



温州肯恩大学
WENZHOU-KEAN UNIVERSITY

The sustainable finance impacts on Chinese government invest in financial market

In Partial Fulfillment of the Requirements
for the Bachelor of science in finance

by

XING Rujie

1025912

May, 2020

Table of Content

page number

ABSTRACT.....	3
1. INTRODUCTION	4
2. LITERATURE REVIEW	7
2.1 SUSTAINABILITY FINANCE IN CHINESE FINANCIAL MARKET	7
2.2 IMPORTANCE OF SUSTAINABLE FINANCE	7
2.3 THE OPPORTUNITIES AND CHALLENGES OF SUSTAINABLE FINANCE IN CHINESE FINANCIAL MARKET	8
2.3.1 CHALLENGES	9
2.3.2 OPPORTUNITIES.....	10
2.4 THE IMPACTS OF THE FINANCIAL MARKETS MANAGED BY THE CHINESE GOVERNMENT ON SUSTAINABLE FINANCE.....	11
3. DISCUSSION AND EXPLANATION OF DATA SET.....	13
3.1 INDEPENDENT VARIABLES AND DEPENDENT VARIABLES	13
3.2 DISCUSSION OF SAMPLE:.....	14
4. DISCUSSION OF METHODOLOGY & MODEL	15
4.1 DISCUSSION AND EXPLANATION OF METHODOLOGY:	15
4.2 DISCUSSION AND EXPLANATION OF MODEL AND HYPOTHESES	16
5. DATA AND DATA DESCRIBE	17
5.1 INDEPENDENT VARIABLE	17
5.1.1 INDEPENDENT VARIABLE X1	17
5.1.2 INDEPENDENT VARIABLE X2 AND X3.....	18
5.1.3 INDEPENDENT VARIABLE Z1	19
5.1.4 INDEPENDENT VARIABLE Z2 AND Z3	20
5.2 DEPENDENT VARIABLE Y	21
6. DISCUSSION OF RESULTS	22
$Y = 0.05935Z2 + 0.3435Z3$	23
7. CONCLUSION.....	26
8. REFERENCE.....	28

9. TABLES AND FIGURES

Table 1 variables.....	14
Table 2 financing of environment company.....	17
Table 3 environmental pollution& waste removal volume	18
Table 4 environmental pollution& waste removal volume regression output....	19
Table 5 listed environmental protection companies	19
Table 6 investment in environmental pollution& green credit in GDP.....	20
Table 7 Chinese government's investment in financial markets	21
Table 8 regression output	23
Table 9 p-value.....	24

Abstract

With the transformation of the Chinese economy from a traditional development model to a sustainable model, green finance has also become a new direction for exploring sustainable economic development. Therefore, green finance has increasingly become the most noteworthy industry under the new development concept. Green finance means that the financial sector should incorporate environmental and ecological indicators into the financial sustainable development system, and promote the implementation of sustainable development strategies through the operation of financial services.

Firstly, this thesis expounds the practical significance and importance of implementing green finance to promote sustainable financial development, and analyzes the problems and opportunities in the current development of green finance. It also makes an empirical analysis and evaluation of the factors affecting the sustainable development of green finance, and explores the Chinese government's investment in financial markets under the influence of sustainable development finance.

In this thesis the results of the data analysis, the Chinese government's investment in financial markets is positively related to the Chinese government's investment in environmental governance and the proportion of green credit in GDP.

1. INTRODUCTION

With the rapid development of the Chinese economy, the Chinese government is striving to turn the growth rate of GDP into high quality. China's fast-growing GDP is accompanied by environmental degradation – environmental problems such as smog and water pollution. The deterioration of the environment has made the traditional economic development model unable to adapt to China, so the Chinese economy should be rapidly transformed into sustainable development.

Finance is the core of economic development, and sustainable development finance is the basic condition for breaking through the bottleneck of traditional economic development.

As the country with the most population, China has a scarce resource per capita. In order to enable China's economy to continue to see stable development, China must quickly implement sustainable development finance. China's population is so large that the problem of uneven distribution of resources, the political problems of traditional economic development, and the social problems of establishing a sustainable development concept in the hearts of the Chinese people have become obstacles to China's implementation of sustainable finance.

In the process of implementing financial sustainability, the scarcity of sustainable financial products has created demand for financial markets.

The financial system can change China's current economic model. It can not only better integrate environmental risks, but also provide mechanisms to protect nature and

promote sustainable business practices, thus having a significant impact on sustainable development.

This thesis analyzes the current situation of sustainable development finance in China's financial market, including the policies, challenges and opportunities that China is facing. After years of development, the supervision and support of sustainable financial financing products have been improved. China's financial market has made progress in sustainable financing products. The current situation is that the overall development trend of financial products for sustainable financial development in China is favorable.

Financial sustainable development can maintain the balance of China's financial industry by transforming traditional financial ideas. The article believes that China government can start from the relationship between finance and the environment, re-examine finance, introduce the concept of sustainable development into finance, and promote the sustainable development of the financial industry. Therefore, financial sustainable development is of great significance to China's financial market.

