

An analysis of the Effect of Active Executive Departures on the Debt Financing Costs

Rong Huang

School of Accounting, Jiangxi University of Finance and Economics, Nanchang, Jiangxi, China

Abstract:

As an important aspect of corporate governance, executive behavior has always been a major topic of academic concerns. As executive changes have a significant impact on corporate investment and financing decisions, this paper analyzes and tests the relationship between active executive departures and debt financing costs based on the sample data of A-share main-board listed companies in China from 2010 to 2020. The study found that: (1) active executive departures significantly increases the debt financing costs; (2) High corporate disclosure quality and high analyst focus help mitigate the impact of rising debt financing costs caused by active executive departures. Further analysis shows that the higher the proportion of institutional investors holding shares and among the companies that are state-owned in nature, the less the impact of active executive departures on debt financing costs. The conclusion of this paper not only helps to enrich the related study achievements of corporate governance, but also helps to clarify the influencing factors of debt financing costs of companies. Meanwhile, it can provide decision-making reference for listed companies to improve corporate governance and reduce the debt financing costs as well.

Keywords: *Active executive departures; Debt financing costs; Accounting information quality; Analyst focus*

I. INTRODUCTION

The Pecking Order Theory asserts that the first financing mode considered by companies is internal financing, followed by external financing. However, internal financing is hardly sufficient to meet the capital demand for long-term development of companies, which makes the external financing particularly important^[1]. The two major types of external financing are debt financing and equity financing. In China, the regulatory authorities have set more stringent threshold conditions for equity financing, both in terms of initial public offering financing or post-listing refinancing, with complex procedures and high transaction costs. While debt financing is characterized by simple procedures, relatively low transaction costs, more flexible modes, as well as tax shield and leverage effects, which can improve the competitiveness of companies, thus making bank-based debt financing a regular financing mode for companies^[2].

When making loans, banks will identify and measure the credit risk of the borrowers by examining their own endowments (e.g. enterprise scale, profitability, business risk, etc.) to screen the borrowers, and

to determine the credit spread to be charged^[3]. Due to the prevalence of information asymmetry, banks are unable to accurately grasp the actual operation status of companies, and identify and speculate the credit risk of borrowers mainly through external disciplinary mechanisms and signals sent by the enterprise behavior, thereby determining the loan spread to be charged from borrowers within the scope of acceptable level of risk. Based on the value at risk theory, the loan spread charged by the bank moves in tandem with the level of financial risk of the enterprise.

As executives play a pivotal role in corporate strategy formulation and debt financing^[4-5], changes in executives will have a long-term impact on the development strategies of companies, investment and financing decisions and business performance, and will also affect the business risks faced by the enterprise^[6]. There are three types of executive changes: mandatory change, active executive departures and retirements. Of these, mandatory change, as the collective decision led by companies, is usually an after-the-fact punishment for executives with poor competence, and this after-the-fact correction often heralds positive improvement of the future development prospect of the enterprise, while the enterprise can choose the timing wisely to better control the enterprise risk^[6-7]; The active executive departure is an individual-led autonomous decision of the executives, which is more often caused by the company's failure to meet the expectations of the executives, and it often indicates that the executives are not optimistic about the development prospects of the company and choose to "vote with their feet", which is sudden and unpredictable^[8]; And retirement, on the other hand, is a normal change when executives reach the statutory retirement age and are able to be reasonably anticipated and pre-arranged by the companies. By comparison, active executive departures are direct reflections of the executive's personal judgment and willingness to leave. So for banks, which are extraordinarily concerned about corporate risk, will they be concerned about incidents of active executive departures? Will they reassess corporate credit risk and adjust corporate loan spreads on this basis, in other words, will it affect the debt financing costs of corporate?

Executives are in charge of the daily business activities of the company and control more private information about the enterprise. The active departures of the executives often indicate that they are not optimistic about the future development of the enterprise and choose to leave actively to protect their personal interests. The active executive departures both send a message about the growth of the business and increase the risk of business operations. The existing literature provides evidence for this from the negative reactions of capital markets^[9]. The impact of the active executive departures on the business activities mainly lies in the fact that, firstly, it will lead to the loss of important human capital of the company and it is will be difficult for the enterprise to find a successor who is compatible with the development and needs of the enterprise in the short term; Secondly, the departing executives have established a strong trusting relationship with other executives during the course of his or her tenure, and have developed better teamwork skills and personal networks, and other executives may choose to quit after the departing executives, resulting in a larger turnover of staff in the company; Thirdly, the relationship resources tied to the individual executives may be lost with the departure of the executives, resulting in an impact on the access of the business to some key resources required for business development; Fourthly, the successor executives may make adjustments to the organizational structure and

personnel arrangement of the company based on their personal work habits or preferences, and at the same time, as they are not yet familiar with the development and operating mechanism of the enterprise and lack of prestige in the enterprise, which may easily lead to inefficient enterprise decision-making and inefficient operating results. We suggest that the credit risk associated with the active executive departures will cause banks to increase corporate lending spreads and increase the debt financing costs for companies.

