

An Analysis on the Impact of ESG System Disclosure Quality on Corporate Financing Costs under the Carbon Peaking and Carbon Neutrality Goals

-- based on Chinese manufacturing enterprises

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Abstract. This study reviews the link between China's green development path and green finance in recent years, based on the background of the carbon peaking and carbon neutrality goals. The relationship between the quality of corporate ESG disclosure and financing costs of corporate is investigated by using data from Chinese A-share manufacturing enterprises for the period 2012-2020. The study uses a panel data model to estimate the regressions, and finds that The information disclosed about corporate governance and social responsibility in the ESG system has a significant impact on financing costs. As China gradually develops its ecological civilization, the impact of these two dimensions on the financing cost of manufacturing businesses grows more and more. This study examines the effects of the ESG system on business operations from the viewpoint of information disclosure and advances our knowledge of the connection between business sustainability and financing costs.

Keywords: The carbon peaking and carbon neutrality goals; ESG system; Information disclosure; Financing cost.

1. Introduction

The idea of green development has grown in importance as China has progressed through the twenty-first century. In "the outlook of scientific development" has made the requirement that development should be "comprehensive, coordinated and sustainable", which has laid the foundation for China's green development concept. At the 18th CPC National Congress in 2012, the establishment of ecological civilization was proposed in the "Five-sphere Integrated Plan" to change the the economic system development and develop green industries, which has become the path that is fervently supported by all spheres of society. In 2013, the "Decision of the CPC Central Committee on Several Major Issues of Comprehensively Deepening Reform" emphasized that "It is necessary to develop a comprehensive and organized system of ecological civilisation, and for that system to maintain the ecological environment.". In addition, the General Office of the State Council in 2014 (No.69) also requires that "The Central Bank, the Banking Regulatory Commission, the Insurance regulatory Commission, and the Securities Regulatory Commission should work with relevant departments to study financial policies to support the development of the environmental services industry". China has additionally extended the execution of the idea of environment protection, and the development of the green finance has been slowly placed on the plan. In 2015, the amendment of the Environmental Protection Law gave legal support and protection to the construction of the green financial system, enabling it to move forward more and more steadily. 2020, the "carbon peaking" and "carbon neutrality" goals were proposed to put up new specifications for the expansion of green financing in China.

As early as the 1960s and 1970s, green initiatives were already prevalent in the West, and both governments and individuals were able to recognize the importance of greening more clearly and reach a certain consensus in society. As a result, green initiatives are becoming an indicator of investors' interest when making corporate investments. At the same time, financial institutions are progressively realizing that investments in community development and labor protection may have a significant impact on project returns as well as play a significant role in deciding a company's ability

to finance. In particular, the appearance of the Equator Principles in 2003 has significantly increased financial institutions' focus on the social benefits of their client's investments. The ESG enterprise evaluation system was born in such an environment. ESG refers to environmental, social responsibility, and corporate governance, and are an expansion and advancement of those terms. ESG serves as a crucial benchmark for the entire world to assess the current state of green and environmentally friendly development of businesses. An ethical and accountable investment is where the idea of ESG initially emerged. [1]. The ESG evaluation system considers these three aspects as a whole, and considers them to have an impact on the long-term development and stability of an enterprise, so these three are also regarded as the three most important dimensions of corporate sustainable development.

With the steady improving and advancement of green development system, the role of ESG in evaluating enterprises, especially their green development, is increasingly manifested, while better ESG performance feeds into corporate performance, empowering businesses to create a scenario where both social responsibility and corporate growth can coexist. Therefore, this win-win situation can motivate excellent enterprises to make full disclosure of their ESG, so as to gain more benefits in the market competition.

When it comes to green development, it is necessary to consider the manufacturing industry, which is the hardest hit industry for green protection. Along with a high proportion of pollutant emissions, the manufacturing industry has a greater impact on the environment than other industries [2]. The huge impact on the environment make manufacturing a typical target for green development research. Therefore, the manufacturing industry is chosen as the goal of this study was to more thoroughly assess the substantial effect that ESG has on Chinese enterprises that are part of the green development system. This paper examines the association between Chinese manufacturing enterprises' financing costs and the quality of ESG score disclosure since 2012 and up to 2020, when the carbon peaking and carbon neutrality goals are proposed, using data from Chinese A-share manufacturing enterprises from 2012 to 2020. The research is based on domestic and international studies on the association between ESG performance and enterprises' financing costs. Because there is no consistent measurement index for ESG evaluation at home and abroad, there are different evaluation methods and evaluation criteria for ESG in different studies on ESG [3], which leads to differences in the results. Moreover, due to the increasing influence of ESG on corporate value [4], enterprises disclose ESG-related data with certain distortions, which makes ESG-related research potentially distorted. By examining the link between ESG and businesses from the standpoint of information disclosure, the study on the quality of corporate ESG disclosure will offer a fresh perspective on ESG research.

