The Impact of the Number of Key Audit Matters on the Cost of Debt Financing—— Mediation Role Based on Enterprise Transparency

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Abstract: The addition of key audit matters(KAMs) in the audit report can provide more useful information for investors to make decisions, and thus affect the cost of debt financing. In this paper, the sample data of A-share listed companies of Shanghai Stock Exchange from 2017 to 2022 after the implementation of the new audit report standards are studied. Taking the company transparency as the intermediary variable, the impact of the number of KAMs communicated in the audit report is tested in an empirical test on debt financing costs of listed companies. The study found that the increase in the disclosure of KAMs and the decrease in corporate transparency can increase the cost of debt financing, and corporate transparency plays an intermediary role.

Keywords: number of KAMs; cost of debt financing; corporate transparency

1 Introduction

As the main force and leader of the market economy, enterprises have made important contributions to China's economic development. Therefore, how to create a good market environment for enterprises has become an urgent matter, and one of the important considerations is to reduce corporate debt financing costs. If the difficult and expensive financing problems of enterprises can not be well solved, it will become an obstacle to the development of enterprises.The financial information disclosed by listed companies gradually becomes an essential factor for creditors to make decisions, which then affects corporate debt financing costs. In order to conform to the development trend of The Times, China issued a new audit report standard in 2016, requiring A + H-share listed companies to disclose KAMs in audit reports from January 1,2017. The disclosure of KAMs can improve the content of the important information of of the company and reduce the information asymmetry. Junhua Zhang believes that the incremental risk information contained in the section of KAMs can attract more to the attention of financial reporting users[1] .

KAMs can increase the information content of audit reports, but it is still controversial whether the increase is negative or positive information. From the perspective of enterprise transparency, this paper empirically tests the correlation between the number of KAMs disclosed and the debt financing cost of listed companies, which can enrich the non-financial factors affecting the debt financing cost, and improve the relevant theories affecting the motivation of the debt financing cost. Remind users to make full use of the KAMs disclosed

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by auditors, promote enterprises to standardize their own management, improve their own management, and further reduce the cost of debt financing .

2 Literature review and hypotheses presented

2.1 Study on the impact of KAMs on debt financing costs

According to the new audit standards, KAMs focus on the areas where enterprises are prone to major misstatement risks, which means that the disclosure of KAMs conveys the status of the risk of enterprises to the outside world. Base on financial risk theory, Brasel found that the asymmetric information risk makes financial institutions uncertain about the future operational risks of enterprises, and financial institutions often require higher risk compensation in order to reduce the unexpected risk factors[2].Yun Wang believe that KAMs will bring "risk signal transmission effect", which to some extent reflects the possible problems in the future operation of the enterprise,and the strength of this risk signal is closely related to the number of KAMs[3].Jinghua Kan and others found that the disclosure of KAMs reduced the debt financing cost of enterprises by reducing information asymmetry[4]. Jiang et al. believe that fair value measurement and mortgage assets related to the KAMs can increase the cost of debt financing[5]. The more the number of KAMs disclosed, the more risks the enterprise should pay attention to, the stronger the asymmetric information risk signal, and creditors tend to seek higher returns to reduce the unexpected risks. Consider the above hypothesis 1.

H1: When other conditions are the same, the more the number of KAMs disclosed, the greater the financial cost of corporate debt.

2.2 Research on the impact of KAMs on enterprise transparency

KAMs is a certified public accountants in the process of financial statements audit, focus on areas with a high risk of material misstatement, select the most important matters in the audit report separately. The disclosure of KAMs often need certified public accountants and management close communication. Hongyun Jiang thinks communication of these KAMs can reflect the management of listed companies surplus manipulate the size of the space[6]. Huixia Zhang found that the improvement of accounting information transparency makes it less difficult for CPA to obtain the key characteristics information of enterprises to alleviate the information asymmetry between CPA and enterprises[7]. Hongtao Wang et al. believe that when the transparency of enterprises is low, the more the number of KAMs is disclosed, the stronger the audit response power of KAMs is[8]. Therefore, the more KAMs disclosed by the enterprise, the greater the probability of the company's transaction or event records and accounting treatment is not standardized, and then the lower the transparency of the enterprise. Accordingly, we propose the hypothesis 2.

H2: When other conditions are the same, the more the number of KAMs disclosed, the lower the transparency of the company.

2.3 The intermediary effect of enterprise transparency

Dasgupta S. suggests that investors can use a more transparent information environment to evaluate and predict certain inherent capabilities[9].More transparent information disclosure

can inject more accurate corporate characteristics information into the market, which is conducive to investors to predict the future events. Hongyun Jiang and others believe that listed companies with high transparency can provide investors with more complete and accurate financial information, help investors to make better investment decisions, and thus affect the financial cost of corporate debt[6]. Vida Botes et al. believe that creditors may reduce the risk of their own funds by reducing the loan amount or increasing the risk return rate[10].Frederickson and Zolotoy believe that the improvement of the transparency of enterprise accounting information can improve the allocation efficiency of key resources of enterprises and reduce the credit discrimination of banks and other financial institutions, making it easier for enterprises to obtain lower cost and larger scale financing support[11]. Xiang Xiao et al. found that the disclosure of KAMs can alleviate the financing constraints of enterprises by improving the transparency of external information of enterprises[12].This paper draws on the practice of Qingquan Xin and other[3]to use the information disclosure rating of exchanges to measure the transparency of listed companies. By analyzing the impact of KAMs on debt financing costs, on corporate transparency, and on the impact of corporate transparency, hypothesis 3 is proposed.

