

Research on the Impact of Listed Companies' Financialization on Innovation Investment

Zhao Yang

Xidian University, xi 'an 710126, China

Abstract: *With the development of the market economy and financial reform, the financialization of real enterprises has become a common phenomenon, which has attracted widespread attention from scholars at home and abroad. This article selects listed companies on GEM from 2014 to 2018 as the research object, and uses panel data and fixed-effect models to conduct empirical analysis to test whether the financialization of listed companies has a significant impact on innovation investment. The empirical results show that both the current financialization and the lagging financialization of the company have a significant inhibitory effect on innovation investment, that is, the financialization of listed companies is significantly negatively related to innovation investment.*

Keywords: corporate financialization; innovation input

1. Introduction

In recent years, with the continuous development of China's economy and the support of national and local government policies, the financial industry and real estate industry have entered a rapid development path. Financial companies and real estate companies have blossomed everywhere. Their rapid returns and high profits have attracted A large number of investors entered. Data show that 2008-2018 is a golden decade for the development of the financial industry and the real estate industry. The added value of the financial industry in the tertiary industry increased from more than 1.8 trillion yuan in 2008 to nearly 7 trillion yuan, and the tertiary industry's real estate industry increased. The value increased from nearly 1.5 trillion to nearly 6 trillion yuan. At the same time, other domestic industries have developed rapidly under the favorable economic environment and market policies. China has become the second largest economy in the world, its economic strength has been significantly enhanced, the market economy system has been continuously improved, and its overall competitiveness has been significantly improved. .

On the other hand, with the continuous increase of business operating costs, including the substantial increase in land costs, raw material costs, labor costs, overcapacity of enterprises, and slow technological breakthroughs, the profit growth of a large number of physical enterprises has slowed down, and business operation and development are facing large pressure. In this context, many physical enterprises have expanded their business scope to the financial industry and real estate industry, seeking high and rapid returns to improve their operating performance. It is undeniable that companies can obtain considerable benefits in the short term by investing in financialization, but this chase of hot money by enterprises will also affect their investment in innovation and research and development. Because innovation is a key factor for an enterprise to maintain its core competitiveness, only by continuously increasing investment in innovation and research and development of new products and technologies can it maintain its own competitiveness and expand its market share. The investment in innovation and

research and development requires enterprises to continue to invest a certain amount of funds. Therefore, the excessive financialization of enterprises inevitably crowds up the funds invested by enterprises in innovation R & D, especially some enterprises with slow innovation achievements and short-term short-term benefits. In summary, on the basis of existing related research, this article explores the impact of corporate financialization on innovation input, which is of great significance for companies to balance financial investment and innovation research and development investment.

2. Literature Review and Research Hypotheses

The financialization of enterprises originates from financialization. At present, there is no clear conception of the financialization of enterprises in academic circles. Krippner (2011) believes that corporate financialization refers to the tendency of financial investment or institutional investment to have a controlling effect on enterprises during their business operations [1]. Cai Mingrong (2014) proposed that the definition of corporate financialization can be elaborated from two aspects: in terms of investment behavior motivation, the company invests funds in the investment field in the capital operation behavior, not the traditional production and operation activities; in terms of the source of corporate profits, A large amount of surplus comes from the capital investment income of enterprises rather than the traditional production and trade income [2]. It can be concluded that the core of the concept of corporate financialization is that the company applies a large amount of funds to the hot money investment field, rather than the traditional manufacturing industry. This financialization operation can bring considerable benefits to the enterprise.

At present, there is a certain research basis for the relationship between corporate financialization and technological innovation at home and abroad. Zhang Zhao (2018) research found that corporate financialization does have a crowding-out effect on industrial investment [3]. Lazonick (2010) and Davis (2013) researched the relationship between corporate financialization and fixed