2. Literature Review

2.1 Information Disclosure

Various market participants have long recognized corporate information disclosure as a connection between the capital supply side and the capital demand side in the capital market. The financing cost of enterprises, as an important variable affecting the business development of enterprises, is also the object of attention of all parties in the market. Therefore, market research has increasingly focused on the connection between the standard of corporate information disclosure and the price of corporate finance. By enhancing the quality of information disclosure, businesses can lower the level of risk investors take into account when estimating future returns, and as a result, the rate of return investors demand drops, resulting in a corresponding drop in financing costs. Handa et al. theoretically demonstrate that Investors would demand less for such companies, bid less, and demand greater returns on their investments as a result of assigning higher levels of risk to equities with low levels of transparency, raising the cost of financing [5]. Bhushan find that increased disclosure also reduces uncertainty in forecasts about the corporate situation, resulting in more attention, less divergence in forecasts among analysts, and therefore lower financing costs for the corporations [6]. In addition,

Kim et al., through their analytical studies, argue that corporations that by increasing information transparency, one may be able to draw in major investors or lessen the degree of information asymmetry between various investor groups, improving stock liquidity and cutting down on financing costs. [7]. Bloomfield et al. use an experimental study to find that improved disclosure leads to larger stock bids, more market liquidity, and thus cheaper financing costs [8]. Healy et al. argues that public companies with higher quality disclosure have smaller bid-ask spreads, which reduces the transaction costs of stocks [9].

2.2 ESG and Financing Costs

The relationship between ESG, an important indicator for evaluating firms today, and the cost of corporate finance is likewise an important area of research. Dimson et al. find that corporate spending on ESG is effective in reducing total financial costs [10]. ElGhoul et al. Find that corporate ESG performance does lower financing costs, and the relationship between the two is stronger when the market environment is harsher and the institutions are less reliable, according to a global analysis of enterprises market capitalization and corporate ESG performance in several nations [11]. Ye et al. came to the conclusion that the financing costs is considerably and adversely correlated with the quality of information disclosure related to environment [12]; According to a study by Shi et al., actively engaging in corporate social responsibility may significantly lower the cost of loan financing for manufacturing businesses [13]; in terms of corporate governance, Jiang et al. that the strengths and weaknesses of listed companies' governance mechanisms significantly affect the financing costs [14].

The association between ESG disclosure quality and financing costs is partly controversial in domestic and international studies. Krüger discovered that the quality of the information influences how investors react to ESG information, and that the more transparent the ESG information disclosure, the more favorable the investors' reactions to ESG information are. [15]; Meanwhile, Ho et al. conclude that ESG disclosure is negatively related to corporate liquidity in a study of US and Japanese listed enterprises [15]; Brammer et al. distinguish the quality of ESG disclosures and argue that differences in the quality of different ESG disclosures reflect the different business motives of enterprises and therefore have different impacts on company value [17].

3. Study Design

3.1 Model Setting

In this study, a static panel linear regression model is used to examines the association between the corporate ESG disclosure and the costs of corporate finance in equation (1)., where Y_{it} is the dependent variable representing the cost of financing of listed enterprises i at time t , ESG_dis_{it} is a set of indicators representing the quality of corporate ESG disclosure, X_{it} is the set of control variables, and f_i and g_t are the effects due to unobservable individual behavior with time variation, respectively. In the estimation below, all parameters in equation (1) are estimated with fixed effects and random effects, respectively, and which estimation result is selected is decided using the Hausman test.

$$Y_{it} = \beta \cdot X_{it} + \gamma \cdot ESG_dis_{it} + f_i + g_t + e_{it} \quad (1)$$

