

# The Impact of Monetary Policy Uncertainty on Corporate Financialization—Evidence from China

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# Abstract

This paper conducts an empirical analysis of the impact of monetary policy uncertainty on the financialization of China's non-financial listed companies from 2008 to 2020. Utilizing a large dataset, the findings indicate that monetary policy uncertainty has a significant negative impact on the financialization behavior of listed companies. This effect is particularly pronounced in non-state enterprises, firms led by executives with financial backgrounds, those holding dual positions, and those located in areas with high levels of bank competition. The results further suggest that the mechanism underlying this effect is due to a reduction in the returns on firms' financial assets and an increase in their debt financing costs. The empirical results stay robust to the use of the instrumental variables approach and the generalized method of moments (GMM) estimation to address the potential endogeneity problem.

# **Keywords**

Monetary Policy Uncertainty, Corporate Financialization, Financial Asset Return, Debt Financing Cost, Chinese Listed Companies

# **1. Introduction**

In recent years, many countries have experienced an economic slowdown and a decline in fixed investment rates, while the virtual economy is expanding rapidly. In this context, organizations have shifted their focus from their core business to the financial sector in search of new profit growth opportunities, leading to the phenomenon of economic financialization. The concept of financialization originated in the 1980s. With the decline in market demand, excess production capacity in the real economy caused a sharp decline in the return on investment of real assets, and much of the corporate capital flocked into high-yield sectors such as financial market and real estate industry. This led to the rapid expansion of virtual economy and eventually formed the phenomenon of financialization among real economy. The financialization of enterprises is a subcategory of economic financialization. In the context of a global economy that is trending towards virtualization, China, as the largest developing country, is witnessing a similar trend. In addition, China's economy is undergoing a transition from rapid growth to high-quality development, resulting in the disappearance of labor and policy dividends and the end of the period of rapid development. Instead, the fast expansion of the Internet and financial industry, which are hallmarks of a rapidly developing virtual economy, has further contributed to the financialization of the real economy.

In response to the economic slowdown and industrial structure transformation, the Chinese government has implemented various macroeconomic adjustment policies and measures. While these policies have the potential to stimulate economic growth, they can also generate volatility and uncertainty due to frequent adjustments and increased diversification. Therefore, in recent years, researchers have shifted their attention to the effect of policy uncertainty on both the macro and microeconomy in addition to examining the direct impact of economic policies. Studies conducted by Baker et al. (2016) have indicated that there has been a persistent increase in economic policy uncertainty in China, which aligns with the trend observed in major economies such as the U.S. As one of the important instruments of macroeconomic regulation, the uncertainty generated by the adjustment of monetary policy also has an impact on the economy. Since the 2008 global financial crisis, the Chinese government has introduced a number of monetary policies aimed at resolving investment and financing issues for corporations. However, monetary policy often cannot directly affect micro enterprises, and its policy effects need to be indirectly transmitted to enterprises through banks and other financial institutions. Therefore, monetary policy is primarily comprised of transmission channels including interest rate transmission, bank credit channel, and risk-taking channel. Consequently, the effectiveness of monetary policy transmission is of utmost significance, while the monetary policy uncertainty (herein referred to as MPU) often leads to less-thanexpected monetary policy effects. It is therefore important to examine the impact of MPU on the real economy and enterprises. Currently, enterprises engage in a range of investment activities, including innovation investment, fixed asset investment, and financial asset investment, in addition to their primary operations. The prevalence of corporate financialization has increased in tandem with the growth of financial markets, and declining returns on fixed asset investment have further fueled investment in financial assets. Previous research has investigated the motivations behind corporate financialization and its economic consequences, with some scholars examining the macro perspective of economic policy uncertainty (Peng et al., 2018; Xu & Wu, 2018; Liu et al., 2020); however,

few studies have delved into MPU and its underlying mechanisms.

To this extend, based on the annual data of China's non-financial listed companies from 2008 to 2020, our paper first measures the MPU index in China by utilizing the method of Jurado et al. (2015) and investigates the impact of MPU on corporate financialization in China. In addition, we explore the transmission mechanism of MPU on corporate financialization and find that the return on firms' financial assets and the cost of debt financing play a mediating role in the above relationship. Moreover, we also discuss the difference of the impact of MPU on long-term and short-term financial assets from the perspective of maturity. In order to strengthen the rationality of the results and reduce the endogeneity problem of the model, we conduct a series of robustness tests.

In comparison to prior studies, our study presents the following novelties. Firstly, we employ the model of Jurado et al. (2015) to develop an MPU index for China, which takes into account the conditional volatility of various monetary policies, whereas previous studies often relied on textual analysis methods or computed the volatility of Shibor rate. This allows for a more comprehensive evaluation of the impact of MPU on corporate financialization through the use of differing methods of uncertainty index calculation. Second, we go beyond simply examining the relationship between MPU and corporate financialization and examine the mediating roles of return on corporate financial assets and cost of debt financing. Third, we recognize that firms may have varying motives for investing in financial assets, taking into account the term perspective.

## 2. Literature Review and Hypotheses

### 2.1. Review on the Impact of Monetary Policy Uncertainty

Monetary policy is an important method of macroeconomic regulation, it plays an important role in stabilizing and promoting economic development. In response to global crises such as the 2008 financial crisis and the epidemic of New Coronary Pneumonia in 2020, Chinese monetary authorities have introduced innovative monetary policy tools such as standing lending facilities (SLF) and medium-term lending facilities (MLF) on the basis of traditional monetary policy tools, in order to support the recovery and stable development of the real economy. However, while monetary policy has become more innovative and flexible, it is also subject to uncertainty due to unclear policy effects and frequent policy adjustments, which will cause the rise of MPU. Therefore, with the continuous enrichment of monetary policy tools, more and more researchers begin to study the impact of MPU on macro- and microeconomy while focusing on the monetary policy tools themselves. Husted et al. (2020) construct an index of MPU and conduct impulse response analysis through textual analysis, they find that uncertainty results in economic output and the decline of short-term government bond interest rate, leading to an increase in loan cost. Tillmann (2020) finds that bond yields vary with the uncertainty of monetary policy. In periods of high uncertainty, monetary policy shocks will lead to a small increase in long-term bond yields, while in periods of low uncertainty, long-term yields will increase even more. Wang et al. (2019) construct a DSGE model containing MPU and find that the rise of MPU will lead to an increase in default risk and a decrease in output levels. Other researchers focus on the spillover effects of MPU especially in term of macroeconomy. Chen & Tillmann (2021) indicate that MPU in China have a strong spillover effect on other Asian economies, leading to a decline in asset prices and GDP in other countries. Azad & Serletis (2022) point out the U.S. MPU displays a negative relationship with the macroeconomy of several emerging market countries including Brazil, Chile, South Africa, etc. MPU also has impacts on stock markets and commodity markets (Gospodinov & Jamali, 2018; Razmi et al., 2020; Ugurlu-Yildirim et al., 2021; Shaikh & Vallabh, 2022).