In terms of information transmission, on the one hand, higher quality of information disclosure can provide a more comprehensive and reliable signal of enterprise operation and management, which can greatly reduce the degree of information asymmetry between the company and external creditors^[10], and reduce the cost of information use. Meanwhile, companies with good performance are more willing to disclose high-quality reports than those with poor performance, thus leading to a continuous increase in corporate social credit, which can effectively reduce the debt financing costs for companies. On the other hand, analysts are serving as important market information intermediaries with a wide range of information sources, channels, and keen and professional insight and analysis skills, which can quickly generate high-quality information reports, and widely disseminate through diverse information delivery channels, greatly reducing information asymmetry, and also exerting a supervisory and restraining effect on corporate behavior to a certain extent^[11]. Therefore, we believe that higher quality of information disclosure and higher analyst focus would effectively dampen the positive impact of active executive departures on the cost of corporate debt financing.

This paper analyzes and examines the impact of active executive departures on corporate debt financing costs based on data from a sample of A-share main board listed companies in China from 2010 to 2020. The study found that active executive departures increase the debt financing costs for companies, and that the effect is more pronounced in companies with low accounting information quality and low analyst attention. The empirical results of this paper support the logical inference of this paper, that the active executive departures will increase the company's financial risk and increase the debt financing costs, and that this effect is also influenced by the quality of information disclosure and the level of analyst focus.

The contributions of this paper lie in the fact that, on the one hand, most of the existing literature has discussed the impact of executive change on companies from the perspective of corporate investment and external investors^[12], and has also focused mainly on executive change in terms of mandatory changes, with less attention paid to the reactions of external creditors, especially banks, to the active executive departures, and also less study on the sense of autonomy and autonomous behavior of executives. On the other hand, the existing literature has discussed the factors influencing the corporate debt financing costs from the perspective of industry environment, media coverage, corporate tax avoidance and executive background^[13-14], but ignored the impact of executive changes on debt financing costs of corporate. The study of this paper both extends the study on executive change and provides more complete empirical evidence on executive behavior and loan spreads in financial institutions.

The follow-up of this paper is arranged as follows: Part II is the hypothesis derivation and formulation, Part III is the study design and descriptive statistics, Part IV is the analysis of the empirical results, Part V is the robustness testing and further analysis, and finally the conclusions and proposals for the paper.

II. HYPOTHESIS DERIVATION AND FORMULATION

2.1 Active executive departures and Debt financing costs

As the company's top executive in charge of the company's investment and business decisions, change of position is an important event experienced by the company, and will have a significant impact on the production development of the company. In terms of principal-agent relationships, executive change can be divided into mandatory executive change where the principal (shareholders) is the dominant party and active executive departures where the agent (executive) is the dominant party. Company-led executive change usually refers to the forced replacement or dismissal of executives for not meeting the needs of company development^[15-16], the dominant role of such executive change is mostly taken by the companies, thus allowing the companies to choose right timing to better control risks. Rao Pingui and Xu Zihui (2017) provided empirical evidence for this from the perspective of economic policy uncertainty^[6]. Executive-led executive is an autonomous decision by the executives and is an executive-initiated departure triggered by the company not meeting the executive's expectations. On the basis of the hypothesis of ideal economic man, the active executive departures is an executive aiming to maximize personal interests, which is sudden and unpredictable for companies, and will bring about a certain degree of impact on the operation and management of companies, and will also bring potential losses and risks to the future business development of companies, resulting in more uncertainties. The specific areas of focus are as follows:

Firstly, the active executive departures will leave the company deprived of important human capital. In the course of the previous employment, executives have a better understanding of the business development and actual needs of the company, and their managerial skills and qualities are gradually integrated with the strategy and business activities of the company, forming an important and core human resources for the company. Meanwhile, they also profoundly influence the formation of corporate culture, and moreover largely dominate the development of the company and have a more profound impact on the company. Therefore, the active executive departures will directly lead to the loss of such important human capital of the company, and although the company will take measures to make replacement hires in a timely manner, it is also difficult to accurately identify the competency of the candidate executives in short term, not to mention judging whether they are suitable for the actual development needs of the company^[6].

Secondly, the active executive departures may lead to the loss of other executives. An internal relationship network is established between executives and other executives based on work affairs or other activities, creating the relationship and structure within the company in which value is generated, allocated, transferred and used. This cooperation built on the basis of work factors also gradually generates trust between executives and other executives due to the continuation of time, and constructs an effective mechanism for mutual communication and exchange, which greatly reduces mutual information

asymmetry and greatly saves transaction costs^[17]. Especially the ability to collaborate efficiently between executives and other executives based on an internal network of relationships facilitates the timely response to changes in the external environment, which may be more favored by companies in the current transition period and is prevalent in practice. For example, when Edison, the former Deutsche Bank executive, resigned from Merrill Lynch to join, he brought 50 of Merrill Lynch's best employees to Deutsche Bank, which created a miracle performance for Deutsche Bank. Therefore, the active executive departures is no longer the departure of individual executives, but is more likely to be accompanied by the collective departures of other executives or middle-level managers, which will result in a greater loss of human capital.