3.2 Data Sources and Variable Design

In conducting static panel regressions via equation (1), this study will use A-share manufacturing enterprises from 2012 to 2020 as the sample. The 2012 iteration of the China Securities Regulatory Commission's industry classification criteria is used as the basis for the classification criteria for manufacturing enterprises. Since the financing costs of enterprises in financial crisis differ greatly from those of businesses that are running normally and are beyond the purview of this study's discussion, the sample does not include data that were or are presently ST. Additionally, data having null values of study-related variables were eliminated to exclude the influence of unreported data on

the findings. The final sample after data collation contains 9 years of data information for 2020 companies. For all relevant variables covered in this study, the CSMAR database provided the financial information and ESG disclosure quality scores were obtained from the Bloomberg database. For all variables, outliers outside the 5% to 95% quantile were replaced.

To more comprehensively measure the financing cost of firms, this study uses two proxy variables to characterize the financing cost. First, referring to Han et al., debt-to-interest ratio is used to measure the cost of financing a firm's debt, and a higher indicator indicates a higher interest expense per unit of debt [18]. Among them:

debt-to-interest ratio = (net capital expenditure + interest income) / (short-term debt + long-term debt);

short-term debt = short-term borrowing + notes payable + long-term borrowing due within one year;

long-term debt = long-term borrowing + bonds payable + long-term payable + special payable.

Second, the market value of the company is represented by Tobin's Q value. Tobin's Q, which determines whether a capital market value is overpriced or undervalued, is the ratio of a capital market value to its replacement value. A corporation may obtain capital more cheaply through fresh stock issue the higher Tobin's Q is, which indicates to investors how capable of expansion a company is.

A several of control variables are added to help reduce the bias that unobservable enterprise heterogeneity might have on the estimation results in equation (1). The return on total and net assets are used to represent the financial efficiency status; the liquidity ratio and quick ratio are use to evaluate a company's short-term capacity to pay its debts.; the net profit growth rate is used to represent the development capability of enterprises; the asset turnover ratio is used to represent the quality of the operation of enterprises' assets, and the logarithm of the size of enterprises' assets is used to characterize the enterprise size.

The following Tables 1 and 2 show the definitions and descriptive statistics for each variable.

Table 1. Variable Definition

Type	Name	Data Source	Definition
Y_{it}	I/B	CSMAR	Debt-to-interest Ratio = (Net Capital Expenditure - Interest Income)/(Short-term Debt + Long-term Debt)*100%
	Q	CSMAR	Tobin's Q = Market Value / (Total Assets - Net Intangible Assets - Goodwill)*100%
ESG_dis_{it}	E_dis	Bloomberg	Bloomberg ESG Disclosure Score
	S_dis	Bloomberg	Bloomberg ESG Disclosure Score
	G_dis	Bloomberg	Bloomberg ESG Disclosure Score
X_{it}	ROA	CSMAR	Total Return on Assets = (Total Profit + Interest Expense)/Total Average Assets*100%
	ROE	CSMAR	Return on Net Assets = Net income / Average Shareholders' Equity *100%
	LR	CSMAR	Liquidity Ratio = Liquidity Assets / Liquidity Liabilities
	QR	CSMAR	Quick Ratio = Quick Assets / Liquidity Liabilities
	NG	CSMAR	Net Profit Growth Rate
	AT	CSMAR	Asset Turnover Ratio = Total Turnover / Total Assets
	$lnasset$	CSMAR	Logarithm of Total Assets = ln(Total Assets)

Table 2. Variable Description Statistics

Name	Size	Average	Standard Deviation
I/B	16437	3.21	47.69

<i>Q</i>	16437	2.50	2.79
<i>E_dis</i>	16437	3.37	6.99
<i>S_dis</i>	16437	7.51	12.16
<i>G_dis</i>	16437	14.34	20.98
<i>ROA</i>	16437	0.07	0.18
<i>ROE</i>	16437	0.06	1.40
<i>LR</i>	16437	2.68	3.59
<i>QR</i>	16437	2.13	3.18
<i>NG</i>	16437	-0.73	32.27
<i>AT</i>	16437	0.67	0.46
<i>lnasset</i>	16437	19.36	7.28

According to Table 2, the average of the debt-to-interest ratio and Tobin's Q for the two dependent variables are 3.21 and 2.5, respectively, and their standard deviations are 47.69 and 2.79, respectively, while the mean values of the three dimensions of ESG information disclosure scores are 3.37, 7.51 and 14.34, respectively, and their standard deviations are 6.99, 12.16 and 20.98, respectively. The quality of information disclosed by various corporations in relation to the three dimensions of corporate governance, social responsibility, and the environment varies significantly.

