

The Debt Cost Reduction Effect of Earnings Conservatism: Single Threshold Evidence from Financing Constraints

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Abstract

The focus of this paper is whether the impact of earnings conservatism on debt cost depends on the degree of corporate financing constraints. We use data to test this, and use the panel threshold model to sample China's A-share listed companies from 2015 to 2024. The results show that earnings conservatism significantly reduces the cost of debt, and the relationship is moderated by a single financing constraint threshold ($SA = -3.841$). In enterprises with high financing constraints ($SA \leq -3.841$), the role of earnings conservatism in reducing costs is significantly stronger, with a regression coefficient of -1.524; however, enterprises with low financing constraints did not observe a statistically significant impact. It can be seen that the economic benefits of earnings conservatism are not universal, mainly concentrated in companies with tight financing conditions. The evidence in this paper has certain operability: it can not only help enterprises with stronger constraints to improve their financing choices, but also help creditors to assess risks more accurately; at the same time, the study complements the existing literature by emphasizing the non-linear channels through which accounting information affects corporate results.

Keywords

Earnings Conservatism; Cost of Debt; Financing Constraints.

1. Introduction

1.1. Research Background

In the financing structure of modern enterprises, the cost of debt financing will directly affect the company's investment ability and financial health. However, there is information asymmetry in the credit market, and it is not easy for enterprises to obtain low-cost capital: it is difficult for creditors to fully assess the real risks of enterprises, and they often demand higher risk premiums, thus driving up the cost of debt financing. In this case, the quality of accounting information as a key mechanism to reduce information asymmetry, the importance is very prominent. Earnings conservatism requires losses to be recognized faster than returns, can reveal potential risks earlier, and can constrain managers' opportunistic behavior. Therefore, it is often seen as an important governance tool that helps to reduce agency costs and risk premiums for creditors.

Based on the above logic, this paper examines the impact of earnings conservatism on debt financing costs, and further analyzes the non-linear role of financing constraints. To this end, this paper reviews the literature and builds a corresponding theoretical framework.

1.2. Significance of the Study

The theoretical contributions of this paper are twofold. First, by moving beyond the traditional linear approach and adopting a nonlinear perspective, the study examines whether the impact

of earnings conservatism on debt financing costs changes nonlinearly, thus helping us better understand how the economic consequences of accounting information depend on the context. Second, it identifies a single threshold value for financing constraints ($SA = -3.841$), providing a quantifiable benchmark for future research.

In practice, our findings help highly constrained firms use stronger accounting conservatism as a tool to improve their financing strategies. They also offer a reference for creditors to better assess borrower risk and refine credit pricing models, and provide academic support for regulators to strengthen disclosure guidelines and guide the allocation of financial resources.

There are two theoretical contributions. First, it breaks through the traditional linear thinking and tests whether the impact of earnings conservatism on debt financing costs changes with the situation from a non-linear perspective, so as to better understand the context dependence of the economic consequences of accounting information. The second is to identify a single threshold value of financing constraints ($SA = -3.841$), which provides a quantifiable benchmark for subsequent research. In practice, highly constrained enterprises can use stronger earnings conservatism to improve financing strategies. Creditors can evaluate risks more accurately and optimize credit pricing models accordingly. Regulators can also improve disclosure guidelines and guide the allocation of financial resources.

2. Literature Review

2.1. Research on Accounting Conservatism (Earnings Conservatism)

Earnings conservatism is a basic feature of high-quality accounting information, which means that companies tend to treat adverse events ('bad news') and favorable events ('good news') asymmetrically. It requires more rapid identification of losses and more cautious identification of gains [1]. Basu [2] pioneered the use of 'reverse regression model' to measure this feature. The main finding of this study is that the response of earnings to negative stock returns (bad news) is much stronger than that to positive stock returns (good news), thus establishing a basic measurement method for subsequent research. Based on this, Khan & Watts [3] developed the C_Score model to calculate the company's earnings conservatism at the annual level. This model solves the compatibility problem of cross-sectional analysis and time series analysis, and becomes the mainstream method of later research. This paper also uses this model to measure earnings conservatism.

2.2. The Link between Accounting Conservatism and the Cost of Debt: A Review

The existing literature shows that the characteristics of enterprise scale, leverage, profitability and governance mechanism are related to the cost of debt financing [10-16,18-20]. On this basis, many empirical studies have further explored how earnings conservatism affects borrowing costs. Ahmed et al. [5] pointed out that the use of conservative earnings management methods can alleviate the information friction between borrowers and lenders, which in turn leads to a significant decline in interest rates. Domestic research also confirms this negative correlation and finds that it is regulated by the institutional environment and ownership structure. [16, 17] The research of Kim et al. [6] shows that sound internal control will amplify the effect of earnings conservatism on debt cost reduction. On the whole, the benefits obtained by enterprises from earnings conservatism are not fixed, but vary from situation to situation. However, the existing research has not yet tested whether the external environmental factor of financing constraints plays a non-linear threshold role in the relationship between the two.