Furthermore, the active executive departures often results in the loss of certain important relationship resources. Although China's market economy has grown to a large extent, the concept of "relationship oriented" still exists. The establishment and maintenance of various social relationships, such as client relationship, government relationship and bank relationship are conducive to the acquisition of important or scarce resources^[6], and play a very important role in the business development of companies. For example, Yu Wei et al. (2012) found that the political affiliation of executives can facilitate the acquisition of resources for companies and alleviate the financing constraints^[18]. However, such relationship resources are mostly built up by the personal reputation and trust of the executives. Once the executives actively depart, the various social relations resources attached to the executives will be also lost, which will have a significant impact on the development of the company.

Finally, the active executive departures often bring about changes or even imbalances in the internal organizational structure and business activities of the company. The successor executives may adjust the organizational structure and personnel arrangements of the company based on their personal preferences and work habits, or in order to establish personal prestige after the departure of the executives. Meanwhile, the successor executives may not be familiar with the business and operation mechanism of the company due to the fact that they have just assumed their duties, which may lead to inefficiency in the operation of the company, as well as inefficiency in the employees' work execution due to lack of personal prestige, thus affecting the effectiveness of implementation of the company's decision.

Furthermore, due to the asymmetry of information, executives, especially core executives, are more familiar with the current situation and future development of the company, and they often have more private information about the company, and their active departures often indicates that they are not optimistic about the future development prospect of the company and choose to leave actively to protect their personal interests. Therefore, the active executive departures often send negative signals to the outside world. A large number of studies have shown that the capital market has a significant negative response to the active executive departures^[19]. This suggests that investors hold negative attitude towards the future development of the company after the active executive departures^[9]. The creditor is the important stakeholder outside the enterprise and do not fully grasp the internal production and operation condition of the enterprise. Therefore, the departure of company executives as an important way of information transmission, the information of the increased risk of the company will be captured by the

bank, and will become an important reference for the bank to judge the credit risk of the company, which will lead the bank to improve the loan spread to the enterprise and increase the debt financing costs of the enterprise.

Based on the above analysis, this paper proposes the study hypothesis H1:

H1: The debt financing costs will increase significantly and the financial risk of the enterprise will increase significantly after the active executive departures.

2.2 Active executive departures, Quality of Information Disclosure and Debt financing costs

Although the active executive departures will lead to more uncertainty and operation risk in the production and operation activities and corporate value of the company, increasing the risk faced by external stakeholders, there is variability in the risks caused by active executive departures for different companies, and such variability is difficult for external creditors to identify accurately due to information asymmetry, which affects the debt financing costs of companies. Easley et al. (2016) argued that information accuracy can reduce the systemic risk caused by information asymmetry, which makes it an important factor affecting the cost of capital^[20]. And as the quality of information disclosure improves, the level of information asymmetry between listed companies and external creditors will be reduced correspondingly^[10], and a higher information disclosure quality can send a positive signal to the outside world about the business condition of the company^[21]. Companies with better performance tend to be more willing to disclose high-quality reports than those with poor performance. And as the accounting information quality improves, the social credit of a company will be strengthened constantly and correspondingly be better recognized by the outside world. Companies with high information disclosure quality are able to provide creditors with more comprehensive information, thus effectively reducing the cost of information use by creditors, which will be part of the debt financing costs in the process of corporate financing. Welker (1995) found that there was a pronounced negative relationship between the level of information disclosure and company's bid-ask spread and the debt financing costs through empirical analysis^[22], further arguing that the higher the quality of information disclosure the smaller the bid-ask spread in the stock market, in other words, the smaller information asymmetry in capital cost. Zhou Jixian (2011) also provided evidence for the impact of accounting information quality on debt financing costs in terms of information sharing^[23]. Thus, by reducing the level of information asymmetry, the quality of information disclosure can effectively alleviate the external creditors' perceptions of the change of the business activities caused by active executive departures, which in turn affects the debt financing costs, and a higher information disclosure quality can effectively restrain the impact of active executive departures on the debt financing costs of companies. Based on the above analysis, this paper proposes the study hypothesis H2:

H2: The impact of Active executive departures on the debt financing costs is more pronounced in companies with low information disclosure quality than in those with high quality disclosure.