From the perspective of microeconomy, several researchers focus on the impact of MPU on enterprises in terms of corporate risk-taking, corporate investment and cash management. Ren et al. (2021) point out that MPU will reduce the level of enterprise risk-taking and have a negative impact on enterprise innovation. Luo et al. (2022) share the similar view and they suggest that for those firms who have financial constraints, the negative effect on risk-taking would be more obvious. Husted et al. (2020) point out that MPU leads to a decrease in the scale of corporate investment through real options and financial friction channels. Zhong et al. (2021) use the data of listed companies in China to explore the impact of MPU on corporate cash management strategies. The empirical results show that the rise in MPU makes listed companies tend to allocate their cash holdings to dividend distribution operations as the signal of stable operation, which leads to the decline in corporate cash holdings.

# 2.2. Influential Factors and Economic Effects of Corporate Financialization

Corporate financialization is an important branch of economic financialization, which is manifested in the increase of financial investment activities and the increase of the proportion of investment income from financial assets to the total profits of enterprises, while the proportion of capital allocated to the core business of enterprises decreases and the proportion of profits from core business gradually decreases. Moreover, the above phenomenon tends to increase year by year (Krippner, 2005; Orhangazi, 2008; Cai & Ren, 2014). A number of studies have pointed out that monetary policy, industrial policy, financial market development and other macro factors are the influencing factors leading to the phenomenon of GDP growth and the increase of money supply (M2) would lead to an increase in the degree of corporate financialization. Yang et al. (2017) discuss the allocation of corporate transactional financial assets and find that accommodative monetary policy can promote enterprises to invest in transactional financial

assets. At the firm level, the main factors contributing to the phenomenon of financialization include the decline in returns on fixed asset, the upward trend of relative returns on financial assets and the corporate governance strategy to maximize shareholder value (Xie et al., 2014; Van der Zwan, 2014; Deng et al., 2017; Liu & Luo, 2019). Davis (2018) studied the financialization of non-financial enterprises in the United States The results showed that shareholder value orientation was one of the reasons for the decline in the proportion of fixed asset investment in enterprises, and made executives increasingly tend to use the stock market return index as a reference benchmark when making investment and financing decisions.

In addition to analyzing the factors that cause the phenomenon of financialization, some researchers have also begun to study the countermeasures to restrain enterprises from going fictitious, considering that the phenomenon of corporate financialization is inherently detrimental to the development of the real economy. For example, Chen et al. (2021) find that the development of digital finance in recent years has a suppressive effect on corporate financial asset allocation. Especially with the increase of the financial regulation, the effect of digital finance on the inhibition of corporate financialization is more obvious. Zhong et al. (2022) argue that the development of digital inclusive finance would lead to a decline in the return on financial assets and a reduction in the size of shadow banking, thus inhibiting the phenomenon of corporate financialization to a certain extent. Yang et al. (2019) discuss the inhibiting effect of interest rate deregulation on corporate financialization. That is to say, by relaxing the lower bound of loan rate, the negative impact of corporate debt financing costs on profits will reduce, thus curbing the level of corporate financialization. He & Chen (2022), on the other hand, find that bank competition is conducive to reducing the cost of debt financing for firms, thereby discouraging firms' motivation to pursue profits by holding financial assets.

Moreover, the economic consequences arising from financialization are also one of the research focuses. It has been pointed out that financialization will cause a decline in the accumulation of real sector and fixed asset investment (Stockhammer, 2004; Orhangazi, 2008; Tori & Onaran, 2020), enabling enterprises to invest more capital in the financial market. Using a sample of listed firms in China, Sun & Zhang (2022) find that corporate financialization reduces the investment efficiency of firms. In addition, financialization also significantly inhibits corporate innovation, and this effect is more pronounced among firms with stronger arbitrage motivation and those in the growth stage (Wang et al., 2019; Xiao & Lin, 2019). Li & Xiao (2022) pointed out that generally, the corporate financialization has a negative effect on corporate performance, while heterogeneity is observed when financial assets are classified by term, that is, shortterm financial assets will enhance corporate performance while long-term financial assets inhibit corporate performance. Some scholars have studied from the perspective of agency theory and found that financialization has an impact on enterprise shareholders and managers. The deepening of financialization will lead to the tendency of enterprise managers to conform to the benefits of shareholders, resulting in the decline of managers' decision-making power and autonomy (Dallery, 2009; Colombo et al., 2022).

## 2.3. Monetary Policy Uncertainty and Financialization—Hypothesis Development

Two types of views exist in studies of the impact between economic policy and corporate financialization based on an uncertainty perspective. Changing economic policies make it more difficult for firms to anticipate future markets movements and motivate them to hold more liquid assets. Since financial assets are generally more liquid than fixed assets, some researchers believe that economic policy uncertainty will discourage firms from investing in fixed assets and promote the trend of financialization (Liu et al., 2020; Guo & Zhu, 2020). Contrary to the above view, many scholars believe that economic policy uncertainty will inhibit firms' investment in financial assets. Peng et al. (2018) find that as policy uncertainty rises, firms have undertaken more operational risks and faced greater financial market risks, therefore reduce their holdings of speculative financial assets. Xu & Wu (2018), on the other hand, argue that firms make financial investments with the purpose of market arbitrage, while economic policy uncertainty leads to a reduction in the market arbitrage space, thus inhibiting the phenomenon of corporate financialization. In addition to the two main views mentioned above, there are also views indicate that there exists a U-shaped relationship between economic policy uncertainty and corporate financialization. Zhao & Sun (2022) find that when economic policy uncertainty is within a certain range, firms do not increase their investment in financial assets; however, if economic policy uncertainty is at a high level, firms tend to hold more financial assets.

Following the analysis of economic policy uncertainty, monetary policy, as one of the important instruments of macroeconomic regulation, also has an impact on firms. The main channels through which monetary policy affects firms' decision-making are the interest rate transmission channel and the credit transmission channel. The adjustment of monetary policy has become more and more regular in recent years, followed by an increase in the MPU. The uncertainty of policy can lead to bias in its transmission effects and thus affect firms' decisions, which includes the impact on firms' financialization behavior. Some studies point out that MPU can promote the phenomenon of corporate financialization. MPU can lead to a reduction in the level of risk-taking by corporate management, causing firms to invest less in fixed assets and its core business, while holding more financial assets instead. Meanwhile, MPU can also affect corporate financing constraints. Based on the interest rate transmission channel of monetary policy, it is known that when facing higher MPU, banks will be more reluctant to lend, which causes the scale and possibility of financing through external channels to decrease. To maintain normal operation and uncertainty risk, firms may reduce their operational risk by holding more liquid assets (Liu & Du, 2022). It has also been argued that MPU inhibits corporate financialization. Zhang et al. (2020) study the listed companies in China and find that frequent changes in monetary policy led firms to reduce the size of their financial asset holdings, and this dampening effect is more pronounced in areas with a better financial ecology. Based on the above analysis, our paper proposes the following contradictory hypotheses:

H1a: Increased MPU leads to more financial assets being held by firms and promotes corporate financialization behavior.

H1b: Increased MPU may discourage firms from holding more financial assets and inhibit corporate financialization behavior.

The rise in MPU may lead to increased volatility in the capital market. Investors, including enterprises, will need a higher risk premium to cope with market volatility, which will lead to an increase in the expected rate of return on financial assets while the actual return is unchanged or declines. When the rate of return is lower than expected, institutional investors including firms are likely to adjust their willingness to invest in financial assets and sell their financial assets holdings, resulting in a plunge in investment returns on financial assets in a short-term. The decline in the rate of return on financial assets will cause firms to reduce their willingness to further hold financial assets in the future, thereby inhibiting the degree of corporate financialization. Based on the above analysis, we propose the following hypothesis:

H2: The rise in MPU will cause a decline in the rate of return on financial assets and inhibit the expected degree of corporate financialization.