2.3. Measurement of Financing Constraints

When companies do not have enough internal and external funds to invest in all projects with a positive net present value, they will be subject to financing constraints. [7] In order to measure this phenomenon, several indicators have been proposed, including KZ index [13],

WW index and SA index [8]. Compared with other indicators, the advantage of the SA index is that it only relies on two strong exogenous variables : firm size and operating time. This design helps to reduce the estimation bias caused by the endogeneity of financial policy choices. Therefore, the SA index has been widely recognized in contemporary empirical research [8]. This paper also uses the SA index to measure the degree of financing constraints faced by each sample company.

2.4. Literature Review

The critical evaluation of the existing literature shows that the relevant progress and shortcomings coexist. First of all, existing studies have generally found that earnings conservatism reduces borrowing costs [4,5], which supports the benchmark hypothesis (H1) of this paper. Secondly, although the cost-reducing effect of robustness is considered to change with situational factors such as internal control quality and ownership structure, [6,16] most of the existing studies use it as a linear moderating variable, and do not test whether it plays a role in a non-linear threshold way. Finally, the incremental contribution of this paper is to shift the focus from internal governance arrangements such as internal control to external financing environment factors such as financing constraints. With the help of Hansen panel threshold model, [9] this paper tests whether financing constraints play a threshold role between earnings conservatism and debt cost, so as to determine its critical value and identify the particularly favorable conditions for earnings conservatism, so as to deepen the understanding of the situational dependence of economic consequences of accounting information.

3. Theoretical Analysis and Research Hypotheses

3.1. Theoretical Framework

According to the theory of information asymmetry, [8] it is difficult for lenders in the credit market to fully grasp the actual risk exposure of borrowers, so they will require higher risk premiums, thus pushing up debt interest expenses. The principal-agent theory [9] further points out that there is a conflict of interest between shareholders and creditors, such as asset substitution. This agency conflict will eventually be reflected in higher debt interest rates. The signal transmission theory [10] holds that companies with better performance can convey favorable information to the market through verifiable actions. Earnings conservatism is precisely in line with this logic : timely recognition of losses helps to alleviate information asymmetry and curb management 's opportunistic behavior, thereby reducing the risk premium demanded by creditors. Overall, the three theoretical views support a conclusion : the use of earnings robustness significantly reduces the cost of borrowing.

3.1.1. Earnings Conservatism and Debt Financing Costs: The Main Effect Hypothesis

Information asymmetry and principal-agent conflict are the two main reasons that push up the cost of borrowing. Earnings conservatism is not only an important indicator of the quality of accounting information, but also a corporate governance mechanism that can alleviate these two types of problems. Accordingly, there are three main paths for earnings conservatism to reduce debt costs. First, conservative accounting policies require timely recognition of losses. This early warning enables creditors to detect risks earlier and narrow the information gap. Second, robustness inhibits managers ' opportunistic investment decisions and earnings manipulation, and reduces the agency costs borne by lenders. Thirdly, as signal transmission theory [10] says, conservative earnings reports convey credible signals that the company is in good financial condition and that management is responsible. When creditors obtain more reliable information, face less agency risk and perceive positive signals, they will require a lower risk premium, that is, lower borrowing costs. Based on this, this paper proposes the first hypothesis :

H1: When other conditions remain unchanged, the degree of corporate earnings conservatism is significantly negatively correlated with borrowing costs.

3.1.2. The Threshold Effect Hypothesis of Financing Constraints

The effect of earnings conservatism on the reduction of borrowing costs varies from company to company. This difference is mainly due to the quality of corporate information environment, and financing constraints are the core indicators to measure the information environment. Enterprises with high financing constraints are usually smaller, younger and more opaque. It is difficult for creditors to obtain verifiable 'hard data', and information asymmetry is more serious. At this time, lenders rely more on 'soft information' such as accounting numbers when making credit decisions. Conservative earnings not only provide valuable information, but also transmit credible signals, so its marginal contribution is magnified, and the effect of earnings conservatism on the reduction of debt costs is more obvious. On the contrary, companies with low financing constraints are usually large, mature and transparent, and creditors can rely on multiple sources of information such as credit ratings and analyst reports. They are less dependent on accounting conservatism, and the marginal impact of conservatism on borrowing costs is small or non-existent.