2.3 Active executive departures, Analyst Focus and the Debt financing costs

As a market information intermediaries external to the company, the analyst plays the role of information transmission between the company and the external market^{[10][24]}, and its presence can greatly reduce the information asymmetry to a large extent. The process of analyst participation in the market is essentially a process of all round intervention in the collection, analysis and transmission of information^[25]. In the process of information production, analysts possess a wide range of access to information sources and a keen ability to analyze and interpret various primary information both publicly and non-publicly so as to deeply analyze and interpret the company's financial situation and operation development, and to dig deep to form high quality information and provide the information to the public; In the process of information analysis, as analysts possess more professional analysis skills, which allow them to be able to quickly extract key and important information from the redundant company announcements and news information, and collate them into a form that is easily understood by investors; In the process of information transmission, analysts have possess a wide range of information transmission channels, and are able to provide various forms of information such as study reports, recommendation ratings and earnings forecasts to the outside world through various channels such as client groups, the internet, TV, etc., so the information provided by analysts can be disseminated quickly and timely in a wide range of areas. Therefore, analyst tracking can provide supervisory restraint to management and reduce the level of information asymmetry of external investors^[11]. Skinner (1990) argued that if the number of analysts tracking and analyzing a company after the option listing of the company increases^[26], it indicates that more information about the company is being uncovered and disseminated. Zhang Chun and Lv Wei (2007) found that the greater the number of analysts tracking and analyzing the companies^[10], the smaller the financing constraints faced by the companies. Generally speaking, analysts make full use of their expertise to improve market efficiency by providing investors with high quality information and alleviating information asymmetries through systematic, scientific and comprehensive analysis of many factors affecting the price of securities. Asking the above analysis together, this paper argues that analyst tracking can greatly reduce the level of information asymmetry and effectively mitigate the impact of Active executive departures on the debt financing costs cost. Based on the above analysis, this paper proposes the study hypothesis H3:

H3: The lower the number of analysts tracking, the more significant the impact of active executive departures on the debt financing costs of corporate.

III. STUDY DESIGN AND DESCRIPTIVE STATISTICS

3.1 Study Design

To test the study hypothesis proposed in this paper, the study model is set as follows:

$$\text{Cost}_{i,t} = \beta_0 + \beta_1 \text{Resign}_{i,t} + \beta_2 \text{SOE}_{i,t} + \beta_3 \text{Size}_{i,t-1} + \beta_4 \text{AM}_{i,t-1} + \beta_6 \text{Growth}_{i,t-1} + \beta_7 \text{Top1}_{i,t} + \beta_8 \text{Top2_10}_{i,t} + \beta_9 \text{Growth}_{i,t} + \beta_{10} \text{Top2_10}_{i,t} + \beta_{11} \text{Board}_{i,t} + \beta_{12} \text{Dual}_{i,t} + \beta_{13} \text{Gshare}_{i,t} + \beta_{14} \text{Inp}_{i,t} + \sum \beta_{16} \text{Year} + \sum \beta_{17} \text{Industry} + \varepsilon_{i,t}$$

Whereby the dependent variable Cost is a measure of the debt financing costs, and is taken as the ratio of the financial cost to the total long-term and short-term borrowings of the company^[13]; The independent variable Reign is a dummy variable for the active executive departures, which takes the value of 1 when an executive of the company has an active departure and 0 otherwise; Among them, executives include the chairman and general manager of the company, with whether active departures draw on the identification method proposed by Rosenberg ^[27], which defines departures that non-passive departures and retirement as active departures, mainly including personal causes such as personal reasons, family reasons, physical reasons, active departures, etc.; The subgroup variables Analyst and Quality are measures of analyst focus and accounting information quality respectively; Where Analyst equals the number of tracking analysts; Quality equals manipulable accrued surplus^[28]. The control variables are drawn from the practices of Liu Wenhuan et al.(2018)^[13] and mainly include indicators such as company scale, asset maturity structure, growth, institutional environment and corporate governance. We also performed controls for the year and industry. Also, to avoid the impact of corporate-level clustering effect on standard deviations, the cluster process is carried out at the company level in the regression. The main relevant variables of the model are described in TABLE I below:

TABLE I. Description of Variables

Explanatory Variables		
Cost	Debt financing costs	Equal to the ratio of the financial costs in the next period to the total long-term and short-term borrowings of the company in the current period
Explanatory Variables		
Resign	Active executive departures	Take 1 if the executive departs actively during the year and 0 otherwise.
Subgroup Variables		
Analyst	Analyst Tracking	Number of analysts tracking for analysis
Quality	Quality of Information Disclosure	The extent of the surplus of the company's accrued earnings.
Control Variables		
Size	Company Scale	Natural logarithm of total assets
AM	Asset Maturity Structure	Equal to the ratio of the net fixed assets at the end of the period to the total assets at the end of the period
Growth	Growth	Operating income growth rate
Top1	Top	Shareholding proportion of the top shareholder

	Shareholder	
Top2_10	Second to Tenth Largest Shareholders	Sum of the proportion of shares held by the second largest shareholder to the tenth largest shareholder
Board	Size of Board of Directors	Number of Board of Directors of the Company
Dual	Dual Positions in One	Take 1 if the Chairman and General Manager is the same person, 0 otherwise.
Gshare	Executive Shareholdings	Availability of management shareholding, take 1 if yeas, 0 otherwise.
Inp	Independent Director Proportion	The ratio of independent directors to the total number of board of directors of the company
Year	Year	Year dummy variables
Industry	Industry	Industry dummy variable

We selected an initial sample of companies listed on the main-board of A-shares within China from 2010-2020, and processed the data as follows: (1) Excluded financial firms;(2) Excluded ST and*ST companies; (3) Excluded samples with missing relevant variables;(4) In order to eliminate the influence of outliers, the continuous variables in the model were processed with winsorize at the upper and lower 1% level in this paper to exclude the effect of the outliers, and finally 12,727 observations were obtained. The executive data used in this paper were collected and collated manually from the announcement of listed companies, while the other data mainly obtained from the CSMAR database and WIND database.

