

# Research on the Coupling of Financial Technology to Green Venture Capital Driving and the Development of Two Systems

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**Abstract:** In view of the drive of financial technology to green venture capital and the coupling of the development of the two systems, first, based on the data of 31 provinces (cities) in China from 2014 to 2019, a fixed effect panel data model is built to empirically analyze the relationship between financial technology and green venture capital, and then a coordination model of the coupling degree of the two systems is built to analyze from a macro perspective. The results show that the advantages of financial science and technology are consistent with the bottleneck of green venture capital. The development of green policy, education level and innovation atmosphere will help to provide a good environment for the development of green venture capital; Industrial development has crowding out effect on green venture capital; China's financial technology and green venture capital have been in an antagonistic coupling state for a long time, and the long-term lagging development of financial technology is an important factor restricting the improvement of the coupling degree of the two systems; The coupling degree of the three regions and two systems in China is increasing year by year, but the coupling degree difference between regions is increasing. Therefore, it is proposed to optimize the development environment of green venture capital from various aspects, improve the development level of financial science and technology in a multi-pronged manner, and promote the coordinated and high-quality development of the two systems.

**Keywords:** Financial technology; Green venture capital; System coupling; Fixed effect; Panel Data.

## 1. Introduction

Since the reform and opening up, China's industrialization and urbanization have been continuously promoted, and at the same time, serious environmental problems have been brought. The report of the 19th National Congress of the CPC pointed out that we should unswervingly implement the new development concept of "innovation, coordination, green, openness and sharing". The Party's Report to the 20th CPC National Congress pointed out that promoting green and low-carbon economic and social development is the key to achieving high-quality development. In response to the government's call for green development and low-carbon economy, more and more enterprises in our country are gradually committed to the green industry. However, the huge capital of the green industry is far from enough depending on the government's capital supply. At the same time, due to the lagging development of our financial system, the current financial system in our country lacks adequate preparation for the development of the green financial industry (Wang Jianfa, 2020), and the government's green policies and regulatory policies are not perfect, which have not had a significant positive impact on the efficiency of green financial allocation (Wang Fengrong et al., 2018).

At the same time, with the development of science and technology, technological innovation has had a huge impact on people's lives. Against this background, science and technology has been enabled in the financial industry, and financial technology has emerged. Green finance has been fully enabled by easing information asymmetry, increasing the supply and innovation of green financial products, improving the level of green financial services, and

innovating regulatory instruments (Huang Zhuo et al., 2022), reshaping the modern financial system in terms of value mobility, value storage, value exchange, value creation and value management (Liu Zhiyang et al., 2022).

Compared with previous studies, the possible contributions of this paper are as follows: First, the research object is specific and meticulous to green venture capital. Green finance includes green VC, green credit, green securities, green insurance, green stocks, green funds, etc. At present, domestic research is lack of specific research on a certain field in the green financial system, such as green risk investment, and few researchers pay attention to the green attribute of financial technology. Taking the panel data of several provinces, cities and autonomous regions in China as the research object, this paper innovatively studies the driving force of financial technology on green venture capital and the coupling of the development of the two systems. In this sense, this paper provides a new idea for the research of financial technology on green finance. Second, the selection of indicators is comprehensive. This paper constructs a measurement system of variables such as green policy, education level, carbon emission intensity and innovation atmosphere, and comprehensively analyzes the impact of financial science and technology on green risk investment from various aspects. Third, the research of coupling degree. This paper uses the panel data of each province from 2014 to 2019 to introduce time-series three-dimensional data factor analysis to construct a financial science and technology-green venture capital coupling model, and makes research separately from the time and space, while the factor analysis method in similar research is often constructed with non-time-series index system.

## 2. Literature review

The research on financial technology and green venture capital at home and abroad mainly focuses on the development of green finance driven by financial technology and direct research on "green financial technology". With the increasing attention paid by scholars to both, their research mainly focuses on the following aspects:

First, research on the coupling between financial technology and green finance. For example, Hu every (2020) selects the data of 31 provinces, cities and autonomous regions in the country from 2014 to 2019 to analyze, and uses fixed effect model to empirically study the driving effect of block chain on green finance; Zhu Jiaming et al (2020) calculated the coupling degree between financial agglomeration and ecological efficiency and the coupling coordination degree after optimization based on the coefficient of variation method, and found that the coupling coordination degree of the two systems is continuously increasing; Cristina Chueca Vergara et al. (2021) analyzed the relationship between financial technology and sustainability through literature review and case study, and concluded that financial technology can make financial business more sustainable by promoting green finance; Haitham Nobanee et al. (2022) pointed out that the mining of Bitcoin consumes electricity, and if a large amount of electricity is derived from fossil fuels, it would run counter to the goal of financial technology to drive green financial development; Zhu Jiaming et al (2020) drew a conclusion that the degree of imbalance between economic society and ecological environment in China from 2013 to 2017 has an increasing trend by constructing a coupling and coordination degree model between economic society and ecological environment.