H3: When other conditions are the same, corporate transparency mediates between KAMs and the cost of debt capital.

3 Research design

3.1 Sample selection and data source

According to the research needs, this paper selects the data of the financial reports and audit reports of a-share listed companies with information disclosure rating in the Shanghai Securities market in 2017-2022 as the research sample. In order to ensure the scientific research process and results, the data are processed : excluding the listed companies in the financial industry, and excluding all ST and * ST enterprises. Based on the screening results, 7,620 valid observations were finally obtained. The data of the number of KAMs was obtained through the CNRDS database of China research data service platform and manual collation, while other data were obtained from the CSMAR database and through manual collation. The applicable data processing software in this paper is stata17.

3.2 Definition and measurement of variables

(1) Interpreted variable: debt financing cost. Measured by the ratio of interest expenses (including interest expenses, commission expenses, other financial expenses) to total liabilities at the end of the period, and tail shrinking treatment. It is difficult to calculate the cost of debt financing more accurately. Due to the time mismatch between long-term liabilities and short-term liabilities and the time of short-term liabilities cannot be obtained, the denominator of the explained variable corporate debt financing cost in this paper adopts the total liabilities at the end of the period. Due to the existence of accounts payable, the total debt at the end of the period is higher than the debt obtained from outside, resulting in the calculated financing cost of debt is lower than the actual financing cost of debt obtained from outside.

(2)Mediating variable: company transparency. Due to the inconsistency between the information disclosure rating standards of the Shanghai Stock Exchange and the Shenzhen Stock Exchange, the paper adopts the evaluation criteria of the Shanghai Stock Exchange in order to make the data reliable. Set A to 4, B to 3, C to 2 and D to 1. The higher the rating, the higher the score.

(3) Explanatory variables: the number of KAMs. Manually organize the number of KAMs disclosed by listed companies to measure the KAMs. Failure to disclose KAMs is considered as missing values.

(4) Control variables: ① Asset-liability ratio. Reflect the proportion of total assets raised through borrowing, the lower the asset-liability ratio, the lower the cost of debt financing .② Whether it was audited by the big four international accounting firms. Yes marked 1, no marked 0.③ earnings per share. Reflective profitability of the enterprise, creditors evaluate the default risk of the enterprise. The lower the risk of default, the lower the rate of compensation.

The selection and measurement methods of the specific variables are shown in Table 1.

Table 1 Variable selection and measurement

Type of variable	Variable name	symbol	variable-definition
explained variable	Debt financing costs	Debt	(Interest expense + commission expense + other financial expenses) / total liabilities at the end of the period
Mediating variable	Company transparency	Level	The Shanghai Stock Exchange information disclosure rating
explanatory variable	Number of KAMs	Kam	The number of KAMs disclosed in the audit report of the current year
controlled variable	asset-liability ratio	Alr	Total liabilities / total assets
	Is being audited by the Big Four international accounting firms	Big4	In the logarithm of the company's assets
	earnings per share	Eps	After-tax profit / Total Equity

3.3 Model construction

This paper examines the relationship between KAMs and debt financing costs, and the mediating role of corporate transparency between KAMs and debt financing costs. Therefore, the following empirical model is proposed:

$$Debt=\alpha_0+\alpha_1 Kam+\alpha_2 Alr+\alpha_3 Eps+\alpha_4 Big4+\varepsilon_1 \quad (1)$$

$$Level=\beta_0+\beta_1 Kam+\beta_2 Alr+\beta_3 Eps+\beta_4 Big4+\varepsilon_2 \quad (2)$$

$$Debt=\lambda_0+\lambda_1 Kam+\lambda_2 Level+\lambda_3 Alr+\lambda_4 Eps+\lambda_5 Big4+\varepsilon_3 \quad (3)$$

Model (1) test the impact path of KAMs on debt financing costs. Model (2) Explores the influence of the number of KAMs on the transparency of intermediary variables. The

dependent variable in the model (2) is added to the model as an independent variable (1) to form a model (3) to explore whether corporate transparency plays an intermediary role in the impact of the number of KAMs on the cost of debt financing.

4 Empirical results and analysis

4.1 Descriptive statistics of the main variables

Descriptive statistical analysis of each variable, the results are shown in Table 2.

The average value of the explained variable debt financing cost (Debt) in the sample is 1.7% and the standard deviation is 0.13%, which indicates that the debt financing cost of A-share enterprises is low and the floating range is small. The intermediary variable information disclosure rating (Level) of Shanghai Stock Exchange is above B on average, indicating that the information disclosure status of Shanghai Stock Exchange Company is good. The average value of the number of KAMs (Kam) disclosed by the explanatory variables is 1.987, and the floating range is between 1 and 6. Excluding the undisclosed, there is a relatively large difference in the number of disclosure between the company and the company.