The motivation of enterprises to hold financial assets is mainly divided into preventive motivation and profit-seeking motivation. In fact, the main reasons for enterprises to invest in financial assets are the decline in corporate profits and the decline in the rate of return on fixed assets. In order to stabilize the development of enterprises, managers have to seek new profit growth methods. In general, financial asset investment has higher return and higher risk than fixed assets investment. Therefore, more and more enterprises hope to increase profits by investing in financial assets to offset the negative impact brought by the decline of the fixed investment income. When monetary policies are adjusted frequently and policy uncertainty rises, firms will face more financing difficulties, considering that banks may reduce their willingness to take risks and scale down their loans. The rise in financing cost of firms reduces their disposable cash, which hinders the possibility of profit-seeking through corporate financialization behavior (Peng et al., 2018). Therefore, we propose hypothesis 3:

H3: The rise of MPU will inhibit the degree of corporate financialization by increasing corporate debt financing costs.

## 3. Construction of the Monetary Policy Uncertainty Index

In this paper, we refer to the study of Jurado et al. (2015) to measure the China's

MPU. Jurado define the theoretical model for measuring uncertainty as followed:

$$\mathcal{U}_{jt}^{y}(h) \equiv \sqrt{E\left[\left(y_{jt+h} - E\left[y_{jt+h} \middle| I_{t}\right]\right)^{2} \middle| I_{t}\right]}$$
(1)

where,  $j = 1, 2, ..., N_j$ ;  $E[\cdot | I_t]$  denotes the conditional expectation obtained based on the data information of period *t*, and  $I_t$  represents the t-period data information. After calculating the uncertainty of every single variable, the uncertainty of the whole series can be obtained by using a certain weight. The weighting method can be done by equal-weight averaging, that is  $\omega_j = 1/N_y$ , or the weights of each variable can also be extracted by principal component analysis (PCA) for weighted average. Specifically:

$$\mathcal{U}_{t}^{y}(h) = \sum_{j=1}^{N_{y}} \omega_{j} \mathcal{U}_{jt}^{y}(h) \equiv E_{\omega} \Big[ \mathcal{U}_{jt}^{y}(h) \Big]$$
(2)

For the selection of indicators to measure MPU in China, we refer to the method of Wang et al. (2019), which are divided into two major categories. The first category is related to monetary policy-related indicators, with 18 variables selected for monetary policy. The second category is other macro-level economic variables, mainly including economic indicators in 7 areas, such as bond market, exchange rate market, securities market, macro-economy, price level, government expenditure, import and export. There are 42 variables selected for this category, with a total of 60 variables. **Table 1** represents the detail information of all the selected variables. The frequency of variables is monthly, and the time interval is from March 2006 to December 2021. The data are obtained from CEIC database, Wind database and China Economic Network statistical database.

According to the above theoretical model for measuring uncertainty, our paper obtains the MPU index for the next one, three and twelve periods, i.e. h = 1, 3, 12. In **Figure 1**, csa represents the uncertainty obtained by averaging equal weights, and pca represents the uncertainty obtained by principal component analysis method. It can be seen from **Figure 1** that the uncertainty trend of the next one period, the next three periods and the next twelve periods are consistent. Secondly, the MPU is at its peak at the end of 2008, and the difference between the uncertainty indexes obtained by the two weighting methods is not significant. Therefore, in the following part, we will use the next one period uncertainty index with pca method as the proxy variable of the China's MPU.

## 4. Empirical Model Design

#### 4.1. Sample Selection

This paper selects the A-share listed companies in China from 2008 to 2020 and arranges the sample according to the following rules: 1) exclude the listed companies in the financial industry and real estate industry; 2) exclude firms that have been delisted or listed for less than 2 years; 3) retain only companies with 3 or more consecutive years of observations, and finally we obtain 2532 companies

| Classification        | N Variable name                                | Calculation   | Symbol |
|-----------------------|--|---|--------|
|                       | Money supply M0                                | year-on-year growth rate  | M0     |
|                       | Money supply M1                                | year-on-year growth rate  | M1     |
|                       | Money supply M2                                | year-on-year growth rate  | M2     |
|                       | Deposit reserve ratio (large commercial banks) | current period rate   | DRR1   |
|                       | Deposit reserve ratio (other banks)            | current period rate   | DRR2   |
|                       | Rediscount rate                                | current period rate   | DIR    |
|                       | Loan rate: 1 year or less                      | current period rate   | LPR1   |
|                       | Loan rate: 1 to 5 years                        | current period rate   | LPR1_5 |
| Monetary              | Loan rate: more than 5 years                   | current period rate   | LPR5   |
| policy                | Deposit rate: demand deposit                   | current period rate   | DR     |
|                       | Deposit rate: 3-month savings deposit          | current period rate   | DR3M   |
|                       | Deposit rate: 6-month savings deposit          | current period rate   | DR6M   |
|                       | Deposit rate: 1-year savings deposit           | current period rate   | DR1Y   |
|                       | Deposit rate: 2-year savings deposit           | current period rate   | DR2Y   |
|                       | Deposit rate: 3-year savings deposit           | current period rate   | DR3Y   |
|                       | Shibor: 7 days                                 | current period rate   | ILR7D  |
|                       | Shibor: 1 month                                | current period rate   | ILR1M  |
|                       | Shibor: 3 months                               | current period rate   | ILR3M  |
|                       | 6-month treasury bond spread                   | 6-month Treasury yield minus 3-month Treasury yield             | TS6M   |
|                       | 1-year treasury bond spread                    | 1-year Treasury yield minus 3-month Treasury yield              | TS1Y   |
|                       | 3-year treasury bond spread                    | 3-year Treasury yield minus 3-month Treasury yield              | TS3Y   |
|                       | 5-year treasury bond spread                    | 5-year Treasury yield minus 3-month Treasury yield              | TS5Y   |
|                       | 7-year treasury bond spread                    | 7-year Treasury yield minus 3-month Treasury yield              | TS7Y   |
|                       | 10-year treasury bond spread                   | 10-year Treasury yield minus 3-month Treasury yield             | TS10Y  |
|                       | 30-year treasury bond spread                   | 30-year Treasury yield minus 3-month Treasury yield             | TS30Y  |
| <b>D</b> 1 1 <i>i</i> | 1-year 3A corporate bond spread                | 1-year 3A corporate bond yield minus 3-month<br>Treasury yield  | CS1Y   |
| Bond market           | 2-year 3A corporate bond spread                | 2-year 3A corporate bond yield minus 3-month<br>Treasury yield  | CS2Y   |
|                       | 3-year 3A corporate bond spread                | 3-year 3A corporate bond yield minus 3-month<br>Treasury yield  | CS3Y   |
|                       | 5-year 3A corporate bond spread                | 5-year 3A corporate bond yield minus 3-month<br>Treasury yield  | CS5Y   |
|                       | 7-year 3A corporate bond spread                | 7-year 3A corporate bond yield minus 3-month<br>Treasury yield  | CS7Y   |
|                       | 10-year 3A corporate bond spread               | 10-year 3A corporate bond yield minus 3-month<br>Treasury yield | CS10Y  |

 Table 1. Description of variables used to measure the uncertainty index of China's monetary policy.