Second, the research on the driving factors of green venture capital. For example, Tao Cen et al (2018) took Ant Financial Services as an example to explain the promotion role of financial technology in inclusive green investment; Robyn Owen et al. (2018) et al. found that government policies play a key role in solving the financing gap of long-term low-carbon investment demand and encouraging green investment; Li Lingyu (2020) points out the significance of policy orientation and cultural atmosphere to green investment by constructing the theoretical framework of corporate green investment driving mechanism and realization path.

## 3. Empirical model construction

### 3.1. Model setting

In order to analyze the country-wide financial technology driving green venture capital and the coupling between the two systems, this paper uses the provincial panel data from 2014 to 2019 after referring to several papers. As the selected data conform to the characteristics of panel data, this paper selects the two-way fixed effect regression model for empirical analysis. The basic model is set as follows:

$$\ln VC_{it} = \alpha + \beta \ln FIN_{it} + \gamma_0 PC_{it} + \gamma_1 EU_{it} + \gamma_2 \ln IN_{it} + \mu_{it} \quad (1)$$

Among them,  $i$  represents the sample province and city,  $t$  represents the year, and  $\alpha$ ,  $\beta$ ,  $\gamma_i$  are the parameters to be estimated.  $\ln VE_{it}$ ,  $\ln FIN_{it}$  and  $\ln EU_{it}$  represent the logarithmic value of each variable.

### 3.2. Variable Selection and Data Description

(1) Interpreted variable

Green venture capital (VC). This paper refers to Jiang Hongli et al. (2020) to define green venture capital as venture capital invested in new energy, new materials and environmental protection industries, which is referred to as green venture capital. The data is from the private equity database in ZeroIPO Group. The venture capital of the above three industries will be matched to each province based on the registered places of the invested enterprises by year, and the green venture capital data for 2014-2019 will be obtained. For the data of missing years, multiple interpolation method is used for interpolation.

(2) Core explanatory variables

Financial Technology Level (FIN). This paper uses the year-end number of the A-share financial technology industry's stock return index from 2014 to 2019 as the proxy variable with reference to Hu Ying (2020).

(3) Control variables

① Green Financial Policy (PC). According to the 2014-2019 China Statistical Yearbook, the provinces' Statistical Yearbook, the China Insurance Yearbook and the constructed evaluation system, the entropy method is used to measure the green financial policy.

② Education level (EU). According to the Demographic and Employment Statistics Yearbook 2014-2019, the proportion of higher education population is used as the proxy variable.

③ Innovation atmosphere (IN). Referring to Zhang Jiuse et al. (2021), the patent application volume of each province from 2014 to 2019 is adopted as the proxy variable of innovation atmosphere.

④ Carbon emission intensity (EP). Carbon emissions are used for measurement, but there is no uniform measurement method at present. In this paper, the annual carbon dioxide emissions of each province are calculated with reference to the default carbon dioxide emission coefficients of 8 types of fossil fuels and the energy fossil fuel consumption of each province respectively provided in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the China Energy Statistics Yearbook. The specific calculation formula is shown in Equation (2), and then the carbon emissions of each province (city) in the country are calculated based on the relevant data of China from 2000 to 2017.

$$C_{CO_2} = k \sum_{i=1}^n E_i \delta_i \quad (2)$$

Among them,  $C_{CO_2}$  represents carbon dioxide emissions;  $k(k = 44/12)$  is that weight ratio of carbon dioxide to carbon molecule;  $E_i$  is the consumption of class  $i$  fossil fuels;  $\delta_i$  is the emission coefficient of class  $i$  fossil fuels.

## 4. Analysis of empirical results

### 4.1. Empirical Analysis Based on Provincial Panel Data

Descriptive statistics are made for each variable, see Table 1 for details.