3.2 Descriptive Statistics

Descriptive statistics of the study samples are provided in TABLE II. It can be found that the frequency of the sample companies in which active executive departures occurred is 1,244, and 9.77% of the sample companies has experienced active executive departures, with a median value of 0, indicating that active executive departures are not common in the sample companies. The mean value of Cost is 0.0726 and the median value is 0.0550, indicating that the average debt of the sample companies is 7.26%, and that the debt financing costs of most companies is below average for most companies; The mean values of Cost for the sample with and without active executive departures are 0.080 and 0.070 respectively, both of which are significant at the 1% level. Similarly, the median value of Cost is significantly higher at the 1% level in the samples with active executive departures than in the samples without active executive departures. This result suggests that the debt financing costs of the companies with the active executive departures is significantly higher than that of the companies without the active executive departures, which tentatively confirms the hypothesis 1 of this paper.

TABLE II. Descriptive Statistics

(1) Full Sample

Variable Name	Observed Value	Mean Value	Standard Deviation	p25	Median Value	p75	Min. Value	Max. Value
Cost	12727	0.0726	0.0702	0.0332	0.0550	0.0851	0.00140	0.450
Resign	12727	0.0977	0.297	0	0	0	0	1
Soe	12727	0.540	0.498	0	1	1	0	1
Size	12727	22.22	1.321	21.31	22.08	22.99	19.15	25.94
AM	12727	0.278	0.186	0.131	0.252	0.405	0.00247	0.766
Growth	12727	0.0590	0.325	0.0365	0.0961	0.215	1.910	0.781
Top 1	12727	35.16	15.15	23.17	33.13	45.62	9.090	75.99
Top 2-10	12727	19.38	12.41	8.940	17.61	28.01	1.220	53.24
Board	12727	2.183	0.202	2.079	2.197	2.197	1.609	2.708
Dual	12727	0.826	0.379	1	1	1	0	1
Gshare	12727	0.744	0.437	0	1	1	0	1
Inp	12727	0.368	0.0535	0.333	0.333	0.400	0.0909	0.571

(2) Sub-sample Comparison

Variable Name	Resign =0 (n=11483)		Resign =1 (n=1244)		T test (C) - (A)	WILCOX ON (D) - (B)
	Mean Value (A)	Median Value (B)	Mean Value (C)	Median Value (D)		
Cost	0.070	0.050	0.0800	0.060	0.01***	0.01***
Soe	0.540	1	0.560	1	0.020	0.00
Size	22.12	21.95	22.29	22.18	0.17***	0.23***

AM	0.280	0.250	0.280	0.260	0.010	0.01
Growth	0.070	0.110	0.040	0.090	-0.03***	-0.02**
Top1	35.06	33	36.13	34.01	1.07**	1.01
Top2 10	19.36	17.57	19.47	18.09	0.110	0.52
Board	2.180	2.200	2.170	2.200	-0.02***	0.000
Dual	0.820	1	0.850	1	0.03**	0.00
Gshare	0.750	1	0.690	1	-0.06***	0.00
Inp	0.370	0.330	0.370	0.360	0.01***	0.03***

Note: ***, **, * indicate significance at the statistical levels of 1%, 5%, and 10% respectively.

IV. Analysis of Empirical Results

Table 3 provides the results of the empirical analysis of the impact of active executive departures on the debt financing costs of corporate. M1 and M2 are full sample regression results, where M1 reports regression results that do not control for other characteristic variables other than industry and year, and M2 reports the results of regression that controls for other factors. In the regression results of M1 and M2, the estimated coefficients of Reign are 0.0283 and 0.0301 respectively, and both are significant at the level of 1%, indicating that the Active executive departures can significantly increase the debt financing costs. Furthermore, the estimation coefficient of size of company scale is significantly negative at the level of 1%, indicating that the larger the explicit asset size, the lower the debt financing costs. The estimated coefficient of growth is also significantly negative, suggesting that the better the growth of the company, the stronger its debt servicing capacity, the lower the credit risk faced by the bank and the lower the required debt financing spread. These results are also consistent with our expectations and with previous results in literature.

To analyze the moderating effect of information disclosure quality on the relationship between active executive departures and corporate debt financing costs, we divide the full sample into samples in Table III with high information disclosure quality (Quality=1) and those with low information disclosure quality (Quality=0) and conduct tests based on the quality of information disclosed. In the sample group with Quality=0, the estimated coefficient of Reign is 0.0322 and is significant at the level of 5%, while in the sample group of Quality=1, the estimated coefficient of Reign is 0.0247, which is not statistically significant even though the coefficient is positive. The regression results indicate that the impact of Active executive departures on the debt financing costs of corporate debt financing varies significantly among companies with different accounting information quality, and that the quality of information disclosure effectively suppresses the positive impact of active executive departures on the debt financing costs of corporate.

