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### **EFFECTS OF NATIONAL EASING MONETARY POLICY ON CHINESE ENTERPRISES' INVESTMENT**

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# Effects of National Easing Monetary Policy on Chinese Enterprises' Investment

Xing WANG<sup>1</sup>, Ximing SUN<sup>2</sup>

## Abstract

Enterprise investment is closely related to cost of capital, and cost of capital is affected by lending rate driven by national monetary policy. For instance, the retail interest rate (including deposit, loan interest rates) of a bank would rise during the practice of tight national monetary policy. Excessively high loan interest rate would reduce enterprises' investment due to increasing cost of capital. In this case, corporate investment behavior could be understood from national monetary policy. Taking listed companies publicly offered by Shanghai Stock Exchange and Taipei Exchange as the research samples, the open annual information from the database are acquired. Industry peculiarities, financial, securities, and insurance industries applicable to special accounting standards, as well as construction industry are excluded, and samples with incomplete or omitted data are deleted. The research results show that 1.the practice of easing policy in national monetary policy allows Chinese enterprises holding higher free cash flow, 2.Chinese enterprises with positive free cash flow appear higher investment behavior, and 3.the practice of easing policy in national monetary policy results in higher investment behavior of Chinese enterprises. According to the results, it is proposed to discuss the evaluation basis for impacts on industrial development during monetary policy. The results could assist policy makers in better understanding impacts of national monetary policy adjustment on enterprise investment effect as well as provide business managers for evaluating the effectiveness of national monetary policy.

*Keywords:* monetary policy; easing policy; free cash flow; Chinese enterprises.

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## Introduction

The US subprime mortgage crisis in 2007 induced credit crisis when global financial markets fell into fund liquidity stagnation. Although central banks of many countries invested huge amount of funds in financial markets, the financial crisis could not stop worsening. Such a storm started to lose control and resulted in bankruptcy of many large financial institutions or being taken over by the governments. Generally speaking, the economic stimulus policy promoted by governments of various countries mainly contained financial policy of expanding or cutting government spending to influence economic activity and national monetary policy to influence economic boom through interest rate adjustment and money supply control. During the outbreak of financial crisis, The Federal Reserve System reinforced the market capital flow with several times of cutting interest rate to result in federal fund rate approaching zero. Nonetheless, the economic condition in the USA was not improved and the credit market was continuously worsening. When the interest rate transmission mechanism in conventional national monetary policy did not work, “unconventional monetary policy” would be adopted. “Unconventional monetary policy” aimed to “revise market interest rate expectations” and “recover monetary policy transmission mechanism” and presented the features of (1) maintaining low interest rate, (2) injecting huge amount of monetary base, and (3) directly participating in long-term asset and credit markets. The US “quantitative easing monetary policy”, “QE policy” in short, conformed to above conditions.

Enterprise investment is closely related to cost of capital, and cost of capital is affected by lending rate driven by national monetary policy. For example, the retail interest rate (including deposit, loan interest rate) of banks would rise with the practice of national tight monetary policy. High loan interest rate would reduce enterprise investment due to increasing cost of capital. For this reason, corporate investment behavior could be understood by cutting in from national monetary policy. National monetary policy could affect market interest rate through interest rate channel, credit channel, exchange rate channel, and other asset price effects to further influence the output of economies. Interest rate would change an enterprise’s cost of capital to further influence the investment. Many past studies verified the significant effects of national monetary policy on company investment (Chiang, 2021). However, several research indicated that the degree of monetary policy transferring to the retail interest rate of banks was not complete, i.e. the adjustment of retail interest rate being different from official interest rate adjustment. As a result, the relationship between national monetary policy and company investment should be reviewed. This study discusses the effect of national monetary policy on Chinese enterprises’ investment, expecting to provide government decision makers with the evaluation basis of impacts on industrial development for making national monetary policy. The results do not simply assist policy makers in better understanding the impact of national monetary policy adjustment on enterprise

investment effect, but also provide business managers for evaluating national monetary policy effectiveness.

## Literature review

Kim & Rhee (2021) stated that the US easing monetary policy, through large asset purchase program transmission mechanism, prompted long- and short-term interest rate approaching zero to change the market expectation of inflation, encourage lending activity, enhance private investment, and excite economic activity. Meanwhile, it allowed the rise of asset price to support asset price, rising Tobin's Q, net asset value, household wealth, and increased value of bank collaterals to prompt consumption and investment. Furthermore, export was enhanced through depreciation of exchange rate to boost the economy. Husted *et al.* (2020) mentioned that national monetary policy would affect corporate investment behavior and free cash flow through monetary channel and credit channel. On one hand, currency situation adjustment would change banks' loan willingness and enterprises' financing environment. On the other hand, it would influence the employment and output growth of the society to change market demand and investment opportunity encountered in enterprise management. Apparently, the transmission of monetary policy revealed close relationship with enterprises' financial decisions. Caldara & Iacoviello (2022) indicated that, along with the development of interest rate liberalization, enterprises would increase the sensitivity to investment and cash flow step by step, and tight monetary policy, through general credit channel, would enlarge such an effect. They also indicated that the development of interest rate liberalization did not appear large effects on the sensitivity to investment cash flow for state-owned enterprises.