**Table 1.** Descriptive statistic

Index	Obs	Avg	Max	Min	SD
$\ln VC_{it}$	186	5.671	9.456	1.099	1.755
$\ln FIN_{it}$	186	7.851	8.593	7.747	0.156
$PC_{it}$	186	0.213	0.793	0.081	0.121
$EU_{it}$	186	0.152	0.505	0.068	0.079
$\ln IN_{it}$	186	8.527	10.987	4.663	1.367

This paper selects the data of 31 provinces, cities and

autonomous regions from 2014 to 2019, so there are 186 observations. The interpreted variable in  $InVC_{it}$  it has an average value of 5.671 and a standard deviation of 1.755; The explanatory variable in  $InFIN_{it}$  it has an average value of 7.851 and a standard deviation of 0.156.

The difference between the minimum value and the maximum value of the explained variable is large, and the standard deviation is large, which indicates that the development of green venture capital in different regions of our country is unbalanced, and the green venture capital in developed regions is much higher than that in underdeveloped regions. The difference between the minimum value and the maximum value of explanatory variables is small, and the standard deviation is small, which indicates that due to the development of financial science and technology in China has just started, the regional differences are not very large.

**Table 2.** Regression results

$InFIN_{it}$	$PC_{it}$	$EU_{it}$	$InIN_{it}$	$_{-CO}$ $ns$	$N$
0.419*	1.570*	0.484*	2.087*	-5.296	15
**	**	**	**	***	6
(4.60)	(3.48)	(2.89)	(7.02)	(-0.19)	

t statistics in parentheses, \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Note: The second behavioral regression coefficient, the values shown in brackets represent the T value of the variable

As shown in Table 2, the core explanatory variable  $InFIN_{it}$  has a positive sign with a coefficient of 0.419 and is highly significant, indicating that financial technology has a positive role in promoting the development of green risk investment. The advantages of financial science and technology coincide with the bottlenecks of green venture capital. Financial technology improves the risk identification ability of enterprises, and reduces the excessive cost caused by information asymmetry between the two parties of the transaction by means of decentralized block chains, etc. Compared with the original enterprises, the proportion of funds invested in green enterprises increases, bringing greater economic and environmental benefits, forming a virtuous circle, and ultimately improving the operation efficiency of the whole system.

In the three selected control variables, the sign of the coefficient is positive. The t value of the green policy is 1.570, which has passed the significance test under the 1% confidence level, indicating that the green policy plays a key role in solving the financing gap of long-term low-carbon investment demand and encouraging green investment. The government guides green funds to invest in the field of environmental risk investment through the financial policy, improves the liquidity of green risk investment and promotes the all-round development of green venture capital; At the same time, financial subsidies also promote the research and development of green environmental protection technology, provide a good external environment for green venture capital, and promote the healthy development of green industry.

The t value of education level is 0.484, which passes the significance test under a 1% confidence level. It shows that the improvement of education level has promoted the influx of talents from finance, science and technology and other fields into the financial market, improved the market vitality, increased the frequency of transactions, spread the customer base more widely, opened the business model more, and finally enabled the Green Venture Capital.

The t value of innovation atmosphere is 2.087, which also

passes the significance test under the 1% confidence level, indicating that the stronger the innovation atmosphere is, the higher the technological innovation efficiency of the green industry is. Therefore, it can effectively promote the development of the green industry and the green growth of the regional economy. At the same time, more forms of venture capital have emerged, which broadens the investment channels and enhances the investment efficiency.

## 4.2. Robustness test

In this paper, we use the method of introducing new control variables to test the robustness. Relevant literature points out that regional industrial production and carbon emission intensity will also have a significant impact on green finance. The higher the degree of industrial development in the region, the more financial resources in the region will flow to industry. Due to crowding-out effect, limited resources will be occupied and the funds used for green environmental protection will be relatively insufficient, thus crowding out the green venture investment and the green venture investment will decrease accordingly.

Similarly, after adding carbon emission intensity as a control variable, we constructed a new regression equation:

$$InVC_{it} = \alpha + \beta InFIN_{it} + \gamma_0 PC_{it} + \gamma_1 EU_{it} + \gamma_2 InIN_{it} + \gamma_3 InEP_{it} + \mu_{it} \quad (3)$$

Among them,  $i$  represents the sample province and city,  $t$  represents the year, and  $\alpha$ 、 $\beta$ 、 $\gamma_i$  are the parameters to be estimated.  $InVC_{it}$ 、 $InFIN_{it}$ 、 $InIN_{it}$  and  $InEP_{it}$  represent the logarithmic value of each variable.