asset investment based on US entity data, and found that corporate financialization would take up investment in fixed assets [4] [5]. Xie Jiazhi and Wang Wentao (2014) used the data of Chinese manufacturing listed companies and adopted system GMM and other technologies. The empirical results found that excessive financialization of manufacturing enterprises significantly inhibited their technological innovation and innovation capabilities [6]. Jin Shengwu (2017) used Shanghai and Shenzhen A-share listed companies as a research sample, and concluded that there is a negative correlation between corporate financialization and R & D investment, and executives' equity incentives can improve this relationship [7]. Wang Hongjian (2017) used the market arbitrage framework to empirically study whether corporate financialization has a significant impact on corporate innovation. It was found that the financialization of physical enterprises as a whole inhibited corporate technological innovation, but there was an inflection point in the impact of this crowded-out technological innovation. When the proportion of financialization of physical enterprises exceeds 23%, the financialization of enterprises will instead promote technological innovation of enterprises [8]. Guo Liting (2018) Based on the data of Chinese manufacturing listed companies, empirical tests found that the financialization of manufacturing companies significantly inhibited technological innovation by enterprises, but was affected by corporate financing constraints [9]. Yang Songling (2019) analyzes the intertemporal impact of the financialization of physical enterprises on R & D investment based on the theory of preventive savings. The research results show that the financialization of physical enterprises and R & D investment are negatively correlated in the current period, but are significantly positively correlated in the lag period [10]. At the same time, some scholars have found that corporate financialization has also promoted technological innovation. Alessandra (2008) proposed that enterprises can bring more investment income to enterprises through financial investment, which has alleviated financing

constraints to a certain extent and provided higher retained earnings, which in turn has a positive impact on enterprises' investment in innovation and research and development. [11]. James (2010) and Agnieszka (2013) believe that corporate financialization is a source for companies to obtain a large amount of funds, which can improve the efficiency of corporate investment and also promote corporate R & D investment [12] [13].

To sum up, there is no clear and uniform conclusion on the research of corporate financialization on innovation investment. Based on the existing literature research, this article further studies the impact of financialization of GEM listed companies on corporate innovation investment, selects companies with higher innovation motivation and level as the research carrier, and considers the time lag of financialization. Meaning of innovation. So this article proposes the following research hypotheses:

- H1: There is a negative correlation between corporate financialization and innovation input.
- H2: Lagging corporate financialization has a negative correlation with innovation investment.

3. Research Design

3.1 Sample selection and data source

This article selects GEM listed companies as the research object, removes incomplete financial data and financial companies, excludes ST and * ST companies, and finally selects 227 GEM companies for empirical analysis. The company's relevant financial data is mainly obtained through the wind database, and the empirical analysis is completed using software such as Eviews.

3.2 Variable Design and Model Construction

The variable design in this article is shown in the table:

Dependent variable	Explanatory variable	Definition	control variable	Definition
RD (expenditure / Total operating income)	FN (Measure the degree of financialization)	(net investment real estate + transactional financial assets + available-for-sale financial assets + loans and advances) / total assets	CR	cash ratio
			BS	asset-liability ratio
			OCF	Operating Cash Flow / Operating Income
			ROA	return on assets

According to the existing research literature, RD represents the innovation input level of the company as the explanatory variable, which is obtained by the ratio of the company's annual R & D expenditure to that year's operating income. There are many indicators for the measurement of corporate financialization. This paper uses the methods of Demir (2009) and domestic researchers to measure the level of corporate financialization by the proportion of total assets occupied by financial assets [14], that is, corporate financialization FN equals financiality. Total assets / total assets. Among them, financial assets are equal to the sum of investment real estate, transactional financial assets, available-for-sale financial assets, loans and advances. Finally, reference is made to the literature that affects the

level of research and development investment of enterprises, using cash ratio (CR), asset-liability ratio (BS), operating cash flow ratio (OCF), and return on assets (ROA) as control variables. Based on the previous research assumptions and variable design, the following empirical model is established:

$$\begin{aligned}
 & \text{H1:} \\
 & RD_{i,t} = \beta_0 + \beta_1 FN_{i,t} + \beta_2 CR_{i,t} + \beta_3 BS_{i,t} + \beta_4 OCF_{i,t} + \beta_5 ROA_{i,t} + \epsilon_{i,t} \\
 & \text{H2:} \\
 & RD_{i,t} = \beta_0 + \beta_1 FN_{i,t-1} + \beta_2 CR_{i,t} + \beta_3 BS_{i,t} + \beta_4 OCF_{i,t} + \beta_5 ROA_{i,t} + \epsilon_{i,t}
 \end{aligned}$$

Model 1 is used to test the impact of the current financialization of enterprises on innovation investment, and Model 2 is used to test the impact of lagging financialization of enterprises on innovation investment.