Next, the thesis declares challenges of financial sustainability in China's development and the opportunities it brings to China's financial markets. The main problems that exist include the lack of standard policies for management, and the fact that environmentally-friendly SMEs (small and middle-size enterprise) are not eligible for large amounts of money and cannot expand their size through listing or bank loans. However, sustainable development finance has increased the activity of environmental

protection industry securities for financial markets, while sustainable development finance can make the company's production efficiency higher.

At the end of the thesis, this thesis puts forward suggestions for the Chinese government to manage sustainable development finance according to the problems and constraints of China's financial market, combined with theory.

2. LITERATURE REVIEW

2.1 Sustainability Finance in Chinese Financial Market

Sustainability means being able to satisfy the needs of the contemporary people without compromising the ability of people to acquire production and life in the future.

Financial sustainable development refers to the continuous adjustment of the financial system and mechanism through economic development, and then rationally and effectively mobilize and allocate financial resources, improve financial efficiency, and ultimately achieve long-term effective economic and financial stability. (Bai,1998)

Sustainable finance refers to any form of financial services that can make ESG (environmental, social and Governance) business or investment decisions.

2.2 Importance of Sustainable Finance

Salazar (1998) believes that green finance is a great innovation in the financial industry, seeking economic development in environmental protection and achieving a balance between the economy and the environment.

The traditional concept of development is to care the immediate interests and ignore the long-term development. People will plunder resources and destroy the social environment for the sake of economic growth. (Sun,2019) (Liu,2013) Some unscrupulous companies may defend their own interests through acts that are unjustified and harm the interests of society. The result of the traditional concept of

development can only be the collapse of Chinese society. Therefore, in order to maintain order in the social market and avoid turmoil and instability, the Chinese government must adopt a sustainable development mechanism. (Yang; Wang, 2018)

For companies, financial sustainability can save money by reducing internal energy and materials consumption through its own internal management. Companies can maintain their own interests through sustainable finance. (Qiao; Sun, 2018)

due to the deteriorating ecological environment, the Chinese government needs to invest a large amount of funds for pollution control, but it is difficult for the government to achieve it. Therefore, some environmental protection projects still have a large funding gap. (Ma, 2015) Moreover, China continues to maintain economic growth, which means consuming energy resources. (Qiao; Sun, 2018) (Zhao,2017) In order to solve these problems, China needs to develop and utilize renewable sources and research new technologies, so it requires a lot of money. Financial companies can just provide these financial support. At the same time, the use of these renewable resources and new technologies can bring huge economic benefits, and can also ensure the smooth return of funds, so the financial industry is sustainable.

2.3 The Opportunities and Challenges of Sustainable Finance in Chinese Financial Market

Cowan (1999) pointed out that green finance is mainly to study the issue of green economy financing, and it is an organic combination of economic sustainable development and financial issues.

2.3.1 Challenges

The business objectives and objectives of many companies in China also emphasize the maximization of shareholders' interests and the maximization of profits. Therefore, the sustainable development of finance still lacks value drivers. In China, many small and medium-sized environmental enterprises in development are facing difficulties in financing. Most of these companies adopt private financing or fundraising, rarely lend to financial institutions, and fail to meet the conditions for listing financing. (Qu, 2019) Therefore, it is difficult for the Chinese government to promote these large and medium-sized environmental protection enterprises with large scale and wide coverage. (Du; Zhang, 2012)

Environmental pollution has become an obstacle to urban progress and curbed economic development. One goal of sustainable development is to reduce environmental pollution on the basis of sustainable value creation for the economy. Therefore, environmental pollution can be used as an influencing factor in the study of sustainable development finance. (Qiao; Sun, 2018).

Domestic garbage removal volume is to test the level of people's awareness of environmental protection and the speed of processing garbage. Domestic garbage removal volume is an environmentally friendly way. Therefore, the operation of domestic garbage removal volume is a factor in the study of sustainable finance.

2.3.2 Opportunities

By implementing sustainable development finance, companies can enhance the reputation of financial companies and enhance social benefits. (Chen,2019) As the public's awareness of environmental protection continues to increase, the government and the public have put forward the requirements for sustainable development of corporate social responsibility. (Zhou; An, 2018) (Gan, 2018) Enterprises should follow this trend and use financial means to guide the improvement of industrial structure, strive to shoulder their own social responsibilities, and establish a good social image for themselves.

China's investment in environmental pollution (thousand billion) control is an indicator of environmental pollution. Therefore, the amount of Chinese government's investment in environmental pollution can be used as a factor in studying sustainable finance.

The proportion of green credit in GDP. In credit activities, compliance with environmental testing standards, pollution control effects, and ecological protection are important prerequisites for credit approval. Economic leverage leads to environmental protection. Economic leverage can enable companies to internalize the cost of pollution, so as to achieve ex-ante governance, instead of the usual post-event pollution control. Commercial banks can use the differentiated pricing to guide funds to industries and enterprises that are environmentally friendly and can effectively promote sustainable development. Therefore, green credit can be used as a factor in studying sustainable finance.