We further analyzed the impact of Active executive departures on debt financing costs for companies with different levels of analyst tracking. In TABLE 3, we divided the samples into the sample group with low analyst tracking (Analyst=0) and the sample group with high analyst tracking (Analyst=1) based on

the number of analysts followed. The test results are presented in M5 and M6. The data show that in M5, the estimated coefficient of Reign is significantly positive at the level of 5%, while in M6, the estimated coefficient of Reign is positive but not significant. The above data suggest that the degree of analyst tracking moderates the relationship between Active executive departures and the debt financing costs. In comparison to companies with high analyst tracking, the impact of Active executive departures on the debt financing costs is more pronounced in companies with low analyst tracking.

TABLE III. Multiple Regression Results

Variable Name	Cost	Cost	Cost	Cost	Cost	Cost
	M1	M2	M3	M4	M5	M6
	All Sample		Quality =1	Quality =0	Analyst =1	Analyst =0
Resign	0.0283** *	0.0301** *	0.0247	0.0322**	0.0199	0.0310**
	(2.94)	(2.74)	(1.54)	(2.19)	(1.15)	(2.32)
SOEs		-0.0015 (-0.09)	-0.0054 (-0.27)	0.0036 (0.20)	0.0002 (0.01)	0.0003 (0.01)
Size ₋₁		- 0.1199*** (-6.48)	- 0.1497*** (-5.75)	- 0.0976*** (-4.62)	-0.0412 (-1.49)	- 0.1395*** (-6.34)
AM ₋₁		0.0778** *	0.0914** *	0.0654** *	0.0319	0.0907** *
		(4.28)	(3.77)	(3.02)	(1.10)	(4.24)
Growt h ₋₁		- 0.0635*** (-5.34)	- 0.0477*** (-2.58)	- 0.0740*** (-4.87)	- 0.0509*** (-3.09)	- 0.0617*** (-4.20)
Top1		- 0.0615*** (-3.66)	- 0.0562** (-2.51)	- 0.0654*** (-3.42)	-0.0378 (-1.28)	- 0.0751*** (-3.83)
Top2_ 10		- 0.0483*** (-3.08)	- 0.0464** (-2.21)	- 0.0495*** (-2.80)	-0.0315 (-1.36)	- 0.0617*** (-3.29)
Board		- 0.0350** (-2.26)	-0.0206 (-1.02)	- 0.0461*** (-2.61)	-0.0324 (-1.42)	-0.0318 (-1.62)
Dual		0.0094 (0.68)	0.0168 (0.90)	0.0039 (0.24)	0.0218 (0.99)	0.0040 (0.23)
Gshare		-0.0154 (-1.05)	-0.0132 (-0.68)	-0.0186 (-1.10)	-0.0034 (-0.14)	-0.0186 (-1.06)

Inp		- 0.0311** (-2.45)	-0.0156 (-0.89)	- 0.0424*** (-2.94)	- 0.0413** (-2.14)	- 0.0306** (-2.01)
Year	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
Industry	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
Observed Values	12727	9698	4319	5379	3396	6302
Adj R ²	0.0364	0.0704	0.0720	0.0796	0.0737	0.0718

Notes: Standardized beta coefficients; Values shown in brackets are values of t,***,**,* indicate significance at statistical level of 1%, 5% and 10% respectively; Cluster is processed at the company level, and standard deviations are estimated by using robust.

V. Robustness Test and Further Analysis

5.1 Robustness Test

To ensure the reliability of the findings of the paper, Heckman's two-stage model test was adopted. Active executive departures may be influenced by other factors in the model and the model may have endogenous problems. For this reason, this paper adopts Heckman two-stage modeling to test the model. As average management shareholding and average compensation affect the departure decision of individual executives^{[19][29]}, we put AGshare and Acom into the model as proxies for average management shareholding and average compensation respectively in the first stage of regression. The results of two-stage regression for the instrumental variables are shown in TABLE IV. M1 and M2 are the regression results for the first and second stages respectively. The results indicate that Active executive departures remain significantly and positively related to the debt financing costs after controlling for the endogeneity of Active executive departures, suggesting that Active executive departures do increase the financial risk and the debt financing costs for companies.

TABLE IV. Heckman Two-stage Test

Variable Name	Resign	Cost
	M1	M2
Resign		0.2660** (2.03)
lambda		-0.2265* (-1.88)
Soe	-0.0829	0.0068

	(-0.87)	(0.49)
Size-1	-0.0714 (-0.69)	-0.1167*** (-7.22)
AM-1	0.0369 (0.40)	0.0886*** (5.47)
Growth-1	-0.1973*** (-2.64)	-0.0556*** (-3.60)
Top1	0.2120** (2.45)	-0.0385*** (-2.63)
Top2_10	0.0789 (0.94)	-0.0460*** (-3.35)
Board	0.0424 (0.48)	-0.0452*** (-3.52)
Dual	0.0671 (0.85)	0.0069 (0.53)
Inp	0.2656*** (3.26)	-0.0416*** (-3.19)
IMR		-0.2265* (-1.74)
Ashare	-0.4162*** (-4.22)	
Acom	-0.0273 (-0.28)	
Year	Controlled	Controlled
Industry	Controlled	Controlled
Observed Value	6606	6606
Pseudo R ² /Adj R ²	0.0403	0.0661

Standardized beta coefficients; t statistics in parentheses;*p< 0.1,**p< 0.05,***p< 0.01; Due to the addition of control variables in Stage 1, the addition of missing values for the variables resulted in a reduced sample size, but will not materially affect the findings of this study.

