Li and Fei Xing, (2014) [28] supplemented it by adjusting the cash dynamics of enterprises under

the uncertainty of economic policy, and proposed to avoid adverse effects when enterprises are affected by rising economic costs caused by economic policy uncertainty. Enterprises will speed up the adjustment of cash holdings, and companies will invest more cautiously when they exceed their current goals.

Through the retrospection of the existing literature, we find that compared with foreign countries, due to the late implementation of accounting standards, domestic theoretical and empirical research on working capital is relatively backward. However, after decades of accumulation, domestic and foreign scholars have proved the importance of corporate working capital management through theoretical and empirical research, which helps to improve business efficiency and profitability. On the other hand, micro-level research on economic policy uncertainty focuses on financial decisions that reduce the impact of uncertainty, such as delaying investment, holding excesscash or less working capital. The working capital management of an enterprise involves not only the capital structure of working capital, but also the working capital management policy and the efficiency of working capital management. It is a dynamic overall decision-making content. Based on this, this paper studies the impact of uncertainty on the efficiency of corporate working capital management, and reflects the impact of policy uncertainty on the management decisions.

2.3. Hypotheses Development

The receivables turnover days reflect the time required for the company to obtain the receivables and ultimately receive the cash. The shorter the turnover days, the higher the liquidity efficiency of the company. Its formation is mainly due to the commercial credit in the practice of business transactions between enterprises. The company provides short-term financial support to the counterparty through commercial credit, which alleviates the buyer's financial pressure, and its sacrificed liquidity can be seen as the sale cost. Compared with the capital market, the upstream and downstream enterprises of the enterprise have long-term trade relationship, and have high information transparency, which can reduce the moral hazard and adverse selection of the demand side. The accounts receivable provided by the commercial credit supplier are often regarded as alternative to traditional financing (Zhengfei Lu and Deming Yang, 2011 [29] [30]). When the macroeconomic policy is adjusted, the uncertainty of the future business performance of the enterprise makes the commercial banks and capital market investors tighten their capital supply, resulting in tighter corporate financing constraints. On the one hand, for commercial credit providers, tighter financing constraints will have an impact on corporate liquidity, while commercial credit provision will further weaken corporate capital flows and increase corporate liquidity costs. At the same time, in an uncertain environment, the difficulty of predicting the profitability of the company's future operations will further increase the demand for cash flow. On the other hand, for commercial credit demanders, when they are in an uncertain environment, their demand for commercial credit tends to increase sharply due to financing constraints. Up-

stream companies have incentives to provide commercial credit support to ensure sales growth and expand market share. In general, under the influence of economic policy uncertainty, the provision of commercial credit by upstream enterprises often depends on their trade-offs between liquidity costs and customer acquisition costs. However, listed companies in China are large enterprises with prominent position in the industry. Compared with their non-listed companies, they have more extensive channels of financing, so the following assumptions are made:

H1: Economic policy uncertainty will reduce the efficiency of corporate accounts receivable management while other conditions remain unchanged.

The inventory turnover days reflect the time required for the company to purchase raw materials, put into production and finally sell. The shorter the turnover days, the higher the inventory management level of the enterprise. The daily inventory management of enterprises often has a trade-off between storage costs and deficit costs. Storage cost refers to the cost of goods storage. When the company has unreasonable inventory backlog, storage costs further affect the company's profitability. The deficit cost refers to the loss caused by the company's inventory interruption. Companies will maintain a certain amount of buffer stock to cope with the uncertainty of the demand for goods. When companies face uncertainty, the difficulty of estimating the demand for goods will rise sharply, making it difficult to make reasonable inventory management, so we propose the following assumptions:

H2: Economic policy uncertainty will reduce the efficiency of enterprise inventory management while other conditions remain unchanged.

The accounts payable turnover days reflect the average period in which the company pays off the supplier's payment. Within the agreed credit sales cycle, the longer the turnover days, the higher the company's accounts payable management level. Similar to accounts receivable, when the company is under uncertainty, the constraints of the financing market will lead to more credit sales demand, resulting in an increase in the proportion of credit sales and a longer term for the seller. We make the following assumptions:

H3: Economic policy uncertainty will increase the company's accounts payable turnover period when other conditions remain unchanged.