Table 2 Descriptive statistics of the main variables

Variable	Obs	Mean	Std.Dev.	Min	Max
Debt	7819	0.017	0.013	0	0.066
Level	7819	3.027	0.65	1	4
Kam	7620	1.987	0.635	1	6
Alr	7633	0.452	0.198	0.008	1.29
Eps	7633	0.588	1.481	-10.179	52.042
Big4	7819	0.097	0.296	0	1

4.2 Correlation analysis and collinearity

This paper analyzes the correlation of the number of KAMs, the transparency of enterprises, debt financing costs and control variables, and obtains the correlation coefficient. The results are shown in Table 3.

The results of the correlation analysis between the various variables, and the correlation coefficient of Debt and Kam is 0.088, significant at the 1% level, indicating a significant positive relationship between the two. The correlation coefficient between Debt and Level is -0.153, significant at 1%, indicating a significant negative correlation.The correlation coefficient of Level and Kam is -0.067, significant at 1%, indicating a significant negative correlation. Other variables are also correlated with Debt, but the coefficients between them are less than 0.4, which does not produce too strong collinearity problem. Then, the collinearity test is conducted by using the variance expansion factor method. The variance inflation factor is 1.05, far less than 10, which proves that there is no multicollinearity problem in the regression model as a whole.

Table 3 Correlation analysis of the main variables

Variables	(1)	(2)	(3)	(4)	(5)
(1) Debt	1				
(2) Kam	0.088***	1			
(3) Level	-0.153***	-0.067***	1		
(4) Alr	0.351***	0.170***	-0.013	1	
(5) Eps	-0.141***	-0.043***	0.172***	-0.094***	1
(6) Big4	0.035***	-0.012	0.224***	0.099***	0.070***

Note: * p<10% , * * p< 5%, * * * P< 1%

4.3 Regression analysis and mediation effect test

Table 4 shows the results of multiple regression tests for model (1), model (2) and model (3), mainly used to verify the assumptions in this paper.

4.3.1 Regression analysis of the debt financing cost and the number of KAMs

Table 4 column (1) shows the regression results of the number of KAMs disclosed (Kam) and the debt financing costs (Debt). The Kam's coefficient was 0.00055 and was significant at the level of 5%. This suggests that the more key audits companies disclose, the higher the cost of debt financing. Hyhypothesis thesis H1 is tested.

4.3.2 Regression analysis of enterprise transparency and the number of KAMs

Table 4 column (2) shows the regression results of the number of KAMs (Kam) and Corporate Transparency (Level).The Kam's coefficient was-0.0568 and was significant at the level of 1%. This shows that the more disclosure of KAMs, the lower the transparency.This significantly negative result validates hypothesis H2.

4.3.3 The intermediary effect test of enterprise transparency

Table 4 column (3) shows Level's coefficient was-0.00257 and is significant at the 1% level. This shows that the lower the corporate transparency, the higher the cost of corporate debt financing.

The most commonly used method to test the mediation effect is the causal step method. Table 4 column (1) shows that the Kam's coefficient is significant at the 5% level, Table 4 column (2) shows that the Kam's coefficient is significant at the 1% level, Table 4 column (3) shows that Level is significant at the 1% level, and Kam's coefficient of 0.000404 is significant at the 10% level. Therefore, enterprise transparency plays an intermediary role. The research hypothesis H3 in this article is proved.

Table 4 Regression results analysis

VARIABLES	(1) Debt	(2) Level	(3) Debt
Level			-0.00257***
			-0.000223
Kam	0.000550**	-0.0568***	0.000404*
	-0.000222	-0.0113	-0.00022
Alr	0.0219***	-0.0261	0.0218***
	-0.000718	-0.0366	-0.000712
Eps	-0.000939***	0.0656***	-0.000771***
	-9.44E-05	-0.00482	-9.47E-05
Big4	0.000675	0.457***	0.00185***
	-0.000469	-0.0239	-0.000476
Constant	0.00653***	3.082***	0.0145***
	-0.000527	-0.0269	-0.000862
Observations	7,620	7,620	7,620
R-squared	0.134	0.077	0.149

Note: * p<10% , * * p< 5%, * * * P< 1%

5. Conclusions

This paper discusses the relationship between KAMs, corporate transparency and debt financing cost, and found that reducing the number of KAMs disclosed and improving corporate transparency can significantly reduce the cost of debt financing. Further research shows that corporate transparency plays a partial intermediary role between the number of KAMs and the cost of debt financing. The research conclusions of this paper enrich the theoretical research on KAMs and debt financing costs. At the same time, according to the above empirical research, some enlightenment can be obtained: enterprise managers should actively cooperate with the work of auditors, standardize their own management, improve management, and focus on rectification in areas with high risk of major misstatements disclosed in KAMs. Reduce enterprise risk and improve the quality of financial results. This can not only reduce the number of KAMs, but also improve the transparency of enterprises, so as to reduce the cost of debt financing.

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