# Continued

|                      | 15-year 3A corporate bond spread               | 15-year 3A corporate bond yield minus 3-month<br>Treasury yield                          | CS15Y   |
|----------------------|--|--|---------|
|                      | 20-year 3A corporate bond spread               | 20-year 3A corporate bond yield minus 3-month<br>Treasury yield                          | CS20Y   |
|                      | 30-year 3A corporate bond spread               | 30-year 3A corporate bond yield minus 3-month<br>Treasury yield                          | CS30Y   |
|                      | Shanghai Composite Index Return                | Monthly yield of Shanghai Composite Index  | SHR     |
|                      | Shanghai Composite Index Volatility            | Conditional standard deviation of composite index yield obtained from GARCH (1, 1) model | SHSVOL  |
| Securities           | Shanghai Composite Index turnover rate         | Monthly turnover rate: the arithmetic average of daily turnover rate                     | SHTO    |
| market               | Shenzhen Composite Index Return                | Monthly yield of Shenzhen Composite Index  | SZR     |
|                      | Shenzhen Composite Index Volatility            | Conditional standard deviation of composite index yield obtained from GARCH (1, 1) model | SZSVOL  |
|                      | Shenzhen Composite Index turnover rate         | Monthly turnover rate: the arithmetic average of daily turnover rate                     | SZTO    |
|                      | Above-scale industries realized added value    | year-on-year growth rate   | VAI     |
|                      | Macroeconomic boom index: leading indicator    | year-on-year growth rate   | MI1     |
| Macro<br>economy     | Macroeconomic boom index: consistent indicator | year-on-year growth rate   | MI2     |
|                      | Macroeconomic boom index: lagging indicator    | year-on-year growth rate   | MI3     |
|                      | PMI: manufacturing                             | year-on-year growth rate   | PMI     |
|                      | Total retail sales of consumer goods           | year-on-year growth rate   | SCR     |
|                      | Fixed asset investment: cumulative             | year-on-year growth rate   | FI      |
|                      | СРІ  | year-on-year growth rate   | СРІ     |
| <b>N·1</b> 1         | Commodity retail price index                   | year-on-year growth rate   | RPI     |
| Price level          | Enterprise commodity price index               | year-on-year growth rate   | FPI     |
|                      | Producer Price Index                           | year-on-year growth rate   | IPI     |
|                      | RMB to USD                                     | year-on-year growth rate   | USDCNY  |
|                      | RMB to Euro                                    | year-on-year growth rate   | EUROCNY |
| Exchange<br>market   | RMB to JPY                                     | year-on-year growth rate   | JPYCNY  |
| market               | RMB to HKD                                     | year-on-year growth rate   | HKCNY   |
|                      | Real effective exchange rate: BIS              | year-on-year growth rate   | BIS     |
|                      | National general public budget revenue         | year-on-year growth rate   | GI      |
| Government           | National general public budget expenditure     | year-on-year growth rate   | GS      |
| CAPCHISCS            | Tax revenue                                    | year-on-year growth rate   | TI      |
| Import<br>and Export | Net exports                                    | year-on-year growth rate   | EI      |

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Figure 1. China's monetary policy uncertainty index.

with 21,854 company-year observations. In addition, in order to reduce the impact of extreme values on the empirical results, we winsorize the firm specific variables at the 1% and 99% levels. The company data are obtained from Wind database and CSMAR database, and the macro level economic data are from CEIC database. The data of MPU are calculated based on the method of Jurado et al. (2015) in the previous part.

#### 4.2. Model Construction

To study the impact of the MPU on the financialization of listed companies in China, the following baseline regression model is constructed with reference to the research of Peng et al. (2018):

$$FA_{i,t} = \beta_0 + \beta_1 MPU_{t-1} + \beta_2 TA_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LEV_{i,t} + \beta_5 Risk_{i,t} + \beta_6 Salesgrowth_{i,t} + \beta_7 TobinQ_{i,t} + \beta_8 Turnover_{i,t} + \beta_9 Shareholder_{i,t}$$
(3)  
+  $\beta_{10} GDPg_t + \beta_{11} CPIg_t + \beta_{12} M2g_t + \beta_{13} LPR_t + \mu_{i,t} + \varepsilon_{i,t}$ 

where, *i* denotes the listed company in this paper, and *t* represents the year. The dependent variable is FA, which represents corporate financial assets and is logarithmically treated. The core explanatory variable is MPU, which denotes China's MPU calculated in the previous part. To avoid endogenous problems, MPU is lagged by one period. The control variables are divided into firm-level and macro-level.  $\mu_{i,i}$  is the individual fixed effect,  $\varepsilon_{i,i}$  is the stochastic error. Since MPU is time-series data and remain unchanged with individuals, the introduction of time-fixed effect will create a multiple collinearity problem. Therefore, our paper controls for a series of macro-level economic variables instead of

controlling the year fixed effects.

Furthermore, our paper divides the samples into several groups according to their characteristics to analyze their heterogeneity. We have state-owned enterprises and non-state-owned enterprises, managers with financial background and those without, duality or not of chairman and general manager, as well as enterprises with high Herfindahl index in the banking industry in their province and those with low Herfindahl index in the banking industry. With the above groups, we can investigate whether firm heterogeneity causes differences in the impact of MPU on corporate financialization.

In addition, we also discuss the mediating effect of the return on corporate financial assets and the cost of corporate financing. First, we test whether MPU affects firms' return on financial assets (RETURNFA) through model (4), then we add both MPU and return on financial assets in the model to verify whether MPU affects firms' holding level of financial assets through affecting the return on financial assets.

$$RETURNFA_{i,t-1} = \alpha_0 + \alpha_1 MPU_{t-1} + \alpha_2 TA_{i,t} + \alpha_3 ROA_{i,t} + \alpha_4 LEV_{i,t} + \alpha_5 Risk_{i,t} + \alpha_6 Salesgrowth_{i,t} + \alpha_7 TobinQ_{i,t} + \alpha_8 Turnover_{i,t} + \alpha_9 Shareholder_{i,t} + \alpha_{10} GDPg_t + \alpha_{11} CPIg_t + \alpha_{12} M2g_t + \alpha_{13} LPR_t + \mu_{i,t} + \varepsilon_{i,t}$$

$$(4)$$

To test the mediating effect of financing cost, our paper first calculates the cost of debt financing (COD) of listed companies. Referring to Han et al. (2017), the ratio of the sum of corporate net capital expenditure and interest income to corporate debt is used to measure the cost of debt financing. Specifically, corporate net capital expenditure equals to capital expenditure less depreciation and amortization, and corporate debt equals to the sum of short-term debt and long-term debt. Then we construct model (5) to analyze whether MPU affects the cost of debt financing.

$$COD_{i,t-1} = \varphi_0 + \varphi_1 MPU_{t-1} + \varphi_2 TA_{i,t} + \varphi_3 ROA_{i,t} + \varphi_4 LEV_{i,t} + \varphi_5 Risk_{i,t} + \varphi_6 Salesgrowth_{i,t} + \varphi_7 TobinQ_{i,t} + \varphi_8 Turnover_{i,t} + \varphi_9 Shareholder_{i,t}$$
(5)  
+  $\varphi_{10} GDPg_t + \varphi_{11} CPIg_t + \varphi_{12} M2g_t + \varphi_{13} LPR_t + \mu_{i,t} + \varepsilon_{i,t}$ 

## 4.3. Variable Definition

#### 4.3.1. Dependent Variable: Corporate Financialization

The methods for measuring corporate financialization (FA) mainly include: either measuring the corporate financial assets holding or the corporate financial assets return. Our paper measures the corporate financialization from the perspective of corporate financial assets holdings. Referring to Gu et al. (2020), we select the sum of 12 items in the balance sheet, including trading financial assets, derivative financial assets, held-to-maturity investments, other receivables, financial assets purchased against sale, noncurrent assets maturing within one year, loans and advances, available-for-sale financial assets, long-term equity investments, investment properties, other current assets and other noncurrent assets, as the amount of corporate financial assets holdings, then take logarithm as the proxy variable of corporate financialization.