From the perspective of the company's cash cycle, we believe that under the conditions of uncertainty, the difficulty of forecasting all aspects of production and operation will increase, which will reduce the overall efficiency of working capital management. We make the following assumptions:

H4: Economic policy uncertainty will reduce the efficiency of corporate working capital management while other conditions remain unchanged.

3. Methodology

3.1. Samples and Data

This study uses the listed non-financial enterprises of Shanghai and Shenzhen

stock markets from 2000 to 2010 as a research sample to study the impact of economic policy uncertainty on the efficiency of corporate working capital management. The enterprise level data is quarterly data, taken from the CSMAR database. China's economic policy uncertainty is monthly data, taken from the China Economic Policy Uncertainty Index jointly developed by Stanford University and the University of Chicago. We use registered place of the listed company as the location of the enterprise. Thus, the sample for the analysis is 23,704 firm-quarter panel data for 971 listed companies. Table 2 provides the summary statistics for the variables under consideration, we will discuss descriptive statists in Section 3.3.

3.2. Variables

To measure the working capital management efficiency (WCM), we select the common indicator cash cycle (CCC) and its sub-item receivables turnover days (DSO), inventory turnover days (DIH), accounts payable turnover days (DPO) as an explanatory variable. The cash cycle reflects the average time from cash payment to cash recovery in a company's production operations. The amendment has become a common indicator in empirical research.

This paper measures the uncertainty of economic policy based on Baker S, Bloom N and Davis S J (2013) [18] using the Hong Kong English newspaper SCMP (South China Morning Post) data to construct China's economic policy uncertainty index (EPU), they passed the SCMP Articles containing specific terms are screened, such as "China", "Economy", "Uncertainty", etc., and then the number of articles selected by the statistics is compared with the frequency of monthly articles published by the South China Morning Post. The index comprehensively reflects the uncertainty of economic policy through the perspective of news reports, and has been widely used in domestic scholars' research, such as Feng-Yu LI and Mozhu Yang (2015) [20], Feng-Yu LI and Yong-Dong S (2016) [22]. In order to match the seasonal data at the enterprise level, this paper calculates the economic data uncertainty monthly data by means of arithmetic mean.

For control variables, we used firm size (SIZE) as the logarithm of total assets, cash flow (CFO) as net cash flow from operating activities divided by total assets, leverage (Lev) as total liabilities divided by total assets, fixed assets ratio (FA) as fixed asset divided by total assets, sales growth (SALEGRWOTH) as the sales amount difference from the previous quarter divided by the sales of the previous quarter ($\left(\text{Sale}_t - \text{Sale}_{t-1}\right)\big/\text{Sale}_t$) and ROA as profitability. Furthermore, we use annual GDP growth (GDPGROWTH) to measure the economic environment. Table 1 shows the variables and definition.

3.3. Descriptive Statistics

Table 2 highlights the descriptive statistics for the variables under consideration. In the whole sample, the average turnover of accounts receivable (DSO) was

Table 1. Main variable definition and description.

Variables	Variable definition
DSO	Accounts receivables/sales × 365
DIH	Inventories/purchases × 365
DPO	Accountspayable/purchases × 365
CCC	Accounts receivables/sales × 365 + Inventories/purchases × 365 − Accountspayable/purchases × 365
EPU	Monthly average of China's economic policy uncertainty index as the quarter index
CFO	Net cash flow from operating activities/total assets
LEV	Liabilities/total assets
SALEGROWTH	sales amount difference from the previous quarter divided by the sales of the previous quarter
GDPGROWTH	annual GDP growth
ROA	profitability
SIZE	logarithm of total assets
FA	fixed asset divided by total assets

Data sources: CSMAR database, Wind database.

Table 2. Descriptive information for listed company in China.

Variables	Sample	Mean	Median	Standard deviation	min	max
DSO	23,704	127.1	77.84	136.6	4.015	538.8
DIH	23,704	128.0	86.44	120.3	16.42	525.2
DPO	23,704	277.7	137.6	381.4	16.06	1,830
CCC	23,704	289.1	142.6	411.2	−41.85	1,862
EPU	23,704	104.6	96.54	42.31	64.40	218.7
CFO	23,704	0.0279	0.0239	0.0561	−0.0800	0.134
LEV	23,704	0.472	0.485	0.173	0.125	0.762
SALEGROWTH	23,704	0.0939	0.0530	0.335	−0.477	0.957
GDPGROWTH	23,704	0.167	0.169	0.0503	0.0514	0.248
ROA	23,704	0.0299	0.0212	0.0289	−0.00752	0.101
SIZE	23,704	0.0279	0.0239	0.0561	−0.0800	0.134
FA	23,704	21.63	21.49	1.025	20.21	24.21

Data sources: CSMAR database, Wind database.