2.4 The Impacts of the Financial Markets Managed by The Chinese Government On Sustainable Finance

In order to reduce financial risks and improve the social responsibility of financial activities, it is imperative to establish a green financial legal system (Katharina, et al., 2000). Improve the system of green financial laws and regulations. (Li,2011) In the construction of the legal system, the Chinese government has formulated and improved the system's legal guarantee system as soon as possible, including the basic legal system of green finance, the implementation system of green financial services, and the green financial supervision system. Introduce policies to support financial sustainability. (Li,2011) (Li; Xia, 2014) The Chinese government can formulate a series of supporting policies and measures according to the macro-policy and sustainable development principles, provide a good external environment for green finance, and guide all parties to actively participate in green finance and stimulate the potential and vitality of sustainable financial markets. (Zhou; An, 2018) (Liu, 2013) Such as tax reductions, financial discounts, risk compensation, credit guarantees, etc. for environmental protection companies.

In China, the development of green finance requires restraint mechanisms and regulatory supervision, incentives for government policies, and support from public opinion. Sustainable development finance is inseparable from the corresponding management design and maintenance measures of financial institutions. (Chen,2019) Investors with a sense of social responsibility and environmental protection and a large

number of scholars with green financial expertise are also necessary for the government to develop sustainable finance.

The purpose of the next section is to clarify the impact of sustainable finance on the Chinese government's management of financial markets. In this section, the data types, data sources, samples and methods, models and assumptions of the thesis are identified.

3. DISCUSSION AND EXPLANATION OF DATA

SET

The thesis wants to describe how the Chinese government manages financial markets under the influence of sustainable finance. The thesis used researched secondary data needed.

In this thesis, the opportunities and challenges faced by China's financial market are dependent variables. The impact of sustainable development finance on China's financial market is an independent variable. The main information for measuring the relationship between the independent variable and the dependent variable will be collected through.

3.1 Independent variables and dependent variables

The challenges variables in this thesis were made up of difficulties in financing by environmental protection companies, serious environmental pollution and domestic garbage removal volume in China.

The opportunities variables in this thesis are listed environmental securities companies, China's investment in environmental pollution (thousand billion) and the proportion of green credit in GDP.

This paper examines the impact of the challenges and opportunities of sustainable finance on the Chinese government's management of financial markets.

Variables table

Independent variables	challenges	X1	Financing of environmental companies
		X2	Environmental pollution
		X3	Domestic garbage removal volume
	opportunities	Z1	Listed Environmental Securities Companies
		Z2	China's investment in environmental pollution(thousand billion)
		Z3	The proportion of green credit in GDP
Dependent variable		Y	Chinese government investment in financial markets (thousand billion)

Table 1 variables

3.2 Discussion of Sample:

This thesis considers the completeness and rationality of the data. The research object is limited to the environmental protection companies listed on the A-share market. The research data comes from the annual information from 2002 to 2017 disclosed by the exchange and the annual reports of various enterprises. In addition, the data used in this study are derived from the National Bureau of Statistics, the China Statistical Yearbook, the National Environmental Statistics Bulletin, the China Economic Network Statistics Database, and the Guotai'an Database.

The next part is declaring and explaining methodology, model, and hypotheses used for this thesis.

4. DISCUSSION OF METHODOLOGY & MODEL

4.1 Discussion and Explanation of Methodology:

The correlation thesis design had been proposed in this thesis. A thesis design was set up steps, collecting procedures, analyzing and measuring the different variables, and solving the research problems.

The issue of this thesis is the impact of sustainable financial challenges and opportunities on the Chinese government's management of financial markets

Using correlation thesis design could clearly determine the proposed of this thesis. Meanwhile, correlation thesis design could explain the relationships between the challenges and opportunities that sustainable finance faced and the China's financial market.

In this thesis, Microsoft will be used to process the collected data and measure the link between the data through linear programming. Pearson Product will be used to establish correlation between the variables difficult in financing by environmental protection companies, environmental pollution, domestic garbage removal volume, listed environmental securities companies, china's investment in environmental

pollution (thousand billion) and the proportion of green credit in GDP and China's financial market.

The level of significance used for each test is set at 0.05.

The level of p-value needs less than 0.1.

4.2 Discussion and Explanation of Model and Hypotheses

In the model of this thesis, the opportunities and challenges faced by China's financial market are independent variables. The impact of sustainable development finance on China's financial market is an independent variable.

This thesis has six independent variables: difficult in financing by environmental protection companies, environmental pollution, domestic garbage removal volume, listed environmental securities companies, china's investment in environmental pollution (thousand billion) and the proportion of green credit in GDP.