Also, we took the robustness test by adding control variables and adjusting the sample size. The relevant results are shown in TABLE V. M1-M4 respectively increased the indicators such as company profitability, cash flow and financial leverage, and M5 excluded the sample of companies with 10% above and 10% below each asset size. The data show active executive departures remain significantly and positively associated with the debt financing costs of corporate after adding control variables and adjusting the sample size. The findings are consistent with those of the previous study, which indicates that the study in this paper has strong robustness.

TABLE V. Addition of Control Variables and Adjustment of Sample Size

Variable Name	Cost	Cost	Cost	Cost	Cost
	M1	M2	M3	M4	M5
Resign	0.0300^{***} (2.74)	0.0337^{***} (3.11)	0.0305^{***} (2.78)	0.0337^{***} (3.12)	0.0275^{**} (2.24)
Roe	-0.0195 (-1.19)			-0.0255 (-1.38)	
NCF		0.1665 ^{***} (10.48)		0.1672 ^{***} (10.50)	
Lev			-0.0175 (-1.46)	-0.0043 (-0.41)	
SOEs	-0.0021 (-0.13)	0.0064 (0.40)	-0.0015 (-0.10)	0.0056 (0.36)	-0.0065 (-0.37)
Size ₋₁	-0.1195 ^{***} (-6.47)	-0.1290 ^{***} (-7.07)	-0.1198 ^{***} (-6.46)	-0.1285 ^{***} (-7.05)	-0.0266 (-1.42)
AM ₋₁	0.0773 ^{***} (4.26)	0.0379 ^{**} (2.03)	0.0779 ^{***} (4.28)	0.0371 ^{**} (1.99)	0.0778 ^{***} (3.92)
Growth ₋₁	-0.0627 ^{***} (-5.33)	-0.0685 ^{***} (-5.76)	-0.0646 ^{***} (-5.44)	-0.0677 ^{***} (-5.75)	- 0.0533 ^{***} (-4.02)
Top1	-0.0610 ^{***} (-3.63)	-0.0698 ^{***} (-4.21)	-0.0616 ^{***} (-3.66)	-0.0693 ^{***} (-4.18)	- 0.0572 ^{***} (-3.07)
Top2 ₋₁₀	-0.0481 ^{***} (-3.07)	-0.0529 ^{***} (-3.39)	-0.0486 ^{***} (-3.10)	-0.0525 ^{***} (-3.37)	- 0.0511 ^{***} (-2.91)
Board	-0.0348 ^{**} (-2.25)	-0.0334 ^{**} (-2.16)	-0.0350 ^{**} (-2.25)	-0.0332 ^{**} (-2.16)	-0.0336 [*] (-1.94)
Dual	0.0096 (0.69)	0.0080 (0.58)	0.0090 (0.65)	0.0081 (0.58)	0.0161 (1.10)
Gshare	-0.0156 (-1.06)	-0.0154 (-1.07)	-0.0155 (-1.05)	-0.0156 (-1.08)	-0.0252 (-1.52)
Inp	-0.0311 ^{**} (-2.45)	-0.0258 ^{**} (-2.04)	-0.0309 ^{**} (-2.43)	-0.0257 ^{**} (-2.04)	- 0.0420 ^{***} (-2.92)
Yearly	Controlled	Controlled	Controlled	Controlled	Controlled
Industry	Controlled	Controlled	Controlled	Controlled	Controlled
Observ	9697	9697	9697	9697	7823

ed Value					
Adj R ²	0.0708	0.0951	0.0707	0.0957	0.0521

Notes: Standardized beta coefficients; Values shown in brackets are values of t,***,**,*indicate significance at statistical level of 1%, 5% and 10% respectively; Cluster is processed at the company level, and standard deviations are estimated by using robust.

5.2 Further Analysis

Due to the solid expertise and higher shareholding amount, institutional investors are given a governance role, which can effectively restrain the management misconduct. When institutional investors hold relatively high shareholding, are motivated and capable of supervising and incentivizing the management of the company, and can also effectively improve the accounting information quality of enterprise, thereby alleviating the principal-agent problem of the company^[30] and reducing the debt financing costs. The institutional investors will continue to play the role of corporate governance to effectively restrain the short-term behaviors of the management and reduce the financial risks in the aftermath of active executive departures.

Due to the different nature of equity, SOEs (State Owned Enterprises) enjoy greater access to resources, government support and policy preferences than non-SOEs^[31], which makes the government extend a "helping hands" to SOEs when facing business difficulties by providing them with greater levels of financial support, such as financial subsidies and capital market financing. To some extent, the government provides an implicit guarantee for the business development of SOEs^[32].