127.1 days, the minimum value was 4.015, and the maximum value reached 538.8, indicating that the commercial credit policy among enterprises is insufficient and has polarization. The inventory turnover period (DIH) averaged 277.7 days, the maximum value reached 1830, and the standard deviation was 381.4, indicating that the inventory management between enterprises is the same as the receivables turnover period. The average payables turnover period (DPO) was

128 days and the average cash cycle (CCC) was 289.1 days. According to the working capital management report released by PwC in 2018, the global average accounts receivable turnover period is 51.8 days, the inventory turnover period is 58.2 days, the accounts payable turnover period is 67.7 days, and the cash period is 42.3 days. In comparison, China's listed enterprises have extremely low efficiency in working capital management, and there is room for improvement. China's economic policy uncertainty (EPU) average is 104.6, its minimum is 64.4, the maximum is 218.7, and the standard deviation is 42.31, indicating that the uncertainty of the economic policy in the sample interval is large, providing a macro environment for the study of working capital management. The average cash flow (CFO) is 0.0279, and the standard deviation is 0.0561, indicating that the operating cash flow levels among enterprises are small. The average gearing ratio (LEV) is 0.472, the median is 0.485, the minimum is 0.125, and the maximum is 0.762, indicating that nearly half of the company's debt ratio is higher than the industry average. The sales growth rate (SALEGROWTH) averaged 0.0939, the minimum value was −0.477, and the maximum value was 0.957. The average return on assets (ROA) is 0.0299, the minimum is −0.00752, and the maximum is 0.101, reflecting the different sales and profitability of different companies. After the logarithmization of the total assets of the enterprise, the average value is 21.63, the minimum value is 20.21, and the maximum value is 24.21. The average value of fixed assets is 0.286, the minimum value is 0.0258, and the maximum value is 0.6, indicating that the scale of the enterprise and the asset structure are quite different.

3.4. Statistical Analysis

Our model setting mainly draws on Baños Caballero, García Terueland Martínez Solano (2010)'s research model on the factors affecting the working capital management of small and medium-sized enterprises [30], this paper constructs the following model to test the impact of economic policy uncertainty on the efficiency of corporate working capital management:

$$\text{WCM}_{it} = \beta_0 + \beta_1\text{EPU}_{i,t} + \beta_2\text{Cfo}_{i,t} + \beta_3\text{Lev}_{i,t} + \beta_4\text{Salegrowth}_{i,t} + \beta_5\text{Roa}_{i,t} + \beta_6\text{Gdpgrowth}_{i,t-1} + \beta_7\text{Size}_{i,t} + \beta_8\text{Fa}_{i,t} + \lambda_t + \varepsilon_{it} \tag{1}$$

Working capital management (WCM) will use the receivables turnover days (DSO), inventory turnover days (DIH), accounts payable turnover days (DPO), cash cycle (CCC) as a measure for regression analysis.

In the above model, working capital management efficiency indicator reflects efficiency of enterprise i at time t. The core explanatory variable is EPU, reflecting the uncertainty of economic policy that enterprise i receives at time t. At the same time, we refer to the treatment of Julio and Yook (2012) [1] and Chunfang C (2013) [2], using the first-order lag of regional economic growth to control potential endogeneity problems. In order to control the macroeconomic factors that change with time, we control the time and industry fixed effects in the model. In order to control the potential heteroscedasticity and sequence autocorrela-

tion, this paper conducts a firm-level cluster adjustment of the standard error of the coefficient.

4. Results and Analysis

4.1. Main Results

Table 3 shows the empirical results of the full sample, and column 1 show the results of the relationship between economic policy uncertainty and the efficiency of enterprise accounts receivable management. The core explanatory variable economic policy uncertainty (EPU) coefficient is significantly positive at the 1% significance level, indicating that the increase in economic policy uncertainty (EPU) will make Corporate account receivable management less efficient. Reflecting the uncertainty of economic policy (EPU) will make the company

Table 3. The relationship between WCM and EPU.