The results obtained by constructing the fixed effect model again are shown in Table 3:

**Table 3.** Comparison result of robustness test

	$InFIN_{it}$	$PC_{it}$	$EU_{it}$	$InIN_{it}$	$InEP_{it}$	$_{-cons}$
<i>Model I</i>	0.419 *** (4.60)	1.570 *** (3.48)	0.484 *** (2.89)	2.087 *** (7.02)	-	-5.296 *** (-0.19)
<i>Model II</i>	0.236 ** (6.59)	0.510 *** (4.67)	2.333 *** (3.31)	1.698 *** (5.64)	0.268 ** (-2.70)	-7.120 *** (-0.73)

t statistics in parentheses, \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Note: The second and fourth regression coefficients, and the values shown in brackets represent the t value of the variable.

Through comparison, it can be found that the core explanatory variable  $InFIN_{it}$  passed the significance test with a confidence level of 5% after adding the control variable carbon emission intensity, which verified the promotion effect of financial technology on green risk investment.  $PC_{it}$ 、 $EU_{it}$  and in  $InIN_{it}$  are still significant at 1% level, the newly added control variable carbon emission intensity has also passed the significance test at 5% level, and the significant variable coefficient symbols are consistent with expectations.

In conclusion, the robustness test conducted by introducing new control variables verifies the above conclusions, and further proves that financial technology can promote green venture capital.

## 5. The Coupling Degree of Financial Technology and Green Venture Capital

### 5.1. Research ideas

This paper uses the panel data of each province from 2014 to 2019 to introduce the time series three-dimensional data

factor analysis, constructs the financial technology-green venture capital coupling model, obtains the coupling value of the two systems from 2014 to 2019, and uses the statistical analysis method to analyze the obtained results, and obtains the conclusion. At the same time, for different regions, the relevant financial science and technology-green venture capital coupling value is calculated, and the causes of regional differences are obtained through statistical analysis.

### 5.2. Research Methods

Based on the time series three-dimensional data factor analysis, the system dimensions are re-divided, indicators are screened, and the following financial technology-green venture capital coupling model is constructed by using the statistical data from 2014 to 2019:

$$C = \frac{\sqrt{a_{1i}(x) \cdot a_{2i}(x)}}{a_{1i} + a_{2i}} \quad (4)$$

In the above formula,  $C$  is the coupling coefficient of financial technology and green venture capital,  $a_{1i}$  and  $a_{2i}$  respectively represent the comprehensive development level of financial technology and green venture capital, and the range of coupling coefficient  $C$  is  $[0,1]$ . The greater the coupling coefficient, the higher the coupling degree of financial technology and green venture capital, the stronger the interaction, and the more coordinated and orderly the systems tend to be.

The calculation formula of coordination between financial technology and green venture capital is as follows:

$$D = \sqrt{C \cdot \bar{D}} \quad (5)$$

Among them,  $C$  is the coupling coefficient between financial technology and green venture capital, and  $D$  is the comprehensive harmonic index between financial technology and green venture capital.

### 5.3. The overall trend of the coupling and coordinated development of financial science and technology and green risk investment system

In order to study the general trend of coupling and coordinated development of financial science and technology and green venture capital systems, firstly, we divide the coupling types and coordination levels into Table 4 and Table 5:

**Table 4.** Coupling type division

Range	[0,0.3]	[0.3,0.5]	[0.5,0.7]	[0.7,1]
Coupling type	Low level coupling	Antagonistic coupling	Running-in coupling	High level coupling

**Table 5.** Coordination level hierarchy

Range	0	[0,0.1]	[0.1,0.3]
Coordination level	Totally uncoordinated	Extreme disorder	Low level

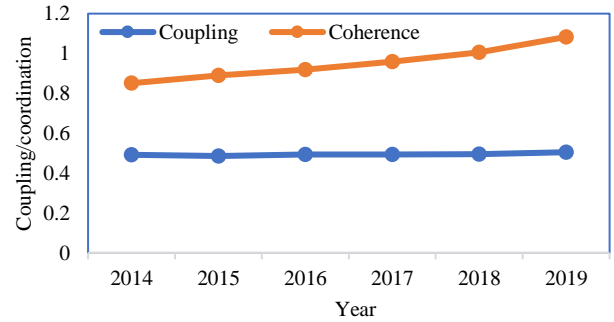
  

Range	[0.3,0.5]	[0.5,0.8]	[0.8,1]	1
Coordination level	Medium level	Higher level	High level	Complete coordination

Based on the above model and the classification of coupling type and coordination level, the coupling degree and coordination level of financial science and technology and green venture capital systems of major provinces and cities in China from 2014 to 2019 are calculated by collecting relevant data. The results are shown in Table 6.