#### 4.3.2. Core Explanatory Variable: MPU in China

We use the index measured in the previous section as the proxy variable of MPU in China. Since the frequency of data in this paper is yearly, the arithmetic average of the MPU index with monthly frequency is adopted to obtain the uncertainty of the year. As a robustness test, the China Monetary Policy Uncertainty Index (CNMPU) constructed by Huang & Luk (2020) through text analysis method as well as the annual standard deviation of the 7-day Shanghai Interbank Offered Rate (SHIBORSD) are used as alternative proxies for MPU.

#### 4.3.3. Control Variables

The following items are selected as control variables. Firstly, the firm-level control variables mainly include: 1) firm size (TA), using the logarithm of the total assets of listed companies at the end of the period; 2) Return on total assets (ROA), which is used to measure the profitability of firms; 3) Asset liability ratio (LEV), which represents the financial leverage of firms; 4) The relative risk of financial and fixed asset investment (Risk) is measured as the ratio of the rolling three-year consecutive standard deviation of the yield on financial assets to the rolling three-year consecutive standard deviation of the yield on fixed assets. According to Zhang & Zhang (2016), the rate of return on corporate financial assets is equal to the sum of investment income, gains or losses from changes in fair value and other comprehensive income, divided by the total amount of financial assets; The yield on fixed assets is equal to the operating income minus operating costs, business taxes and surcharges, period costs and asset impairment losses, divided by the value of operating assets; 5) the growth rate of operating income (Salesgrowth), which represents the growth of enterprises; 6) TobinQ, which is used to measure the investment opportunities of enterprises; 7) Turnover, which denotes the operating capacity of enterprises; 8) Equity concentration (Shareholder), which is measured by the shareholding ratio of the top five shareholders. Macro-level economic variables include GDP growth rate (GDPg), CPI growth rate (CPI), M2 growth rate (M2g) and one-year bank loan interest rate (LPR). See Table 2 for specific variable definitions.

#### 4.3.4. Descriptive Statistics

**Table 3** shows the descriptive statistics of variables. The average value of the proportion of financial assets to total assets of listed companies in China is 0.13, the minimum value is close to 0, and the maximum value is 0.63, indicating that the scale of financial assets held by different enterprises varies greatly. The uncertainty measured in this paper is the monthly value, and it can be seen from **Figure 1** above that the monthly value fluctuates greatly, but the annual value calculated by the arithmetic mean is less volatile. **Table 3** also shows that the maximum value of the annual MPU index is 0.39 while the minimum value is 0.29, and the standard deviation is 0.027.

| Table 2. Variat | le definition. |
|-----------------|----------------|
|-----------------|----------------|

| Variable symbol | Variable name   | Calculation method  | Data source |
|-----------------|---|---|-------------|
| FA              | Corporate financialization                            | The natural logarithm of corporate financial assets   | Wind, CSMAR |
| MPU             | Monetary policy uncertainty in China                  | Calculated according to the method of Jurado et al. (2015)  | CEIC        |
| ТА              | Enterprise size                                       | Natural logarithm of total assets   | Wind, CSMAR |
| ROA             | Return on total assets                                | Net profit/total assets   | Wind, CSMAR |
| LEV             | Asset liability ratio                                 | Total liabilities/total assets  | Wind, CSMAR |
| Risk            | Relative risk of financial and fixed asset investment | Ratio of rolling three-year standard deviation of return<br>on financial assets to the rolling three-year standard<br>deviation of return on fixed assets | Wind, CSMAR |
| Salesgrowth     | Growth rate of operating income                       | (Current operating income – previous operating income)/<br>previous operating income  | CSMAR       |
| TobinQ          | Tobin's Q value                                       | Market value/total assets   | CSMAR       |
| Turnover        | Total assets turnover ratio                           | Operating income/average total assets   | Wind, CSMAR |
| Shareholder     | Equity concentration                                  | Shareholding ratio of the top five shareholders   | CSMAR       |
| GDPg            | Year on year GDP growth rate                          | (Current GDP – previous GDP)/previous GDP   | CEIC        |
| CPIg            | Year-on-year growth rate of CPI                       | CPI index of this year – 100 (base period is the previous year)   | CEIC        |
| M2g             | M2 year-on-year growth rate                           | (M2 of the current period – M2 of the previous period)/<br>M2 of the previous period  | CEIC        |
| LPR             | Benchmark interest rate for loans                     | 1-year benchmark bank loan interest rate  | CEIC        |
| RETURNFA        | Return on corporate financial assets                  | Financial asset profits/Corporate financial assets  | Wind, CSMAR |
| COD             | Cost of debt financing                                | (Net corporate capital expenditure + Corporate interest income)/Total corporate debt  | Wind, CSMAR |

**Table 3.** Summary statistics. This table presents the number of observations, mean, standard deviation, minimum value and maximum value of the variables used in our empirical analyses from 2008 to 2020.

| Variables   | Observations | Mean value | Standard<br>deviation | Minimum<br>value | Maximum<br>Value |
|-------------|--------------|------------|-----------------------|------------------|------------------|
| FA          | 21,854       | 0.13       | 0.13                  | 0.00             | 0.63             |
| MPU         | 21,854       | 0.32       | 0.03                  | 0.29             | 0.39             |
| TA          | 21,854       | 22.24      | 1.23                  | 19.26            | 25.93            |
| ROA         | 21,854       | 0.04       | 0.06                  | -0.36            | 0.21             |
| LEV         | 21,854       | 0.43       | 0.19                  | 0.05             | 1.06             |
| Risk        | 21,854       | 3.45       | 7.81                  | 0.00             | 54.92            |
| Salesgrowth | 21,854       | 0.29       | 0.76                  | -0.73            | 5.99             |
| TobinQ      | 21,854       | 2.03       | 1.25                  | 0.87             | 9.23             |
| Turnover    | 21,854       | 0.66       | 0.45                  | 0.07             | 2.66             |
| Shareholder | 21,854       | 0.52       | 0.15                  | 0.19             | 0.89             |

| Continued |        |       |      |       |       |
|-----------|--------|-------|------|-------|-------|
| GDPg      | 21,854 | 7.17  | 2.42 | 2.35  | 14.23 |
| CPIg      | 21,854 | 2.52  | 1.30 | -0.69 | 5.86  |
| M2g       | 21,854 | 12.40 | 4.57 | 8.10  | 28.50 |
| LPR       | 21,854 | 5.02  | 0.88 | 4.35  | 7.47  |
| RETURNFA  | 21,854 | 0.06  | 0.16 | -0.37 | 1.07  |
| COD       | 20,657 | 0.62  | 3.06 | -1.65 | 27.71 |

# 5. Empirical Results and Analysis

# 5.1. Impact of Monetary Policy Uncertainty on Corporate Financialization

**Table 4** presents the result of the main regression model. Column (1) shows the results with only MPU as the explanatory variable, while column (2) and column (3) successively incorporate firm-level control variables and macro-level control variables. It can be found that the coefficients of MPU in the three columns are -0.249, -0.084 and -0.5051 respectively, which is significant at the 1% level, indicating that MPU has a negative correlation with corporate financialization, that is, the MPU will inhibit corporate financialization and lead to a decrease in the level of corporate holding financial assets. Hypothesis 1b is verified.