4. Empirical Analysis

4.1 Descriptive Statistics

Table 2 is the descriptive statistics of the relevant variables in this article. From the perspective of corporate innovation investment level, the average RD has reached above 7.5, which is significantly higher than the industry average, which indicates that GEM listed companies have a higher level of innovation research and development investment. The average FN is approximately 3.4, with a median of 1.4964, indicating that the average allocation of financial assets of listed companies in this sample has reached 3.4%, and the maximum FN value is 47.31, which reflects the higher financialization of enterprises in some innovative enterprises. s level.

Table 2: Descriptive statistics of main variables (percentage)

	RD?	FN?	BS?	OCF?	CR?	ROA?
Mean	7.543941	3.38767	33.50864	7.440681	1.561039	5.678567
Median	5.11	1.4964	30.9268	8.0616	0.7276	6.2264
Maximum	72.75	47.3195	141.2498	386.0932	70.41	42.0042
Minimum	0.06	0.0007	1.399	-744.06	0.0026	-66.5826
Std. Dev.	7.077248	4.7652	18.34116	33.92184	3.149618	9.197077

4.2 Relevant inspection

Before performing regression on the model in this paper, first perform a unit root test on the relevant variables to verify whether there is a unit root in the variable sequence, so that the regression avoids false regression errors. According to the unit root test results on the related variables, it is shown that the absence of unit roots in the sequence has good stationarity. RD unit root test:

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-36.2870	0.0000	227	908
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-11.6109	0.0000	227	908
ADF - Fisher Chi-square	637.794	0.0000	227	908
PP - Fisher Chi-square	772.784	0.0000	227	908

FN unit root test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-244.158	0.0000	227	908
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-27.4141	0.0000	227	908
ADF - Fisher Chi-square	690.384	0.0000	227	908
PP - Fisher Chi-square	806.901	0.0000	227	908

Hausmann test:

Firstly, the model is subjected to random effect regression, and then Hausman test is performed. From the test results, it can be concluded that the p value is 0, and the null hypothesis is rejected. Therefore, the model regression should be based on individual fixed effect models.

Model 1 test results:

Correlated Random Effects - Hausman Test			
Pool: POOL01			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	33.759499	5	0.0000

Model 2 test results

Correlated Random Effects - Hausman Test			
Pool: POOL01			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	28.120893	5	0.0000

4.3 Model regression results and analysis

	Model1	Model2
C	0.0000 (19.22)	0.0000(17.38)
FN _{i,t}	0.0900(-1.69)	
FN _{i,t-1}		0.0017(-3.15)
CR	0.0000(7.20)	0.6248(-0.48)
OCF	0.0000(-5.04)	0.0000(-5.56)
BS	0.0028(-2.99)	0.0019(-3.11)
ROA	0.0000(-5.37)	0.0000(-4.95)
Adjusted R ²	0.79	0.82
F	20.36	18.91

From the regression analysis results of the model in the table above, we can conclude that the regression results of Model 1 show that the current financialization of enterprises has a negative impact on innovation investment and is established at a significance level of 10%, indicating that the more financial The higher the company's level of entrepreneurial investment, the hypothesis 1 holds. Model 2 results show that the lagging stage of financialization also has a negative impact on innovation input and is established at a significance level of 1%, indicating that the higher the degree of financialization of lagging companies, the more inhibited the company's innovation investment, so hypothesis 2 holds. . In summary, regardless of the current period or the lag period, the financialization of enterprises will have a significant impact on innovation investment, and this effect will become more significant as the years go by.

5. Conclusion and Inspiration

Corporate financialization is the trend of market economics and financial innovation. It can play an important role in asset allocation, risk management, profitability, etc. Corporate financialization is a manifestation of the virtual economy and an effective way for companies to pursue rapid benefits and improve profitability. The development of the virtual economy itself is to develop the real economy, and the two complement each other. Therefore, the

financialization of enterprises can also serve as a reservoir and working capital pool of funds, providing funding for investment and development of enterprises during times of financial strain and financial crisis. However, on the other hand, if the company occupies its own funds for innovation investment and pursues short-term benefits and hot money effects, then the company will lose its competitive advantage in the future development and be gradually eliminated by the market. This kind of deconstruction is not worth the gain. Therefore, this paper uses data from GEM non-financial listed companies from 2014 to 2018 to empirically test the impact of corporate financialization on innovation investment, considering not only the current level of impact, but also the lagging level of impact. The results show that both current and late financialization of enterprises are significantly negatively related to innovation investment, and this effect increases with longer maturity.