4. Analysis of empirical results

4.1 Static Panel Fixed Effects Estimation Analysis

First, a linear regression was conducted using the data of manufacturing companies from 2012-2020, and the Hausman test was used to compare the fixed effect to the random effect, and the test chose the fixed effect to estimate the regression findings while rejecting the random effect. According to Table 3's outcomes, it can be determined that the quality of company governance disclosure has a significant effect on the debt-to-interest ratio at the 5% level, with a negative coefficient. This suggests that as the transparency for company governance improve, the financing cost as characterized by the debt-to-interest ratio decreases, which is consistent with the intuition of reality. The fact that the financing cost of manufacturing enterprises is so strongly related to their corporate governance disclosure shows that the current market attaches importance to the corporate governance aspects of manufacturing enterprises, and also shows that the corporate governance of manufacturing enterprises may be so uneven that investors would be so concerned about their disclosure. In addition, The level of environmental and social responsibility disclosure and an enterprise's debt-to-interest ratio do not significantly correlate with one another. It is presumed that the environmental and social responsibility information disclosure does not directly affect the debt and interest of enterprises in the short term because of the long production and operation cycles of manufacturing enterprises, and therefore is not effectively reflected in the financial data of enterprises.

For another proxy variable of financing cost, Tobin's Q, on the estimation of data based on 2012-2020, it can be seen that at the 1% level with positive coefficients, company governance disclosure quality and social responsibility have a considerable impact on it. This indicates that the higher the social responsibility and corporate governance disclosure quality scores, investors are more aware of an enterprise's capacity for expansion when its Tobin's Q is greater, which also results in a decrease in the relative cost of acquiring capital through subsequent share issuance. The regression results for Tobin's Q complement the elements that affect the cost of corporate finance and facilitate a more comprehensive view of this study.

Table 3. Static Panel Estimation Results for 2012-2020

Dependent variable	I/B	Q
Independent variable		
<i>E_dis</i>	-0.26 (-1.8)	0.005 (0.7)
<i>S_dis</i>	0.24 (1.63)	0.02*** (2.87)
<i>G_dis</i>	-0.22** (-2.58)	0.03*** (6.07)
<i>ROA</i>	2.94 (1.29)	-7.98*** (-60.97)
<i>ROE</i>	0.06 (0.22)	-0.006 (-0.48)
<i>LR</i>	0.04 (0.05)	-0.12** (-2.48)
<i>QR</i>	0.98 (1.05)	0.09 (1.63)
<i>NG</i>	-0.0004 (-0.04)	0.002*** (3.09)
<i>AT</i>	1.10 (0.83)	1.31*** (15.37)
<i>lnasset</i>	0.27*** (3.81)	-0.82*** (-18.00)
<i>Constant</i>	-3.02 (-1.62)	19.56*** (19.62)

Note: t-statistics in parentheses, significant at the 10%, 5%, and 1% levels is denoted by the symbols *, **, and ***.

4.2 Trend Analysis of the Impact of Explanatory Variables

With the further deepening of the concept of ecological and environmental protection development, the market environment is continuously changing. In order to further explore the changing trend of the impact of environment, social responsibility, and corporate governance on corporate financing cost, This analysis uses 2015 as the time node for the application of the updated Environmental Protection Law, and considering the lag of the policy, the panel regression estimation of fixed effects is re-run with the data samples of 2016-2020 and 2017-2020, and Tables 4 and 5 below display the outcomes. From the regression results it can be seen that for the debt-to-interest ratio of firms, there is a significant effect of corporate governance disclosure quality with a negative coefficient in both regression results for 2016-2020 and 2017-2020, which is the same as the results of previous studies. In addition, it can be found that the absolute value of the estimated coefficients becomes larger and more significant as the year increases, which indicates the effectiveness of the green development deepening reform on green finance in China.