## 5.2. Heterogeneity Analysis

**Table 5** summarizes the effect of MPU on corporate financialization after considering the heterogeneity of firm characteristics. Columns (1) and (2) are grouped according to whether they are state-owned companies. The results show that the impact of MPU on financialization is negative for both types, with coefficients of -0.030 and -0.048, respectively. Otherwise, this impact is only significant at 1% level for non-SOEs, implying that non-SOEs will reduce their investment in financial assets when facing increased MPU. The possible explanation might be that non-SOEs are weaker than SOEs in terms of financing capacity and face greater financing constraints. Therefore, in periods of high monetary policy volatility, SOEs are not significantly affected by policy uncertainty, while non-SOEs may face a significant increase in financing costs. To maintain the daily operation, they will choose to reduce investment in financial assets.

Columns (3) and (4) report the impact of MPU on corporate financialization by considering whether senior executives have financial backgrounds. The results show that when the senior executives of listed companies have financial backgrounds, the coefficient of MPU is -0.037 and significant at 5% level, indicating that the MPU inhibits the corporate financialization under this feature. The effect is not significant for listed companies whose executives do not have financial backgrounds. The possible reason is that managers with financial backgrounds have a higher perception of changes in monetary policy. Therefore, they become more cautious in making investment decisions when facing the rising MPU.

| Warishla          | (1)       | (2)       | (3)       |
|-------------------|-----------|-----------|-----------|
| v ariable —       | FA        | FA        | FA        |
| L.MPU             | -0.249*** | -0.084*** | -0.051*** |
|                   | (-12.81)  | (-4.81)   | (-3.05)   |
| ТА                |           | 0.024***  | -0.001    |
|                   |           | (10.59)   | (-0.23)   |
| ROA               |           | -0.160*** | -0.112*** |
|                   |           | (-9.15)   | (-6.49)   |
| LEV               |           | -0.104*** | -0.065*** |
|                   |           | (-7.61)   | (-4.85)   |
| Risk              |           | -0.001*** | -0.001*** |
|                   |           | (-10.02)  | (-9.57)   |
| Salesgrowth       |           | -0.001    | -0.002    |
|                   |           | (-1.03)   | (-1.45)   |
| TobinQ            |           | 0.003***  | 0.001     |
|                   |           | (3.57)    | (1.41)    |
| Turnover          |           | -0.042*** | -0.039*** |
|                   |           | (-7.63)   | (-7.21)   |
| Shareholder       |           | -0.147*** | -0.122*** |
|                   |           | (-8.86)   | (-7.41)   |
| GDPg              |           |           | 0.004***  |
|                   |           |           | (9.95)    |
| CPIg              |           |           | -0.004*** |
|                   |           |           | (-6.52)   |
| M2g               |           |           | -0.003*** |
|                   |           |           | (-11.92)  |
| LPR               |           |           | -0.019*** |
|                   |           |           | (-16.03)  |
| Constant          | 0.213***  | -0.226*** | 0.404***  |
|                   | (33.82)   | (-4.13)   | (5.39)    |
| Firm-fixed effect | YES       | YES       | YES       |
| Observations      | 21,854    | 21,854    | 21,854    |
| $\mathbb{R}^2$    | 0.008     | 0.101     | 0.141     |

 Table 4. Main regression: the effects of MPU on corporate financialization.

Notes: This table shows the results whether MPU variable will influence corporate financialization behaviors by considering only the MPU itself, the firm-level controls, and the macroeconomic controls, respectively. The data is from China's A-share listed firms and contains 21,854 firm-year observations from 2008-2020. The firm-fixed effects are considered in these results. This table presents the model coefficients and R-squared. The t-statistics calculated by firm-level clustered standard errors for each coefficient appears underneath. The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

|                        | (1)      | (2)      | (3)      | (4)     | (5)              | (6)                      | (7)      | (8)      |
|------------------------|----------|----------|----------|---------|------------------|--------------------------|----------|----------|
| Variable               | SOEs     | Non-SOEs | FB       | Non-FB  | Dual<br>position | Two positions separately | HHI high | HHI low  |
| L.MPU                  | -0.030   | -0.048** | -0.037*  | -0.028  | -0.023           | -0.037*                  | -0.036   | -0.047*  |
|                        | (-1.33)  | (-2.01)  | (-1.67)  | (-0.92) | (-0.58)          | (-1.96)                  | (-1.56)  | (-1.84)  |
| Constant               | 0.477*** | 0.556*** | 0.582*** | 0.119   | 0.735***         | 0.413***                 | 0.483*** | 0.335*** |
|                        | (4.14)   | (5.57)   | (6.52)   | (1.04)  | (4.35)           | (4.94)                   | (4.70)   | (2.92)   |
| Firm controls          | YES      | YES      | YES      | YES     | YES              | YES                      | YES      | YES      |
| Macroeconomic controls | YES      | YES      | YES      | YES     | YES              | YES                      | YES      | YES      |
| Firm-fixed effect      | YES      | YES      | YES      | YES     | YES              | YES                      | YES      | YES      |
| Observations           | 8804     | 13,050   | 14,731   | 7123    | 5305             | 16,238                   | 11,405   | 10,449   |
| $\mathbb{R}^2$         | 0.119    | 0.173    | 0.156    | 0.114   | 0.197            | 0.122                    | 0.125    | 0.166    |

#### Table 5. Heterogeneity analysis.

Notes: This table examines whether firms of different nature, firms' senior executive financial backgrounds, firms with dual position/two positions separately, firms in area of different bank industry HHI index are affected differently by monetary policy uncertainty. The firm-fixed effects are considered in these results. This table presents the model coefficients and R-squared. The t-statistics calculated by firm-level clustered standard errors for each coefficient appears underneath. The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

> Columns (5) and (6) are grouped according to the combination of two positions, i.e., chief executive and general manger. When the two positions are held by the same person, then it is called combination of two positions or dual position. The coefficient of MPU in column (5) is not significant, and the coefficient of MPU in column (6) is significantly negative, implying that the negative effect of MPU on corporate financialization is significant for listed companies where the chairman and general manager are not the same person.

> The impact of MPU on corporate financialization may also be influenced by the local bank competition. According to the method of Jiang et al. (2019), we calculate the Herfindahl index of the banking industry in different provinces each year, as a proxy variable for bank competition and calculate the average value of bank Herfindahl index in each year. If the Herfindahl index of a province is greater than the average value of the year, it is taken as 1, and 0 otherwise. Columns (7) and (8) report the results according to different bank HHI index groups. When the province in which the listed company is located has a low bank HHI index, that is, has a greater bank competition, the MPU coefficient is -0.047 and significant at 10% level, indicating that the MPU has a significant inhibitory effect on firms' financial assets holdings. However, in provinces with high HHI, the inhibition effect of uncertainty on listed companies is not significant.