Null Hypothesis (H_0): The sustainable financial challenges and opportunities variables have no impact on the Chinese government's management of financial markets

H1: The sustainable financial challenge variables have negative impact on the Chinese government's management of financial markets

H2: The sustainable financial opportunities variables have positive impact on the Chinese government's management of financial markets

$$Y = \alpha - (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3) + (\beta_4 Z_1 + \beta_5 Z_2 + \beta_6 Z_3) \dots + \varepsilon$$

5. DATA AND DATA DESCRIBE

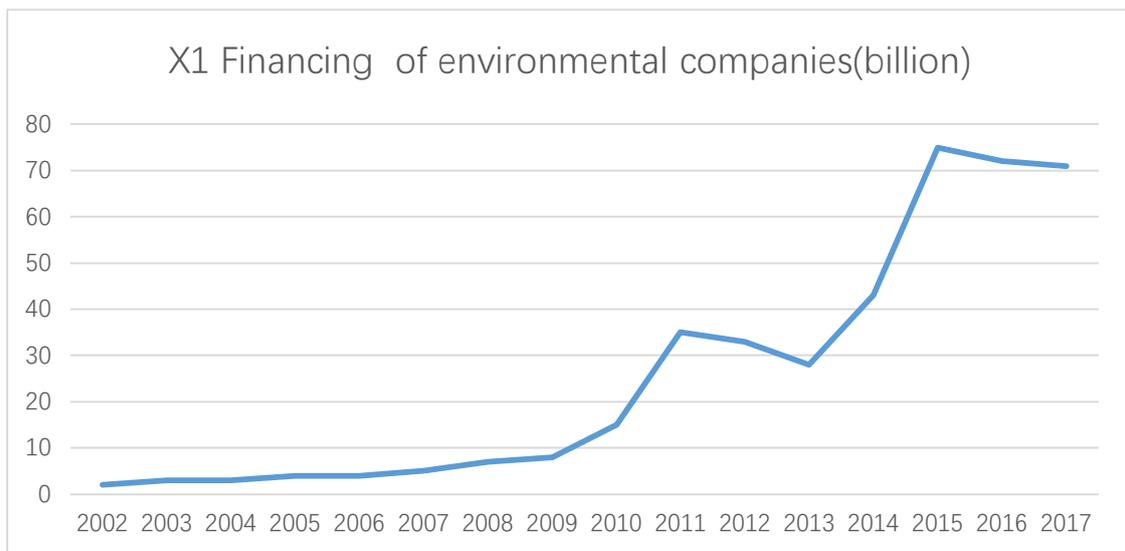
5.1 independent variable

This thesis has six independent variables: difficult in financing by environmental protection companies, environmental pollution, domestic garbage removal volume, listed environmental securities companies, china's investment in environmental pollution (thousand billion) and the proportion of green credit in GDP.

5.1.1 independent variable X1

The variable X1 is the amount of financing of environmental companies from 2002 to 2017. According to the data, the data as a whole is an upward trend. Both declined in 2012 and 2013 but the number of financings increased rapidly in 2014 and 2015.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
X1	Financing of environmental companies	2	3	3	4	4	5	7	8	15	35	33	28	43	75	72	71



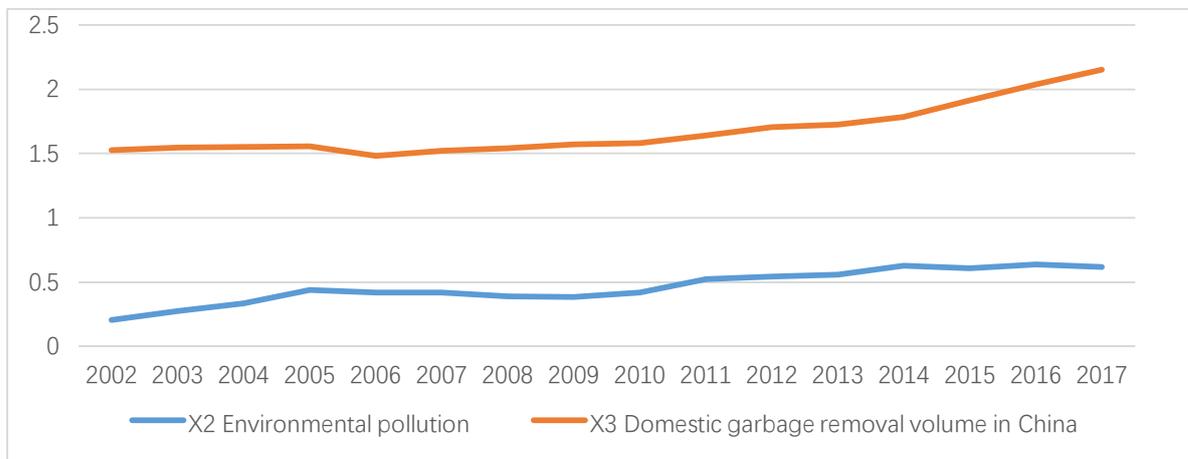
refer from; <https://www.qianzhan.com/analyst/detail/220/190704-436e7cb8.html>