Lakdawala *et al.* (2021), in the free cash flow hypothesis, considered that the manager of a company with more free cash flow would have motivation for excessive investment behavior to worsen agency problem. Sekandary & Bask (2023), in the "agency theory", indicated that, under the separation of business ownership and management right, agency problem would appear in between a professional manager and shareholders; besides, when a company financed abroad, agency problem also existed in between the company and creditors. Bhattarai *et al.* (2020) proposed the positive correlations between free cash flow and overinvestment of a company as well as overinvestment concentrating on a company with high free cash flow. Chiang (2021) pointed out positive effects of a company's cash holding on the value, either in Taiwan or the USA. In other words, a company, in order to ensure the profitable investment opportunities, would have adequate funds for support to further enhance the company value. Taylor (2021) indicated that the quantitative easing policy promoted in the USA indeed would induce the US funds flowing toward emerging markets (e.g. Taiwan) and result in the stock market changes. Wang *et al.* (2022) proposed that, in the prosperity, credit

investigators, due to memory, would worsen the credit capability and forget the previous failure; on the contrary, the failure lessons in the depression would have credit investigators more strictly inspect the lenders' conditions. Ludvigson *et al.* (2021) explained that the liquidity of an enterprise presented certain degree of effects on enterprise investment; accordingly, "financing restrictions" was one of important factors in enterprise investment.

Luo & Zhang (2020) discussed the effect of national monetary policy on different types of Italian enterprises' investment behavior with the tracking data of Company Accounts Data Service (Centrale dei Bilanci), aiming to find out the monetary policy shift mechanism situation through the balance sheet data. The research results showed effects of cost of capital, cash flow, and sale on Italian enterprises' investment, and larger effects of national monetary policy on small businesses or enterprises with large asset proportion. The decision differences in investment among different types of enterprises could not be neglected; therefore, it was important to grasp the financial position of different types of enterprises in order to evaluate the entire effect of monetary policy. Aiming at the effects of interest rate and credit channel on German manufacturers' fixed investment, Smales (2021) studied national monetary policy shift mechanism and discovered that nominal interest rate increasing 100 units would result in investment demand decreasing 4% in the first year. Direct measurement of credit worthiness could also provide evidence for balance sheet channel. An enterprise with more financial constraints showed higher sensitivity to internal funds but decreasing sensitivity to cost of capital and market demand. Moreover, the effect of an enterprise's credit rating on investment demand was consistent with balance sheet channel; however, such a balance sheet channel was a secondary channel. Cloyne *et al.* (2023) discussed the effect of national monetary policy changes on corporate investment behavior and discovered that changes in interest rate affected users' cost of capital in four countries and further influenced investment, with significant proof economically and statistically. Furthermore, the average liability lending interest rate of small-scale enterprises was generally higher than it of large-scale enterprises, revealing comparatively remarkable effect of national monetary policy changes on small-scale enterprises. Javaheri *et al.* (2022), aiming at finding out the effect of national monetary policy transmission mechanism channel on investment expenditure, revealed effective effects of national monetary policy transmission mechanism channel on investment expenditure and heterogeneous monetary policy effect among sub-departments in Malaysian economies. For a long period, the effect on consumer products & service department was notable, while it did not appear much significance on industrial products & asset department. Such heterogeneity revealed three explanations. In specific departments, the sensitivity of product demand to interest rate changed with product durability & cycle; industries with relatively concentrated capitals were sensitive to capital changes, and interest rate changes would affect investment; and, the effect of national monetary policy was influenced by the openness of industry. For instance, tight national monetary policy

to appreciate exchange rate in export-oriented industries reduced department competitiveness, caused decreasing external demands, and eventually tightened investment expenditure of the company.

Summing up above literatures, free cash flow and investment decisions are easily affected by national monetary policy; companies with high industrial competition and high growth opportunity would ensure the source of funds to avoid missing investment opportunities; and, the cash held presents positive effects on the company value. It is considered in this study that cash flow could present a company's true financial position and is an important variable for investment decisions. The following hypotheses are therefore proposed in this study.

H1: The practice of easing policy in national monetary policy allows Chinese enterprises having higher free cash flow.

H2: Chinese enterprises with positive free cash flow appear higher investment behavior.

H3: The practice of easing policy in national monetary policy results in higher investment behavior of Chinese enterprises.

## Methodology

### *Operational definition of variable*

- (1) *National easing monetary policy.* According to Chiang (2021), monetary aggregates (M2) and foreign exchange reserves are regarded as the macroeconomic indices to affect money supply of economies in this study.
- (2) *Free cash flow.* According to Lee & Lee (2023), the data in the cash flow scale are directly used for measuring free cash flow to eliminate the noise in the combination of balance sheet and income statement. Cash receipts of land, house, and equipment selling being deducted from total R&D expenditure, capital expenditure, and acquisition expenditure is defined. Regarding R&D expenditure, a company is requested by financial accounting standards to make R&D expenses, but financial economists generally regard research and development as discretionary investment expenditure. Existing measures result in the amount of R&D expenditure being deducted from cash flow in business activity and are not able to truly express the cash flow created from the business that R&D expenditure is added to the cash flow in business activity.
- (3) *Corporate investment behavior.* According to Su & Liu (2021), Tobin's Q investment prediction model is used for analyzing factors in investment behavior.