#### 5.3. Endogenous Problems and Robustness Test

#### 5.3.1. Endogenous Problems

In model (3), we didn't include time fixed effects. Instead, we added macro-level

control variables to minimize the endogeneity caused by omitted variables. Even so, the model may still have possible endogenous problems, so we adopt the generalized method of moments estimation (GMM) and instrumental variables estimation to test the endogenous problem.

First, based on the baseline model, a dynamic panel regression model is established by adding a one-period lag of corporate financialization (L.FA) to the right side of the equation. Second, referring to Peng et al. (2018), the global economic policy uncertainty (WUI) is selected as the instrumental variable for the model.

**Table 6** reports the results of system GMM and differential GMM, respectively. The coefficient of one-period lagged corporate financialization is significantly positive, and the coefficients of MPU are -0.108 and -0.134 respectively, which remain significantly negative. The *p*-value of AR (2) are 0.802 and 0.309, respectively, which pass the serial autocorrelation test. The p-value of Hansen test is also greater than 0.1, which rejects the overidentification hypothesis, indicating that both GMM models are relatively reliable.

In addition, this paper uses the instrument variables method and selects the global economic policy uncertainty (WUI), the U.S. economic policy uncertainty (USEPU) and the U.S. MPU (USMPU) as instrumental variables for regression. In **Table 7**, column (1) and (2) represent the results of WUI as instrumental variable. The reason for choosing this index is that it has an impact on China's overall macro-economy and China's monetary policy but does not directly affect the financial asset holding behavior of Chinese listed companies and is suitable as an instrumental variable. In columns (3) and (4), the U.S. economic policy

| Variable               | System GMM | Differential GMM |
|------------------------|------------|------------------|
| variable –             | (1) FA     | (2) FA           |
| L.FA                   | 0.690***   | 0.652***         |
|                        | (12.76)    | (15.18)          |
| L.MPU                  | -0.108*    | -0.134*          |
|                        | (-1.78)    | (-1.94)          |
| Constant               | 0.970*     |                  |
|                        | (1.83)     |                  |
| Firm controls          | YES        | YES              |
| Macroeconomic controls | YES        | YES              |
| Observations           | 21,854     | 18,989           |
| AR(1)                  | 0.000      | 0.000            |
| AR(2)                  | 0.802      | 0.309            |
| Hansen test (Pvalue)   | 0.127      | 0.169            |

Table 6. Regression results of system GMM and Differential GMM.

Note: The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

| Variabla                               | 1 <sup>st</sup> stage | 2 <sup>nd</sup> stage | 1 <sup>st</sup> stage | 2 <sup>nd</sup> stage |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| variable                               | (1) L.MPU             | (2) FA                | (1) L.MPU             | (2) FA                |
| L.WUI                                  | -0.035***             |                       |                       |                       |
|  | (-35.66)              |                       |                       |                       |
| L.USEPU                                |                       |                       | 0.033***              |                       |
|  |                       |                       | (26.82)               |                       |
| L.USMPU                                |                       |                       | 0.019***              |                       |
|  |                       |                       | (24.67)               |                       |
| L.MPU                                  |                       | -0.438***             |                       | -0.186**              |
|  |                       | (-6.41)               |                       | (-2.25)               |
| Firm controls                          | YES                   | YES                   | YES                   | YES                   |
| Macroeconomic controls                 | YES                   | YES                   | YES                   | YES                   |
| Firm-fixed effect                      | YES                   | YES                   | YES                   | YES                   |
| Observations                           | 21,854                | 21,854                | 21,854                | 21,854                |
| R <sup>2</sup>                         |                       | 0.126                 |                       | 0.139                 |
| Underidentification test (LM)          |                       | 1271.94               |                       | 1815.82               |
| Weak instrumental variable<br>test (F) |                       | 2085.17               |                       | 684.858               |

 Table 7. Instrumental variables method.

Notes: This table uses the instrument variable method to mitigate endogeneity. Column (1) uses the global economic policy uncertainty (WUI) as an instrument and displays the correlation between MPU and WUI. Column (2) displays the second stage result of instrumental variables regression of financialization on MPU. Column (3) uses the US economic policy uncertainty (USEPU) and US monetary policy uncertainty (USMPU) as two instruments; Column (4) display the second stage result of instrumental variables regression of financialization on MPU by considering USEPU and USMPU as instruments. The t-statistics calculated by firm-level clustered standard errors for each coefficient appears underneath. The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

uncertainty (USEPU) and U.S. MPU (USMPU) are simultaneously used as instrument variables for regression. The reason for choosing the US policy uncertainty is that the USMPU has no direct impact on Chinese enterprises, but it will have a certain impact on China's monetary policy, as well as the economic policy uncertainty. The first stage results of columns (1) and (3) show that WUI, USEPU and USMPU are significantly related to China's MPU. In the second stage regression, as reported in column (2) and (4), the coefficients of MPU are -0.438 and -0.186 respectively, which are significant at the level of 1% and 5%. From the data in the last two rows of **Table 7**, the model also passed the underidentification test and the weak instrumental variable test, indicating that the selected instruments are reasonable.

#### 5.3.2. Robustness Test

Our paper uses the China MPU Index (CNMPU) measured by Huang & Luk (2020) and the annual standard deviation of 7-day SHIBOR (SHIBOR1WSD) as the alternative explanatory variables. Besides, the sample period of this paper is 2008-2020. Considering the shock of the global financial crisis in 2008, we also exclude the data of 2008 and 2009 and rerun the model again. Table 8 shows the results of robustness test. After replacing explanatory variables and excluding special years, the results are still robust.

# 6. Further Discussion

## 6.1. Impact Mechanism Test

The above empirical results verify that the MPU has a negative impact on the degree of corporate financialization. In this part, we will discuss its intrinsic mechanism. We consider the mediating effect of financial asset returns (RETURNFA) and debt financing cost (COD) and explore the effectiveness of the transmission path of "MPU  $\rightarrow$  financial asset returns  $\rightarrow$  corporate financialization" and "MPU  $\rightarrow$  financing cost  $\rightarrow$  corporate financialization".

According to the research of Zhang & Zhang (2016), we define the rate of return on financial assets (RETURNFA) as the value of the channel return on financial assets divided by the value of financial assets. **Table 9** reports the results of the mediating effect of MPU on the level of firms' financial assets holdings. Column (1) is the result of the main regression, and column (2) uses the one-period lag of return on financial assets as the dependent variable. The coefficient of MPU

| Maniahla               | (1)       | (2)       | (3)       |
|------------------------|-----------|-----------|-----------|
| v ariable              | FA        | FA        | FA        |
| L.CNMPU                | -0.016*** |           |           |
|                        | (-7.69)   |           |           |
| L.SHIBOR1WSD           |           | -0.012*** |           |
|                        |           | (-8.12)   |           |
| L.MPU                  |           |           | -0.044*** |
|                        |           |           | (-2.63)   |
| Constant               | 0.481***  | 0.426***  | 0.397***  |
|                        | (6.36)    | (5.66)    | (4.93)    |
| Firm controls          | YES       | YES       | YES       |
| Macroeconomic controls | YES       | YES       | YES       |
| Firm-fixed effect      | YES       | YES       | YES       |
| Observations           | 21,854    | 21,854    | 20,144    |
| $\mathbb{R}^2$         | 0.145     | 0.144     | 0.138     |

Table 8. Robustness test.