For this purpose, we further examined the differences in the impact of institutional investor shareholding and the equity nature on the relationship between active executive departures and the debt financing costs. We divided the sample into the sample with low shareholding ratio (Institution=0) and sample with high shareholding ratio (Institution=1) according to the shareholding ratio of institutional investors, and a non-SOE sample (SOEs=0) and a SOE sample (SOEs=1) according to the nature of equity, and the relevant results are shown in TABLE VI. The results from the data reveal that the estimated coefficients of Resign are only significantly positive where Institution=0 and SOEs=0, but not statistically significant where Institution=1 and SOEs=1, indicating that the impact of active executive departures on the debt financing costs varies across companies with different institutional investors' shareholdings and nature of equity. The proportion of institutional investors' shareholding attenuates the positive impact of active executive departures on corporate debt financing costs, which is more pronounced in non-SOEs than in non-SOEs.

TABLE VI. Differences between Institutional Investor Shareholdings and the Nature of Equity

Variable Name	Cost	Cost	Cost	Cost
	M1 Institution=0	M2 Institution=1	M3 SOEs=0	M4 SOEs=1
Resign	0.0451*** (2.70)	0.0182 (1.28)	0.0321* (1.93)	0.0240 (1.64)

SOEs	-0.0257 (-1.12)	0.0006 (0.03)		
Size ₋₁	-0.1578*** (-6.48)	-0.1058*** (-4.16)	-0.0929*** (-3.76)	-0.1550*** (-6.18)
AM ₋₁	0.0857*** (3.44)	0.0594** (2.46)	0.0761*** (3.45)	0.0838*** (3.26)
Growth ₋₁	-0.0613*** (-3.34)	-0.0536*** (-3.77)	-0.0723*** (-3.95)	-0.0435*** (-3.00)
Top1	-0.0853*** (-3.96)	-0.0650** (-2.37)	-0.1188*** (-5.34)	0.0098 (0.43)
Top2_10	-0.0863*** (-3.67)	-0.0525** (-2.10)	-0.0678*** (-3.21)	-0.0171 (-0.85)
Board	-0.0337 (-1.35)	-0.0289 (-1.56)	-0.0094 (-0.37)	-0.0453** (-2.38)
Dual	0.0041 (0.20)	0.0085 (0.49)	0.0167 (0.83)	-0.0131 (-0.76)
Gshare	-0.0308 (-1.49)	0.0061 (0.32)	-0.0349* (-1.67)	0.0123 (0.63)
Inp	-0.0430** (-2.33)	-0.0240 (-1.42)	-0.0233 (-1.18)	-0.0364** (-2.30)
Year	Controlled	Controlled	Controlled	Controlled
Industry	Controlled	Controlled	Controlled	Controlled
Observed Values	4373	5325	4198	5500
Adj R ²	0.0871	0.0731	0.0805	0.0791

Notes: Standardized beta coefficients; Values shown in brackets are values of t, ***, **, * indicate significance at statistical level of 1%, 5% and 10% respectively; Cluster is processed at the company level, and standard deviations are estimated by using robust.

VI. CONCLUSIONS AND SUGGESTIONS

This paper analyzes and examines the impact of Active executive departures on the cost of corporate debt financing based on data from China's A-share non-financial main board listed companies from 2010 to 2020. The study found that: (1) The Active executive departures is both an unfavorable signal and also increases the uncertainty about the business activities of companies, leading makes banks to increase the credit spreads to the companies, and increasing the debt financing costs for companies; (2) Higher quality information disclosure reduces the level of information asymmetry for external creditors, thereby dampening the increase in the debt financing costs after the Active executive departures; (3) As the intermediary of market information, the analyst plays the role of information uncovering and enterprise supervision. The higher the level of their concern for the business, the less pronounced the increase in the

debt financing costs after the Active executive departures; (4) The external supervision of institutional investors and the natural advantages of SOEs make the debt financing costs increase more pronouncedly in both companies with low institutional investor shareholdings and non-SOEs.

In conclusion, the analysis and empirical results of this paper suggest that the active executive departures leads to an increase in the debt financing costs, which increases the operating costs and financial risk of the company. To cope with this risk, we suggest that the companies should: (1) strengthen the maintenance of relationship banks and other credit departments, and build a smooth information exchange mechanism to enhance the communication and exchange of information and to strengthen the level of trust between banks and companies; (2) establish a sound information disclosure mechanism, build multi-level information disclosure channels, enhance the transparency of business operation, and reduce the level of information asymmetry between banks and companies; (3) establish a risk response mechanism to be able to take measures to address corporate credit risk as per the pre-arranged plan in case of unavoidable voluntary active executive departures, and focus on strengthening the control of key resources and the expansion of financing channels. As for the government, it should define the boundary with the market scientifically, enhance the support for credit financing of private enterprises, establish special support schemes, and address the difficulties of financing for private enterprises effectively to help the high quality development of Chinese economy.

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