Table 2 financing of environmental companies

5.1.2 Independent variable X2 and X3

By the data from the Environmental Pollution Index from 2002 to 2017 and China's waste removal volume, the chart shows that both Variables are value that will slowly rise over time.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
X2	Environmental pollution	0.2084	0.2765	0.3342	0.4379	0.4177	0.422	0.3892	0.3852	0.4181	0.5216	0.5436	0.559	0.6278	0.6064	0.6374
X3	Domestic garbage removal volume in China	1.52954	1.54896	1.55093	1.55768	1.48413	1.52145	1.54377	1.57337	1.58048	1.63953	1.70809	1.72386	1.78602	1.91419	2.0362



refer from: http://www.stats.gov.cn/tjsz/tjsj/tjcb/dysj/201801/t20180105_1570143.html

refer from: <http://data.stats.gov.cn/easyquery.htm?cn=C01>

Table 3 environmental pollution& waste removal volume

Analysis of excel data shows Multiple R is closing to 0.8 and that means environmental pollution is positively related to the amount of garbage removal in China. With the increase of the environmental pollution index, the amount of garbage removal is also increasing. P-value are small than 0.05, so the two variables have positive relationship.

The data is a flat phase from 2005 to 2010, and the overall trend is upward.

Regression Statistics								
Multiple R	0.79802047							
R Square	0.63683667							
Adjusted R Square	0.61089643							
Standard Error	0.12422446							
Observations	16							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	0.37885089	0.37885089	24.5501479	0.00021155			
Residual	14	0.21604401	0.01543172					
Total	15	0.59489491						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.11457048	0.11790608	9.45303658	1.8664E-07	0.86168709	1.36745386	0.86168709	1.36745386
environment pol	1.21805811	0.24583344	4.95481058	0.00021155	0.69079783	1.74531839	0.69079783	1.74531839

Table 4 environmental pollution& waste removal volume regression output

5.1.3 Independent variable Z1

The variable Z1 is the number of listed environmental protection companies.

The number of environmental protection companies listed in 2014, 2015 and 2016 increased significantly.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Z1	Listed Environmental Securities Companies	5	6	6	6	7	8	10	11	20	27	31	32	54	67	88	117

data from: <https://wenku.baidu.com/view/a9d33021bb4cf7ec4bfd0c3.html>

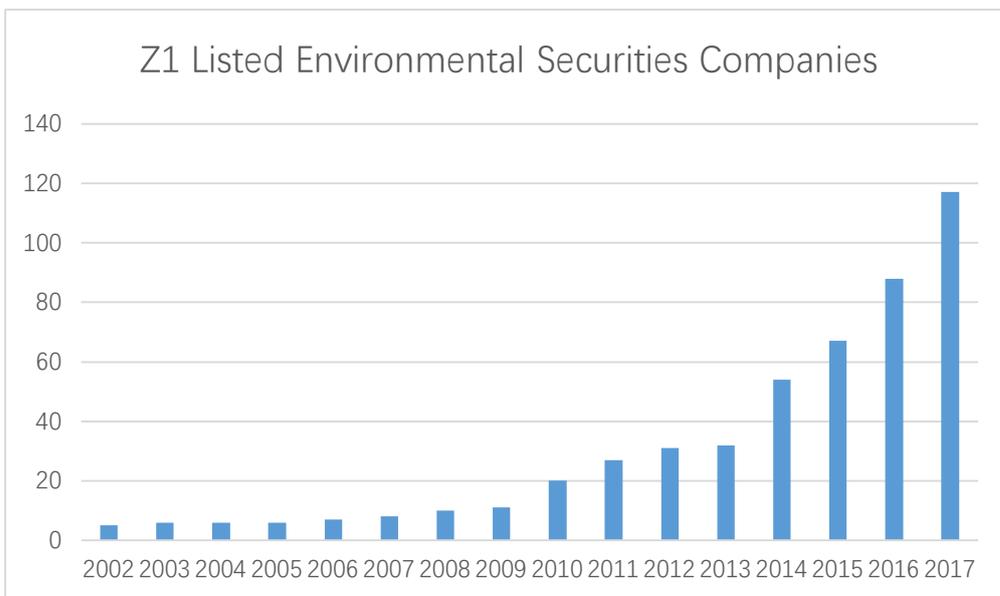


Table 5 listed environmental protection companies

5.1.4 Independent variable Z2 and Z3

Z2 is the Chinese government's investment in environmental governance. The data on the icon shows that the Chinese government's investment in environmental protection has increased over time.

Since 2013, the amount of Chinese investment in environmental protection has remained at around 900 million.