**Table 6.** Coordination Degree and Coupling Degree Results of China's Financial Technology-Green Venture Capital System from 2014 to 2019

Age	Coupling factor	Coupling state	Coordination degree	Coordination status	FinTech level	Green venture capital level
2014	0.49	Antagonistic	0.36	Medium	0.47	0.5
2015	0.49	Antagonistic	0.41	Medium	0.49	0.58
2016	0.49	Antagonistic	0.42	Medium	0.51	0.62
2017	0.49	Antagonistic	0.47	Medium	0.51	0.66
2018	0.50	Antagonistic	0.51	Higher	0.54	0.68
2019	0.51	Running-in	0.58	Higher	0.56	0.69



**Figure 1.** Coupling and Coordinated Development Level of China's Financial Technology-Green Venture Capital System from 2014 to 2019

By calculating the coupling degree, coordination degree and the development level of financial science and technology and green venture capital, it can be found from Figure 1 that the coupling degree of financial science and technology and green venture capital in our country has been basically maintained at the same level, in an antagonistic coupling state, and only in 2019 did it increase from antagonistic coupling to break-in coupling, which is probably related to the large development gap between the two systems. At the same time, the overall coordination degree of the two systems showed an upward trend and reached a high level in 2018, which reflected that the two systems gradually achieved coordinated development after a period of grinding.

Through calculation, the Person correlation coefficient between the development level of financial science and technology and green venture capital is 0.936, which is highly positive correlation, indicating that the continuous development of financial science and technology can effectively promote the development level of green venture capital. At the same time, combining the coupling degree and coordination of the two systems, we can find that the correlation level between the two systems is high, showing obvious synchronization, indicating that financial science and technology is the key to affect green venture capital.

The development level of green venture capital in 2014-2019 has been higher than that of financial science and technology, which is affected by environmental factors and policies. Since the 18th National Congress of the Communist Party of China, China's economic development has entered a new normal, and the economic growth rate has gradually slowed down, to a certain extent limiting the development of financial science and technology. With the release of "General Plan for the Reform of Ecological Civilization System" by the State Council in September 2015, the top-level design of the reform in the field of ecological civilization in our country has been carried out and the green financial system strategy has

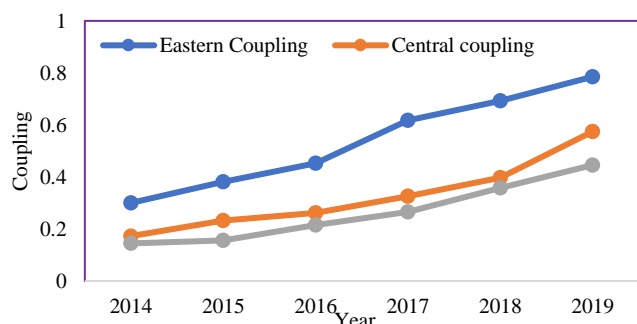
been put forward for the first time; In August 2016, the Central Bank, the Ministry of Finance and other seven ministries and commissions jointly issued the Guidance on Building a Green Financial System, which clarified the definition, incentive mechanism, development direction and risk monitoring measures of China's green finance, and established the top-level framework system of China's green finance. By 2019, the issuance of the Financial Science and Technology Development Plan provided policy support for the development of financial science and technology and formulated detailed future plans. The coupling degree and coordination level of China's financial science and technology and green risk investment have been raised from antagonistic coupling and moderate coordination level to running-in coupling and higher coordination level respectively. With the continuous improvement of relevant policies, the development of financial science and technology will strongly promote the development of green risk investment and form a high level of coordination.

#### 5.4. Regional Differences in Coupling and Coordinated Development of Financial Technology and Green Venture Capital System

In order to further clarify the evolution trend and system development of the coupling degree of the two systems, we further calculated by distinguishing the eastern, central and western regions, and concluded that the comparison of the coupling degree of financial science and technology and green venture capital in 2014-2019 is shown in Table 7.