The research conclusions of this article have strong practical significance for enterprises, especially innovative ones. From the perspective of the enterprise itself, corporate financialization does have certain benefits for the enterprise, and this benefit has the characteristics of low cost and short cycle. However, the enterprise must also clearly realize that the development of the enterprise should focus on the future, and it should make full use of resources for its own business development and improve its core competitiveness and innovation ability. The empirical research results in this paper show that the higher the financialization of enterprises, the lower the innovation investment. Therefore, non-financial enterprises, especially innovative ones, should fully realize that corporate financialization is not harmless. It is necessary to adjust the level of corporate financialization, rationally allocate the proportion of financial assets, define the strategic position of the enterprise, and use resources. In improving their level of innovation.

From a macro perspective, the financialization of enterprises is an inevitable trend in the development of market economy and financial reform and innovation. For the real economy, corporate financialization is conducive to improving profitability, getting rid of financing constraints and optimizing asset allocation. The financialization of low-cost and high-yield has attracted many physical enterprises, and even put the company's main business in the financial and real estate industries, which has caused a certain situation in the country to deviate from reality. However, the current domestic financial system and regulatory policies are not perfect, and hot money industries such as the financial industry and real estate have higher risks. Once a crisis occurs, the real economy will be severely hit. Therefore, from a macro perspective, on the one hand, the government and regulatory authorities should reasonably and effectively guide enterprises in the allocation of financial assets, formulate a sound and reasonable regulatory policy, and prevent systemic risks; on the other hand, the government should increase the innovation of physical enterprises, especially The strength of policy support and capital subsidies of large enterprises encourages

enterprises to invest in innovation and research and improve their own hard power.

References

- [1] Krippner, G. R. .. Capitalizing on Crisis. Harvard University Press, 2011.
- [2] Cai Mingrong, Ren Shichi. Corporate Finance: A Review of Research [J] Science in Finance and Economics, 2014 (7).
- [3] Zhang Zhao, Zhu Junxuan, Li Anyu. The financialization of enterprises has reduced investment efficiency [J] .Financial Economics Research, 2018, 33 (01).
- [4] LAZONICK W. Innovative business models and varieties of capitalism: financialization of the US corporation [J] .Business History Review, 2010,84 (04): 675-702
- [5] DAVIS L E. Financialization and the nonfinancial corporation: an investigation of firm level investment behavior in the U.S. 1971-2011 [J]. Umass Amherst Economics Working Papers, 2013, 86 (276): 178-184
- [6] Xie Jiazhi, Wang Wentao, Jiang Yuan. Financialization of Manufacturing, Government Control and Technological Innovation. Economic Economics, 2014, (11): 78-88.
- [7] Jin Shengwu, He Shanshan. Corporate financialization, executive equity incentives and R & D investment. Science and Technology Progress and Policy, 2017, 34 (22): 78-84.
- [8] Wang Hongjian, Cao Yuqiang, Yang Qing, etc. The financialization of physical enterprises promotes or inhibits corporate innovation: an empirical study based on listed companies in Chinese manufacturing. Nankai Management Review, 2017, 20 (1): 155-166
- [9] Guo Liting. Corporate Financialization, Financing Constraints and Innovation Investment: Based on the Empirical Study of Chinese Manufacturing Listed Companies [J]. Finance and Economy, 2018 (05): 57-62.
- [10] Yang Songling, Niu Dengyun, Liu Tingli, Wang Zhihua. Financialization of Real Enterprises, Analyst Attention and Internal Innovation Driving Forces [J]. Management Science, 2019, 32 (02): 3-18.
- [11] Alessandra B. Financial Integration, Productivity and Capital Accumulation [J]. Journal of International Economics, 2008, 76 (2): 337 ~ 355.
- [12] James B A. Does Foreign Aid Promote Growth? Exploring the role of Financial liberalization [J] .Review of Development Economics, 2010, 14 (2): 197 ~ 212.
- [13] Agnieszka G. Growth, Productivity and Capital Accumulation: the Effects of Financial liberalization in the Case of European Integration, International [J]. Review of Economics & Finance, 2013, 25: 291 ~ 309.
- [14] Demir, F. (2009), "Financial liberalization, private investment and portfolio choice: Financialization of real sectors in emerging markets", Journal of Development Economics 88 (2): 314-324