Unlike Z2, Z3 is the proportion of green credit in GDP. Green credit is a business carried out in China's financial market since 2007. Affected by the financial crisis in 2009 and 2010, there was a decline in value. After 2011, the proportion of green credit in GDP rose rapidly and maintained a stable state.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Z2	China's investment in environmental pollution(thousan	1.3672	1.6277	1.9098	2.388	2.566	3.3873	4.93703	5.25839	7.61219	7.11403	8.25346	9.0372	9.5755	8.8063	9.2198	9.53895
Z3	The proportion of green credit in GDP	0	0	0	0	0	0.0013	3.11	8.93	2.11	2.32	9.75	7.23	9.29	8.6	9.17	7.9

refer from:

<http://kns.cnki.net/KXReader/Detail?TIMESTAMP=637104072246797500&DBCODE=CJFQ&TABLEName=CJFDLAST201>

<8&FileName=HBJR201712001&RESULT=1&SIGN=4YTq1O%2bSupXquxcfTtSS2W%2fnXug%3d>

<http://data.stats.gov.cn/easyquery.htm?cn=C01>

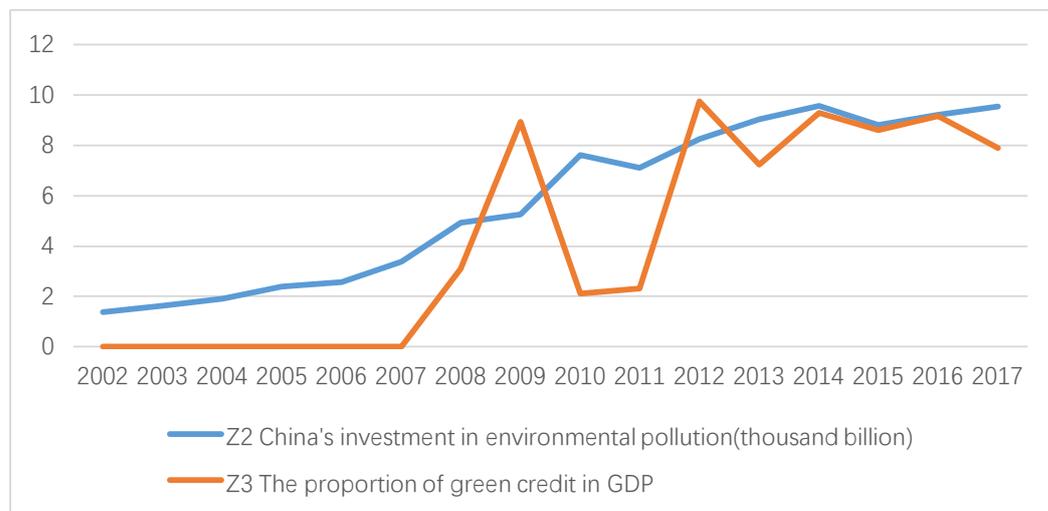
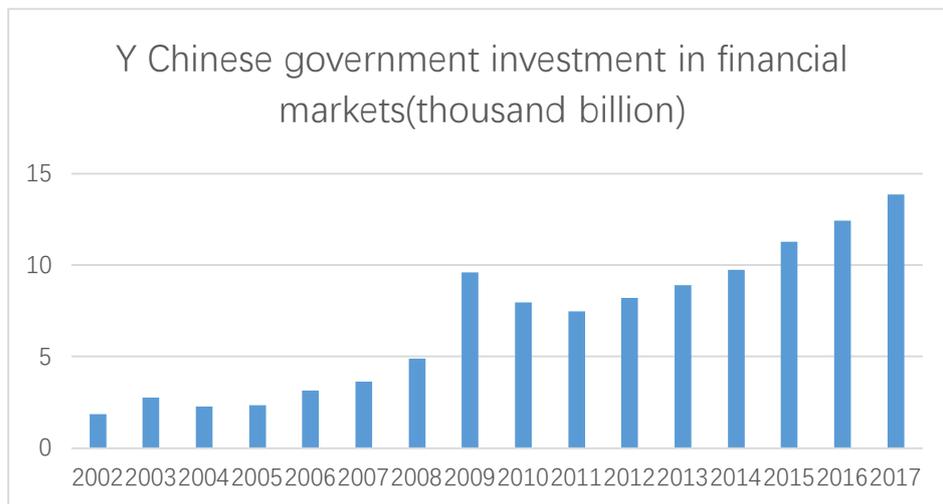


Table 6 investment in environmental pollution& green credit in GDP

5.2 Dependent variable Y

This thesis takes the Chinese government's investment in financial markets as the dependent variable. The data of the table are collected from sixteen groups of data from 2002 to 2017. The data is generally an upward trend. In 2009, affected by the financial market, the Chinese government increased its investment in the financial market.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Y	Chinese government investment in financial markets(thousand billion)	1.8475	2.7652	2.2673	2.3544	3.1523	3.6323	4.9041	9.5942	7.9451	7.4715	8.2038	8.8916	9.7452	11.2693	12.4372	13.8432



refer from: <http://data.stats.gov.cn/easyquery.htm?cn=C01>

Table 7 Chinese government's investment in financial markets

6. DISCUSSION OF RESULTS

Based on survey data from China National Bureau of Statistics, China Banking Industry Social Responsibility Report, China Environmental Protection Association and the China Statistics Bureau, this thesis analyzes the behavior of the Chinese government on financial markets under the influence of six variables of sustainable finance, Financing of environmental companies, Environmental pollution, Domestic garbage removal volume in China, Listed Environmental Securities Companies, the proportion of green credit in GDP and China's investment in environmental pollution (thousand billion).