**Table 7.** Coordination Degree and Coupling Degree Results of Financial Technology-Green Venture Capital System in Three Major Regions of China from 2014 to 2019

Age	2014	2015	2016	2017	2018	2019
Eastern coupling	0.30	0.38	0.45	0.62	0.69	0.79
Central coupling	0.17	0.23	0.26	0.33	0.40	0.57
Western coupling	0.14	0.16	0.21	0.27	0.36	0.45



**Figure 2.** Evolution of Coupling Degree between Financial Technology and Green Venture Capital in Three Major Regions of China from 2014 to 2019

Figure 2 shows the coupling of the two systems in the three regions of China from 2014 to 2019. From the time perspective, the coupling degree of the three regions and two systems in China showed obvious synchronization from 2014 to 2019, and increased year by year, indicating that financial technology is the key to the development of green venture capital. From a spatial point of view, regions with higher levels of financial science and technology development have higher degree of coupling and coordination among systems, and vice versa, indicating that the imbalance in financial science and technology development among regions in China is the key

factor that causes the difference in coupling and coordination between the two systems in each region. In recent years, the development level of green finance in various regions has been improved. The development of financial technology enables green finance and promotes the development of green venture capital. At the same time, it can be seen from the figure that the coupling degree in the eastern region has the fastest growth rate, and has reached a high level of coupling in 2019, while the western region is in antagonistic coupling, indicating that the regional development imbalance problem is increasingly prominent, and the regional differences in financial science and technology level have increased.

## 6. Conclusions and recommendations

This paper investigates the development trend of green venture capital and financial science and technology in China from the macro perspective of system coupling. Based on the panel data of 31 provinces (cities) in China from 2014 to 2019, the fixed effect panel data model is constructed, the index system of green venture capital and financial science and technology is established, the relationship between the two is empirically analyzed, and the coupling development trend of financial science and technology-green venture capital is analyzed from a macro perspective. Based on this, the problems existing in the development of the two systems in China are found, the conclusions are drawn and the corresponding countermeasures are put forward.

First, green policy, education level and innovation atmosphere have significant positive effects on green venture capital. Green policy support provides a good development environment for green venture capital. The government should cultivate more high-quality projects related to financial technology and green financial industry, and actively guide domestic funds to flow to green industry. At the same time, actively strengthen international cooperation, introduce international green investment, establish a linkage mechanism between foreign and domestic investment, improve the development level of green venture capital, and establish a green venture capital development model with both domestic and foreign investment. Education level provides talents in finance, science and technology and other fields needed for industry development, and enables green venture capital to provide continuous development momentum for green venture capital. Therefore, universities and research institutes should play a major role in green venture capital and financial science and technology innovation, build special communication platforms, strengthen cooperation between enterprises and universities, combine the innovation advantages of universities with the market advantages of enterprises, and quickly put financial science and technology innovation achievements into the market according to market demand; Innovation atmosphere is beneficial to broaden the channels of green risk investment and enhance the investment efficiency. We should improve the incentive mechanism of enterprises, stimulate the innovation atmosphere of enterprises and motivate the staff's spirit of innovation and creativity in various ways.

Second, the greater the intensity of carbon emissions, the more capital the industry takes up, thus affecting the capital flow and crowding out the green venture capital. In order to make the green venture capital develop better, the regional capital allocation should be appropriately adjusted to allow more capital to flow to the green venture capital.

Third, during the period from 2014 to 2019, the

development of China's financial science and technology and green venture capital systems were in antagonistic coupling state as a whole, but the coordination degree between the two systems showed a gradual upward trend during the same period, and gradually developed from being on the verge of maladjustment to moderate coordination, and the gap between the two systems began to narrow around 2016.

Fourthly, in the two systems, the obvious lag of financial technology is the key to the long-term antagonistic coupling between the two systems. At this stage, funds should be directed to the financial science and technology field represented by the block chain, so as to increase the enterprise risk identification ability, reduce the risk of venture capital, and increase the investment confidence of investors, in order to promote the further development of green venture capital, and promote the high-quality coordinated development of financial science and technology and green venture capital.

Fifthly, from a time perspective, the coupling degree of the two systems in the three regions in China increased year by year from 2014 to 2019; From a spatial point of view, the differences in green coupling between regions have been increasing with the passage of time. The differences in financial technology-green financial coupling between regions are large, and the imbalance in regional development has become increasingly prominent. We should make good use of the advantages of different regions and adjust measures to local conditions. For the eastern region, its economic strength and scientific and technological level are relatively strong. We should establish a "knowledge-and technology-driven" strategy and improve the existing green financial policy; For the central region, we should reduce the dependence of economic growth on land and infrastructure construction, establish a green financial reform and innovation experimental zone, and further improve the pull effect of financial technology on the growth of green venture capital; For the western region, we can make good use of the abundant clean energy, enable finance through technological innovations such as solar energy and wind energy, establish a carbon finance trading platform, and gradually narrow the differences with the developed regions.

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