For Tobin's Q of enterprises, in both estimation outcomes, social responsibility disclosure is still significantly impacted at the 1% level with a positive estimated coefficient, and the absolute value of the estimated coefficient rises over time, in keeping with estimates from previous result. However, in the two estimated results for 2016-2020 and 2017-2020, it is found that there is no significant effect of corporate governance disclosure quality on Tobin's Q. This probably because that Tobin's Q reflects whether a enterprise is overvalued or undervalued through the relationship between its market value and its replacement value, and uses it to infer investors' willingness to invest in the enterprise, thus characterizing the corporate financing cost. Therefore, in this segment, investors' evaluation of a company's future development ability is an important factor in influencing Tobin's Q. Social responsibility is a better indicator of a company's quality and sustainable development posture compared to corporate governance, especially after the modification to the Environmental Protection Law went into effect, the external performance of a company is more emphasized. This explains why

the influence of corporate governance is little but the quality of social responsibility disclosure has an increasing weight.

Table 4. Static Panel Estimation Results for 2016-2020

Dependent variable	I/B	Q
Independent variable		
<i>E_dis</i>	-0.16 (-0.95)	0.006 (0.72)
<i>S_dis</i>	0.10 (0.52)	0.035*** (3.98)
<i>G_dis</i>	-0.44** (-2.57)	-0.008 (-0.74)
<i>ROA</i>	14.70** (2.57)	-0.06 (-0.20)
<i>ROE</i>	-0.05 (-0.22)	-0.02* (-2.13)
<i>LR</i>	0.90 (0.80)	-0.004 (-0.07)
<i>QR</i>	-0.42 (-0.33)	0.03 (-0.49)
<i>NG</i>	-0.002 (-0.17)	0.0002 (0.61)
<i>AT</i>	0.44 (0.26)	1.72*** (15.85)
<i>lnasset</i>	0.35*** (3.79)	-0.82*** (-12.14)
<i>Constant</i>	-0.92 (-0.31)	19.28*** (12.88)

Note: t-statistics in parentheses, significant at the 10%, 5%, and 1% levels is denoted by the symbols *, **, and ***.

Table 5. Static Panel Estimation Results for 2017-2020

Dependent variable	I/B	Q
Independent variable		
<i>E_dis</i>	-0.02 (-0.12)	0.006 (0.72)
<i>S_dis</i>	0.12 (0.66)	0.033*** (4.09)
<i>G_dis</i>	-1.71*** (-8.46)	0.008 (0.51)
<i>ROA</i>	14.32*** (2.90)	1.04*** (4.47)
<i>ROE</i>	-0.03 (-0.17)	-0.03*** (-3.81)
<i>LR</i>	0.12 (-0.12)	0.04 (0.79)
<i>QR</i>	0.76 (0.68)	-0.10 (-1.71)
<i>NG</i>	-0.001 (-0.18)	0.0001 (0.38)
<i>AT</i>	0.86 (0.54)	-0.14 (-1.32)
<i>lnasset</i>	0.32*** (3.44)	-0.27*** (-4.44)
<i>Constant</i>	16.80*** (5.21)	7.93*** (5.75)

Note: t-statistics in parentheses, significant at the 10%, 5%, and 1% levels is denoted by the symbols *, **, and ***.

5. Conclusion and Recommendation

This study finds through fixed effects panel regression using statistics on Chinese manufacturing enterprises registered on A-share from 2012 to 2020 that there is an influence of corporate social responsibility and company governance information disclosure quality on the financing costs in the ESG evaluation system. With the construction and development of China's green ecological system, the impact of social responsibility and company governance disclosure quality on financing costs will become more and more significant. This is in line with the development philosophy that China is currently encouraging and promoting. The construction of ecological civilization is a major national plan for China, and promoting enterprises toward the goal of sustainable development is a higher requirement for China's current business development, which points to the need for enterprises to give more consideration to the relationship between enterprises and the environment, society and the country, in addition to maintaining good business performance themselves in the process of development. By assessing the quality of ESG disclosure of manufacturing enterprises, the financing cost can be restrained and manufacturing enterprises can be guided to new and better development. Therefore, one of the crucial goals for the advancement of ecological civilisation and green finance in China in the next stage should be to quicken the institutional construction of ESG information disclosure.