Results

In this thesis the three variables Financing of environmental companies, Environmental pollution, Domestic garbage removal volume in China in the challenges has different relationship with the Chinese government's investment in the financial market. The three variables: Listed Environmental Securities Companies, China's investment in environmental pollution (thousand billion) and the proportion of green credit in GDP in opportunity are positively related to the Chinese government's investment in financial markets. The results of this thesis from factual data prove that the Chinese government's investment in financial markets is related to sustainable development finance.

The linear relationship between the dependent variable Y and the six independent variables was obtained through the analysis of regression data.

Regression Statistics								
Multiple R	0.97543576							
R Square	0.95147493							
Adjusted R Square	0.91912488							
Standard Error	1.12288132							
Observations	16							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	6	222.505811	37.0843018	29.4118534	2.0134E-05			
Residual	9	11.3477621	1.26086246					
Total	15	233.853573						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	18.5653601	19.9173684	0.93211913	0.37560335	-26.490857	63.6215777	-26.490857	63.6215777
Financing of environmen	0.01247602	0.04277321	0.29167849	0.77714371	-0.0842837	0.10923574	-0.0842837	0.10923574
Environmental pollutio	-6.3651685	5.68812035	-1.1190284	0.29210375	-19.232591	6.50225369	-19.232591	6.50225369
Domestic garbage remc	-10.124426	13.0452801	-0.7760988	0.45759993	-39.6349	19.3860477	-39.6349	19.3860477
Listed Environmental Se	0.09838264	0.06961845	1.41316899	0.19124454	-0.0591052	0.25587051	-0.0591052	0.25587051
China's investment in er	0.59346138	0.27167606	2.18444492	0.05676186	-0.0211126	1.20803532	-0.0211126	1.20803532
proportion of green cre	0.34350256	0.15285656	2.24722156	0.0512353	-0.002283	0.68928813	-0.002283	0.68928813

Table 8 regression output

Through regression equation in excel table, the significance F is less than 0.05, so the thesis accepts results. The results clarify relationships of variables. Financing by environmental companies, environmental pollution, removal of domestic waste in China, listed environmental securities companies, China's investment in environmental pollution (100 billion yuan) and the proportion of green credit in GDP The Chinese government's investment in financial markets is used as the dependent variable to derive the following formula.

$$Y = 0.05935Z2 + 0.3435Z3$$

Observed from the formula, the slope coefficient of the variable X1 is 0.012476 and P-value is large than 0.1, -6.365168 is the slope coefficient of X2 and P-value is large than 0.1, -10.124426 is the slope coefficient of X3 and P-value is large than 0.1, the slope coefficient of Z1 is 0.09838 and P-value is large than 0.1, 0.05935 is the slope coefficient of Z2 and P-value is smaller than 0.1, and the slope coefficient of Z3 is

0.3435 and P-value is smaller than 0.1. Therefore, the increase or decrease of Y is more related Z2 and Z3 variables.

	<i>P-value</i>	
Intercept	0.375603352	>0.1
Financing of environmental companies	0.777143709	>0.1
Environmental pollution	0.292103748	>0.1
Domestic garbage removal volume	0.457599933	>0.1
Listed Environmental Securities	0.191244543	>0.1
China's investment in environmental pollution	0.056761859	<0.1
proportion of green credit in GDP	0.051235303	<0.1

Table 9 p-value

The Chinese government's investment in financial markets is largely affected by environmental pollution and the amount of waste cleaned up. In general, the research has the following findings:

From the data analysis, two variables in this experiment have a clear positive correlation with the dependent variable, so the null hypothesis is not valid.

From the data, the challenge variables are having high p-values, so the variables do not have significant relationship with dependent variable. So the Hypothesis I is false.

From the data, several variables in the opportunity have a clear positive relationship with the dependent variable (Chinese government's investment in financial markets) so Hypothesis II is correct.

The opportunities items, Z1(Listed Environmental Securities Companies), Z2(the proportion of green credit in GDP) and Z3 (China's investment in environmental pollution) has positive related to the Chinese government's investment in the financial

market. When the items in opportunities are increasing, then the Chinese government's investment in financial markets would increase.

This research proves that the increase in data on environmental pollution will lead to the Chinese government's investment in environmental pollution. This phenomenon will increase people's purchasing power for green credit, and as a result, the Chinese government's investment in financial markets.

Findings

From the scientific perspective of theory and method, the Chinese government invests in the financial market under sustainable development finance. The measurement results of six variables in this thesis indicate that the proportion of green credit in GDP and China's investment in environmental pollution will affect financial markets to varying degrees. Therefore, while the government is increasing investment in financial markets, it needs to adopt structural policies to increasing the investment in environment pollution and green credit.

However, sustainable financial is not just a problem for environmental protection companies. The same results also prove that the Chinese government's investment in financial markets has a certain degree of correlation with environmental pollution and environmental protection companies. Under the premise of sustainable development finance, how the Chinese government invests and manages financial markets is a complex and difficult decision.