Note: The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

| Variables              | (1)       | (2)        | (3)       | (4)      | (5)       |
|------------------------|-----------|------------|-----------|----------|-----------|
| variables              | FA        | L.RETURNFA | FA        | L.COD    | FA        |
| L.MPU                  | -0.051*** | -0.094**   | -0.050*** | 2.476*** | -0.041**  |
|                        | (-3.05)   | (-2.40)    | (-2.99)   | (3.36)   | (-2.42)   |
| L.RETURNFA             |           |            | 0.011***  |          |           |
|                        |           |            | (2.95)    |          |           |
| L.COD                  |           |            |           |          | -0.001*** |
|                        |           |            |           |          | (-3.21)   |
| Constant               | 0.404***  | -0.197**   | 0.406***  | 3.901**  | 0.405***  |
|                        | (5.39)    | (-2.44)    | (5.42)    | (1.96)   | (5.22)    |
| Firm controls          | YES       | YES        | YES       | YES      | YES       |
| Macroeconomic controls | YES       | YES        | YES       | YES      | YES       |
| Firm-fixed effect      | YES       | YES        | YES       | YES      | YES       |
| Observations           | 21,854    | 21,854     | 21,854    | 20,491   | 20,491    |
| R <sup>2</sup>         | 0.141     | 0.050      | 0.142     | 0.037    | 0.137     |
|                        |           |            |           |          |           |

Table 9. Mechanism test of return on financial assets and debt financing cost.

Note: The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

is -0.094 and significant at the 5% level, indicating that MPU leads to a decrease in the firms' return on financial assets. Column (3) includes both MPU and return on financial assets. The coefficient of MPU is -0.050 and significant at the 1% level, implying that there is a mediating effect of return on financial assets between MPU and corporate financialization. In summary, the results suggest that MPU causes a decline in the return on financial assets and thus inhibits the level of subsequent corporate financialization.

Based on the research of Han (2017), firm's debt financing cost is equal to the sum of net capital expenditure and interest income divided by the sum of total debt. Columns (4) and (5) present the results for debt financing cost as a mediating variable. Column (4) includes one-period lagged debt financing cost as dependent variable. The coefficient of MPU is 2.476 and significant at the 1% level. This indicates that the rise of MPU will lead to an increase in firms' financing costs. From column (5), we can find that the coefficient of MPU and debt financing cost are -0.041 and -0.001 and are both statistically significant, indicating that there is also a mediating effect of debt financing cost. To sum up, based on the results of column (1), (4) and (5), the existence of mediating effect of financing cost is verified, that is, the MPU will increase the debt financing cost of enterprises, which will lead to the decline of the degree of corporate financialization in the future.

## 6.2. Analysis of Financial Asset Allocation with Different Motives

The motive of corporate financialization mainly includes the precautionary mo-

tive and the profit-seeking motive. The precautionary motive, also known as the "reservoir" motive, encourages enterprises to hold more highly liquid assets. The profit-seeking motive can be regarded as an alternative to real investment (Huang et al., 2022). Therefore, this paper divides financial assets into short-term and long-term two categories. Short-term financial assets are characterized by high liquidity and belong to the precautionary motivation of enterprises. The main purpose of long-term financial assets is to improve enterprise earnings. Such financial assets are regarded as an alternative to fixed asset investment and belong to the profit-seeking motive of enterprises. When the uncertainty of monetary policy increases, enterprises are likely to hold more highly liquid assets, which is reflected in the increase of the scale of short-term financial assets. At the same time, in order to reduce business risk, the holdings of long-term financial assets may decline.

This paper divides short-term financial assets (FASHORT) and long-term financial assets (FALONG) according to the motivation of enterprises to hold financial assets, in order to study whether MPU has different effects on financial assets held under different motives. Column (1) of **Table 10** shows that the coefficient of MPU is positive but insignificant, that is, the increase of MPU has no obvious impact on short-term financial assets, indicating that the change of MPU will not significantly affect the decision of enterprises to hold financial assets based on precautionary motivation. The MPU coefficient of column (2) is -4.749 and significant at the 1% level, indicating that when MPU rises, enterprises will reduce their holdings of long-term financial assets. The possible explanation is that in periods of high MPU, enterprises face greater risks, and long-term financial assets, such as investment real estate and long-term equity investment, are less liquid and unlikely to be used as assets in the "reservoir" of enterprises. On the other hand, as an alternative to real investment, or as an asset

| Variables —            | (1)     | (2)       |
|------------------------|---------|-----------|
|                        | FASHORT | FALONG    |
| L.MPU                  | 2.039   | -4.749*** |
|                        | (1.53)  | (-4.69)   |
| Constant               | 3.780   | 31.903*** |
|                        | (0.73)  | (6.15)    |
| Firm controls          | YES     | YES       |
| Macroeconomic controls | YES     | YES       |
| Firm-fixed effect      | YES     | YES       |
| Observations           | 21,854  | 21,854    |
| $\mathbb{R}^2$         | 0.148   | 0.046     |

Table 10. Impact of monetary policy uncertainty on financial assets of different terms.

Note: The signs of "\*, \*\*, \*\*\*" represent the significance of 10%, 5%, and 1%, respectively.

held by enterprises in pursuit of profits, when faced with high uncertainty, its return on assets may not reach the expectation, and enterprises' risk preference may decline, thus reducing their holdings of long-term financial assets.

## 7. Conclusion

This paper selects the annual data of non-financial listed companies in China from 2008 to 2020, by measuring the Chinese MPU index, we have studied the impact of the MPU on corporate financialization behaviors in China. The results show that the increase in MPU significantly inhibits firms from investing in financial assets. According to the nature of ownership, the financial background of senior managers, the dual positions and the level of regional bank competition, the sample is grouped into different subsamples. The results show that the above inhibitory effects are more significant among non-state enterprises and firms whose senior managers have worked in financial industry before. Also, the negative effect of MPU on corporate financialization is more significant if the listed companies are located in regions with a higher degree of bank competition. The results of mechanism test suggest that both the return on financial assets and the cost of debt financing play a mediating role between MPU and corporate financialization. An increase in MPU leads to a decrease in the rate of return on financial assets and an increase in the cost of debt financing, which discourages firms from investing in financial assets.

It is important to acknowledge that our study has several limitations. Firstly, although we have tested the impact of monetary policy uncertainty on corporate financialization, it is worth analyzing industry differences, different industries may have different degrees of sensitivity to monetary policy uncertainty, so it may be worth studying the impact of monetary policy uncertainty on corporate financialization in different industries. Secondly, there may be additional factors that have an impact on the relationship between monetary policy uncertainty and corporate financialization, such as the level of openness of the economy, stability of the financial system, and level of financial development. Future studies can consider these factors and explore their impact. Finally, psychological and behavioral factors, such as overconfidence and anchoring, may also play a role in the relationship between monetary policy uncertainty and corporate financialization. Future studies can incorporate these theories and explore their impact on the relationship between monetary and corporate financialization. Future studies can incorporate these theories and explore their impact on the relationship between monetary policy uncertainty and corporate financialization.

# **Conflicts of Interest**

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

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