*Research sample*

Samples for this study are selected as below: (1) Listed companies publicly offered in Shanghai Stock Exchange and Taipei Exchange; (2) Open annual information of companies in the database; (3) Industry peculiarities, financial, securities, and insurance industries applicable to special accounting standards, as well as construction industry are excluded; (4) Samples with incomplete or omitted data are deleted.

*Analysis method*


Regression analysis is applied to understand the relations among national easing monetary policy, free cash flow, and corporate investment behavior.

**Results and discussion**

*Regression analysis of national easing monetary policy and free cash flow*

Regression analysis is applied in this study to test hypotheses and theoretical structure. The first regression tests the effect of national easing monetary policy on free cash flow. The analysis results reveal positive effects of monetary aggregates and foreign exchange reserves on free cash flow (Beta=0.223, p=0.000; Beta=0.217, p=0.000) (Table 1). Hypothesis 1 is therefore supported.

*Table 1. Regression analysis of national easing monetary policy and free cash flow*

Dependent Independent 	Free cash flow	
	Beta	P
national easing monetary policy		
monetary aggregates	0.223	0.000***
foreign exchange reserves	0.217	0.000***
F	31.526	
R <sup>2</sup>	0.283	
adjusted R <sup>2</sup>	0.274	
***p < 0.001		

*Data source: self-organized in this study*

*Regression analysis of free cash flow and corporate investment behavior*

Regression analysis is utilized in this study for testing hypotheses and theoretical structure. The first regression tests the effect of free cash flow on corporate investment behavior. The analysis results show positive effects of free cash flow on corporate investment behavior (Beta=0.245, p=0.000) (Table 2) that hypothesis 2 is supported.

*Table 2. Regression analysis of free cash flow and corporate investment behavior*

Dependent → Independent ↓	corporate investment behavior	
	Tobin's Q	
	Beta	P
free cash flow	0.245	0.000***
F	46.238	
R <sup>2</sup>	0.362	
adjusted R <sup>2</sup>	0.347	
***p < 0.001		

*Data source: self-organized in this study*

*Regression analysis of national easing monetary policy and corporate investment behavior*

Using regression analysis for testing hypotheses and theoretical structure in this study, the first regression tests the effect of national easing monetary policy on corporate investment behavior. The analysis result reveals positive effects of monetary aggregates and foreign exchange reserves on corporate investment behavior (Beta=0.258, p=0.000; Beta=0.241, p=0.000) (Table 3). Accordingly, hypothesis 3 is supported.



Table 3. Regression analysis of national easing monetary policy and corporate investment behavior

Dependent Independent	Corporate investment behavior	
	Tobin's Q	
	Beta	P
monetary aggregates	0.258	0.000***
foreign exchange reserves	0.241	0.000***
F	53.756	
R <sup>2</sup>	0.423	
adjusted R <sup>2</sup>	0.392	
***p < 0.001		

Data source: self-organized in this study

### Conclusion

A company with negative free cash flow, in consideration of enterprise liquidity and financing restrictions, would reduce investment. A company short of free cash flow, under the depression, might appear underinvestment. The practice of national easing monetary policy expects loose market capital that it could revise the global depression and the prediction trend in the period. In this case, national easing monetary policy could slow down the underinvestment problem of a company with short free cash flow. With the practice of easing policy in national monetary policy, Chinese enterprises therefore hold higher free cash flow. A company with positive free cash flow, on the other hand, would invest more prudently, considering the increase of risks in economic recession. Consequently, Chinese enterprises with less free cash flow would appear more overinvestment than those with higher free cash flow. Nevertheless, national easing monetary policy prompts Chinese enterprises with higher free cash flow to engage in reverse decisions and enhance investment willingness under worse economic environment. In this case,

the practice of national easing monetary policy slows down the overinvestment situation of companies with less free cash flow.

### *Recommendations*

National easing monetary policy increases the liquidity supply in the monetary market and relatively results in funds flowing to economies. Monetary policy promoted by governments in various countries would present distinct results, due to selected tools or objectives. Exchange rate is double edged, while national monetary policy also shows the same effect. Both enterprises and individuals expect to live and work in peace and contentment as well as a prosperous country. Government agencies, when making relevant monetary policies in the future, should more carefully considered all possible effects for people's welfare. National easing monetary policy might appear short-term stimulation on domestic economy; however, unconventional easing monetary policy is not suitable for single and long-term execution. It must match proper financial policies to develop the maximal effect and boost low economic conditions. To cope with distinct international financial markets, the combination of currency and asset in foreign exchange reserves should be more flexibly adjusted to strengthen the independence of national monetary policy and increase the space for policy execution.

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