7. CONCLUSION

In the process of China's sustainable development of finance, green financial products have become increasingly abundant, and green financial subjects have become increasingly diversified. According to green financial standards, enterprises should disclose environmental information; financial institutions should disclose information on the environmental impact of their business activities and investment and financing activities, and the opportunities and risks brought by environmental factors to financial institutions.

The thesis studies data from independent variables from 2002 to 2017. The Chinese government's investment in financial markets has a positive correlation with investment in environmental pollution in sustainable development. The Chinese government's increased investment in environmental pollution governance will encourage people to increase investment in green credit, so the Chinese government's investment in financial markets will also increase. Therefore, under the system of sustainable finance, the Chinese government's investment in financial markets will have an impact on the proportion of environmental pollution investment and green credit in GDP.

The factors affecting sustainable finance are not just the variables used in this thesis. The six factors are parts of sustainable development of environmental protection knowledge.

The capacity for sustainable development includes three aspects: first, the potential for environmental purification. It is determined by the output rate of resources, funds,

and information. It is reflected by indicators such as income levels and capital reserves. Second, environmental governance. The environment governance describes the quantity and quality of output, economic stability, and the impartiality of allocation; third, social support. Also the environment covers indicators of social self-regulation, resilience, reform carrying capacity, and social quality. The basic attributes of environmental sustainable development are: coordinated economic development characterized by high efficiency, harmony and regeneration. So, the further study should focus on the sustainable financial market under the social environment.

The stability and continuity of financial development shall be organically combined to determine the basic operating principles for sustainable construction of the financial environment.

There is a certain contradiction between the impulse for financial expansion on which the immediate economic growth depends and the development goals of optimized structure and efficiency. The rapid development of modern science and technology continues to inject stimulants into people's thinking. The introduction of engineering thinking into the financial field has led to major changes in the financial paradigm. The new financial paradigm requires the stability and continuity of financial operations to be based on high-tech support. However, this thesis, did not identify the relationship between sustainable finance with technology.

8. Reference

- Bai, Q. (1998, June 7). Sustainability Finance. *Financial Times*.
- Qu Xinran. (2019) Research on the long-term mechanism of sustainable development of green finance in China [J]. *Chinese and foreign entrepreneurs*, 2019 (23): 38-39.
- Salazar, J., (1998). Environmental Finance: Linking Two World [R]. *Financial Innovations for Biodiversity Bratislava*.
- Cowan E. (1999). Topical Issues in Environmental Finance [R]. *Asia Branch of the Canadian International Development Agency*.
- Katharina, P., Martin, R., and Stanislaw, G., (2000). Law and Finance in Transition Economies [J]. *Economics of Transition*, (8): 325-368.
- Siyu Sun (2019). Research on China's Green Finance Strategy and Sustainable Development [J]. *China Business Theory*, (18): 25-26.
- Zihu Chen. (2019)Research on Green Finance and Sustainable Development[J].*财经界(Academic Edition)*,(18):4-5.
- Lei Zhou, Zhen An (2018). Green Finance and Sustainable Development [J]. *People's Forum*, (18): 84-85.
- Zilin Wang. (2018) Research on green finance development and sustainable incentive mechanism in China in international comparison [J]. *Northern finance*, (07): 11-15.
- Qi Qiao, Tianqi Sun (2018). Thesis on the Construction of China's Green Finance Strategy System[J]. *China Business Theory*, (11):35-36.
- Jun Ma, (2015). On Building China's Green Financial System[J]. *Financial Forum*, 20(05): 18-27.
- Zhong, Li (2011). Research on Green Finance Innovation and China's Industrial Transformation [J]. *Contemporary Economy*, (4): 6-8.
- Li Du, Xin Zhang, (2012). Green Finance, Social Responsibility and Behavioral Choice of State-owned Commercial Banks [J]. *Journal of Social Sciences, Jilin University*, (5): 82-89.
- Xiaoxi Li, Guang Xia, et al., (2014). *China Green Finance Report 2014*[M]. Beijing:

China Financial Publishing House.

- Zhong Li, (2011). Research on Green Finance Innovation and China's Industrial Transformation [J]. Contemporary Economy, (4): 6-8.
- Aiping Liu, (2013). Research on Regional Economic Development and Financial Innovation under Economic Transformation [J]. Financial Theory and Practice, (3): 83-86.
- Ao Yang, Li Wang. (2018) [J]. Sustainable development of China's green finance. Suihua school College Report, 38 (02): 8~11.
- Zihe Zhao, (2017). Analysis of Green Finance and Sustainable Development [J]. China International Finance Jing (Chinese and English), , (19): 229.
- Lei Zhou, Zhen An. (2018) Green Finance and Sustainable Development [J]. People's Forum, (18): 84~85.
- Lian Gan (2018) Analysis of the long-term mechanism of sustainable development of green finance in China [J]. Value Engineering, 37 (08): 33~34.