Independent Variables	Dependent Variables: working capital management			
	DSO	DIH	DPO	CCC
EPU	0.211***	0.563***	0.277***	0.521***
	(0.020)	(0.062)	(0.020)	(0.066)
CFO	−404.032***	−597.849***	−291.602***	−745.491***
	(30.906)	(91.791)	(29.034)	(92.702)
LEV	−87.915***	−82.824	−29.816**	−153.763***
	(15.818)	(54.351)	(14.120)	(57.121)
ROA	−1.4e+03***	−3.0e+03***	−1.2e+03***	−3.5e+03***
	(70.173)	(219.592)	(61.076)	(235.263)
FA	−129.662***	−626.937***	−66.032***	−705.707***
	(15.607)	(67.538)	(18.088)	(68.437)
SIZE	−18.320***	−5.012	3.561	−25.303***
	(2.557)	(8.883)	(2.750)	(9.290)
SALEGROWTH	−40.756***	−119.108***	−47.350***	−126.315***
	(3.007)	(9.927)	(3.227)	(10.401)
L.GDPGROWTH	−58.571*	−112.884	−17.510	−179.813*
	(31.040)	(100.665)	(28.518)	(105.736)
_CONS	645.908***	686.399***	107.284*	1225.630***
	(54.065)	(176.623)	(56.824)	(184.793)
Quarter FE	control	control	control	control
Industry FE	control	control	control	control
N	22101	22101	22101	22101
R2	0.310	0.204	0.194	0.238

The number in brackets is standard errors cluster at firm level; *, ** and *** mean that it corresponded passed the 10%, 5% and 1% significance test.

disturb the sales of the uncertainty, thus increasing the proportion of credit sales, which will lead to lower the efficiency of enterprise accounts receivable turnover. Return on assets (ROA), cash flow (CFO), debt ratio (LEV), fixed assets ratio (FA), firm size, regional economic growth (GDPGROWTH), sales growth (SALEGROWTH) are significantly negatively correlated, indicating that high profitability and good cash flow in production and operation, high-scale enterprises can obtain great bargaining power based on market position and weak financing constraints and use external commercial credit to enhance competitiveness. In order to avoid financial risks, enterprises with excessive debt ratios have incentives to raise the level of their account receivable management. At the same time, the regional economic growth will weaken the impact. The empirical results are consistent with Hypothesis 1, the uncertainty of economic policy will reduce the efficiency of enterprise accounts receivable turnover management.

Column 2 show the results of the relationship between economic policy uncertainty and the efficiency of enterprise inventory management. The core explanatory variable economic policy uncertainty (EPU) coefficient is significantly positive at the 1% significance level, indicating that the increase in economic policy uncertainty (EPU) will make inventory management less efficient. Reflecting the economic policy uncertainty (EPU) will make company's estimation of inventory demand more challenging, resulting in an increase in inventory turnover (DIH). Cash flow (CFO), return on assets (ROA), proportion of fixed assets (FA), sales growth (SALEGROWTH) are significantly negatively correlated, indicating that companies with high growth ability, high profitability in production and operation and good cash flow quality can manage inventory more effectively. Fixed assets investment has crowded out the working capital investment of enterprises, which makes the company improve its inventory turnover efficiency under the financing constraints. The empirical results are consistent with Hypothesis 2, the uncertainty of economic policy will reduce the efficiency of enterprise inventory turnover management.

Column 3 show the results of the relationship between economic policy uncertainty and the efficiency of corporate accounts payable management. The core explanatory variable economic policy uncertainty (EPU) coefficient is significantly positive at the 1% significance level, indicating that the increase in economic policy uncertainty (EPU) will make accounts payable management more efficient. Reflecting the impact of the economic policy uncertainty (EPU) and the constraints of the financing environment will lead to more credit sales demand of the downstream demand side. With increase in the proportion of credit sales and a longer period of time provided by the seller, corporates will have longer account payable turnover period (DPO).