In terms of financing channels, the state and government should actively encourage banks or relevant financial institutions to provide better financial support to enterprises with higher quality ESG disclosure, but at the same time, they should also consider the content of their disclosure and comprehensively evaluate the ESG performance of enterprises. Meanwhile, establishing a negative list and criteria to identify enterprises with poor ESG performance through the quality of ESG information disclosure, and guiding financial institutions to reduce loans to them, so as to force enterprises to strengthen the quality of ESG information disclosure. In addition, encouraging long-term investment institutions to pay more attention to enterprises with good ESG disclosure quality, in addition to obtaining more stable and guaranteed long-term returns, can also promote long-term capital to fully activate the vitality of sustainable enterprises, so that such high-quality enterprises in a stable and good development.

From the perspective of policy system, the establishment of ESG-related disclosure system in stock exchange is still not perfect, and most of the companies still mainly disclose voluntarily. By strengthening the management of disclosure information, establishing a more effective mandatory disclosure system, and enhancing the identification of information authenticity and cracking down on falsified information, we can reasonably guide market expectations, trade in a more transparent market environment for investors and investment institutions, and reduce the problem of capital mismatch. To the corresponding policy system to escort, people should also concentrate on raising the awareness of enterprises and green development concept, and improve the supervision and accountability of corporate ESG scores, strengthen cooperation with third-party institutions to establish a data collection and collation system, and continually push for the development of the green financial sector and the enhancement of the ESG grading system.

References

- [1] Michelson G, Wailes N, VanDerLaan S, Frost G. Ethical investment processes and outcomes. *Journal of Business Ethics*, 2004, 52 (1):1-10.
- [2] Yan Fengzhu, Su Li, Qiao Juan. Research on influence factors of knowledge transfer from implementation consultant to key user in ERP--An empirical study based on manufacturing enterprise. *Scientology Research*, 2011, 29(01):79-83+120.
- [3] Cao Qun, Xu Qian. Study on the construction of financial "environmental, social and governance" (ESG) system. *Financial Regulation Research*, 2019(04):95-111.

- [4] Zhang Lin, Zhao Haitao. Does corporate environmental, social and corporate governance (ESG) performance affect corporate value?--An empirical study based on A-share listed companies. *Wuhan Finance*, 2019(10):36-43.
- [5] Handa P. and Linn S. Arbitrage pricing with estimation risk. *Journal of Financial and Quantitative Analysis*, 1993, 28(1):81-100
- [6] Bhushan R. Firm characteristics and analyst following. *Journal of Accounting and Economics*, 1989, 11(2-3):255-275
- [7] Kim O. and Verrecchia R. Market liquidity and volume around earnings announcements. *Journal of Accounting and Economics*, 1994, 17: 41-68.
- [8] Bloomfield R. and Wilks T. Disclosure effects in the laboratory: liquidity depth and the cost of capital. *The Accounting Review*, 2000, 75(1):13-41.
- [9] Healy P.M., Hutton A. and Palepu K. Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary Accounting Research*, 1999, 16:485-520.
- [10] Dimson E., Karakas O. and Li X. Active ownership. *Review of Financial Studies*, 2015, 28 (12):3225-3268
- [11] El Ghoul S., Guedhami O. and Kim Y. Country-level institutions, firm value, and the role of corporate social responsibility initiatives. *Journal Of International Business Studies*, 2017, 48 (3):360-385
- [12] Ye, Chengang, Wang Zi, Wu Jianfeng, Li Hui. External governance, environmental information disclosure and the cost of equity financing. *Nankai Management Review*, 2015,18(05):85-96.
- [13] Shi Min, Cai Xia, Geng Xiulin. Corporate social responsibility, R&D investment and the cost of debt financing in dynamic environment—the empirical study based on China's private listed companies in manufacturing industry. *Journal of Shanxi University of Finance and Economics*, 2017, 3.
- [14] Jiang Yan and Lu Zhengfei. Corporate governance and the cost of equity capital. *Quantitative Economic and Technical Economics Research*, 2009, 2.
- [15] Krüger P. Corporate goodness and shareholder wealth. *Journal of Financial Economics*, 2015, 115 (2):304-329.
- [16] Jennifer Ho L.C. and Taylor M.E. An empirical analysis of triple bottom-line reporting and its determinants: evidence from the United States and Japan. *Journal of International Financial Management & Accounting*, 2007, 18 (2):123-150.
- [17] Brammer S., Brooks C. and Pavelin S. Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, 2006, 35 (3):97-116.
- [18] Han Qian, Yuan Yufei, Wu Boqiang. Short-term global capital flow and firms' cost of debt. *Economic Research*, 2017, 6.