Column 4 show the results of the relationship between economic policy uncertainty and the cash cycle. The core explanatory variable economic policy uncertainty (EPU) coefficient is significantly positive at the 1% significance level, indicating that the increase in economic policy uncertainty (EPU) will make corporate working capital management less efficient. Return on assets (ROA),

cash flow (CFO), debt ratio (LEV), proportion of fixed assets (FA), size of firm (SIZE), GDP growth rate of regional economy (GDPGROWTH), sales growth (SALEGROWTH) are significantly negatively correlated, indicating that companies with high profitability, good cash flow in production and operation, high-scale enterprises can obtain great bargaining power and use external commercial credit to enhance enterprises' working capital management based on market position and weak financing constraints. In order to avoid financial risks, companies with excessive debt ratios have incentives to improve their working capital management. At the same time, the regional economic growth will weaken the impact. The empirical results are consistent with Hypothesis IV, economic policy uncertainty will make corporate working capital management less efficient.

4.2. Robustness

This article draws on the treatment of Feng-Yu LI and Mozhu Yang (2015) [20] and uses the economic policy uncertainty index for the last month of the quarter as a measure of the quarter economic policy uncertainty. The empirical results are shown in Table 4, the regression results are basically consistent with the main results.

Table 4. Robustness test.

Variables	Working capital management			
	DSO	DIH	DPO	CCC
EPU	0.233***	0.465***	0.208***	0.555***
	(0.024)	(0.072)	(0.024)	(0.079)
CFO	−403.371***	−598.132***	−292.018***	−744.142***
	(30.913)	(91.867)	(29.079)	(92.750)
LEV	−88.296***	−84.080	−30.468**	−154.737***
	(15.820)	(54.368)	(14.137)	(57.130)
ROA	−1.4e+03***	−3.1e+03***	−1.2e+03***	−3.5e+03***
	(70.111)	(219.207)	(61.092)	(234.937)
FA	−129.718***	−627.217***	−66.188***	−705.864***
	(15.612)	(67.550)	(18.096)	(68.444)
SIZE	−18.298***	−4.923	3.609	−25.246***
	(2.557)	(8.885)	(2.751)	(9.291)
SALEGROWTH	−40.888***	−120.437***	−48.137***	−126.776***
	(3.009)	(9.952)	(3.237)	(10.416)
L.GDPGROWTH	−54.626*	−93.371	−6.679	−168.832
	(30.893)	(100.425)	(28.423)	(105.551)
_CONS	649.946***	706.962***	118.741**	1236.952***
Quarter FE	control	control	control	control
Industry FE	control	control	control	control
N	22101	22101	22101	22101
R2	0.310	0.203	0.192	0.238

The number in brackets is standard errors cluster at firm level; *, ** and *** mean that it corresponded passed the 10%, 5% and 1% significance test.

5. Conclusions

This paper selects the listed non-financial enterprises of Shanghai and Shenzhen stock markets from 2000 to 2010 as a research sample to study the impact of economic policy uncertainty on the efficiency of corporate working capital management. This paper finds that there is a significant negative relationship between the operating capital management efficiency of listed non-financial companies and economic policy uncertainty. The accounts receivable turnover period, inventory turnover period, accounts payable turnover period and cash cycle are positively correlated with economic policy uncertainty. It shows that under the economic policy uncertainty, the difficulty of enterprise working capital management increases, which makes the efficiency of enterprise working capital management decline. The specific performance is that enterprises are not only disturbing the uncertainty of sales, but also increasing the proportion of credit sales and relatively loose accounting period, which leads to lowering the turnover efficiency of enterprise accounts receivable. When enterprises face the impact of economic policy uncertainty, enterprises will find more difficult to estimate the inventory demand, which leads to an increase in the inventory turnover cycle. The contraction of the financing market will make the downstream demand more credit sales, resulting in an increase in the proportion of credit sales.

For enterprises, working capital is an important part of the overall operation of the company. Improving the efficiency of working capital management is of great significance for optimizing resource allocation and enhancing the competitiveness. The working capital management in China is relatively insufficient. There are some information loss and time lags in the process of policy promulgation and implementation, which further weakens the effective management of corporate working capital. In addition, with the daily adjustment of policies, the possibility of economic policy uncertainty in the actual operation of enterprises has increased, and higher requirements have been imposed on the working capital management of enterprises. We conduct an empirical research on working capital management under economic policy uncertainty and find that economic policy uncertainty will have a significant negative impact on the efficiency of working capital management, which suggests government should maintain policy direction stability and reduce the negative effects of economic policy uncertainty. The firms should improve their working capital management at the same time. This study also contributes to the literature on the research of uncertainty micro-level impact.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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