This model is more in line with the threshold effect, rather than a simple linear relationship. When the financing constraint is lower than a certain point, the incremental return of earnings conservatism is close to zero; once the constraint crosses this point, the information environment deteriorates sharply, creditors are forced to rely more on accounting information, and the earnings of conservatism jump. Based on this, the second hypothesis is proposed:

H2: There is a threshold of financing constraints in the negative relationship between earnings conservatism and debt financing costs. When the level of financing constraints exceeds the threshold value, the cost reduction effect of earnings conservatism is significantly stronger; when it is lower than the threshold value, this effect is weak or statistically insignificant.

4. Research Design

In this chapter, we describe our empirical methods in detail, including the selection of samples, the source of data, the definition of variables, the measurement techniques used and the setting of measurement models.

A good research design is essential to produce credible empirical research results.

4.1. Data and Sample Construction

The initial sample is all A-share listed companies from 2015 to 2024, and the financial and corporate governance data are from CSMAR. In order to ensure the quality of data, this paper makes the following screening: (1) Excluding financial enterprises (industry code J), because their balance sheet characteristics and regulatory environment are different from non-financial enterprises; (2) Excluding companies that have been ST, *ST or PT during the observation period to avoid deviations caused by financial distress samples; (3) Eliminate the missing observations of C_Score, SA, Cost_Debt and other major variables; (4) Tailing all continuous variables at 1% and 99% quantiles to reduce the impact of extreme values. Finally, 8520 enterprise-year observations are obtained, covering 16 industries such as manufacturing, information technology, wholesale trade and retail industry, which constitute the unbalanced panel data used in this paper.

4.2. Variable Definitions

The explained variable Cost_Debt in this paper represents the cost of debt, which is obtained by dividing the interest expenditure by the total debt and multiplying it by 100. The explanatory variable C_Score represents earnings conservatism. According to Khan & Watts [3], the larger

the C_Score, the higher the accounting conservatism. The threshold variable SA is the financing constraint, which is measured by the SA index of Hadlock & Pierce [8]. The smaller the SA (the larger the absolute value), the tighter the financing constraint. In order to control other influencing factors, this paper introduces the following control variables : Size is the size of the enterprise, measured by the natural logarithm of total assets ; Lev is the leverage ratio, which is equal to the ratio of total liabilities to total assets ; Roa is profitability, equal to net profit divided by total assets ; Growth is growth, reflected by the year-on-year growth rate of operating income ; Tang is tangible, measured by the proportion of net fixed assets to total assets ; Top1 is the ownership concentration, which is expressed by the proportion of the largest shareholder. The model adds both year and industry fixed effects, as shown in Table 1.

Table 1. Variable Definitions

Variable Type	Variable Symbol	Variable Name	Variable Definition
Dependent Variable	Cost_Debt	Cost of Debt Financing	$(\text{Interest Expense} / \text{Total Liabilities}) \times 100$
Independent Variable	C_Score	Earnings Conservatism	Based on Khan & Watts (2009) C_Score model
Threshold Variable	SA	Financing Constraint	$SA = -0.737 \times \text{Size} + 0.043 \times \text{Size}^2 - 0.040 \times \text{Age}$
Control Variables	Lev	Debt-to-Asset Ratio	Total Liabilities / Total Assets
	Roa	Profitability	Net Income / Total Assets
	Growth	Growth	$(\text{Current income} - \text{Prior income}) / \text{Prior income}$
	Tang	Tangibility	Net Fixed Assets / Total Assets
	Top1	Ownership Concentration	proportion of the largest shareholder
	Year	Year Effect	Year dummy variables
	Industry	Industry Effect	Industry dummy variables (2012 classification)
	Lev	Debt-to-Asset Ratio	Total Liabilities / Total Assets

4.3. Econometric Modeling Approach

The empirical model proposed below is specified to evaluate our two hypotheses.

4.3.1. Baseline Regression Model

To test H1 (whether earnings conservatism reduces debt financing costs), we use a fixed-effects panel model:

$$\text{Cost_Debt}_{\{it\}} = \beta_0 + \beta_1 \text{C_Score}_{\{it\}} + \beta_2 \text{Size}_{\{it\}} + \beta_3 \text{Lev}_{\{it\}} + \beta_4 \text{Roa}_{\{it\}} + \beta_5 \text{Growth}_{\{it\}} + \beta_6 \text{Tang}_{\{it\}} + \beta_7 \text{Top1}_{\{it\}} + \Sigma \text{Year} + \Sigma \text{Industry} + \varepsilon_{\{it\}}$$

4.3.2. Threshold Model Specification

In order to test whether financing constraints have a threshold effect, we use the panel threshold regression method proposed by Hansen (1999). Consistent with our theoretical expectations, we set up a single-threshold equation as follows:

$$\text{Cost_Debt}_{\{it\}} = \mu_i + \theta' \text{Controls}_{\{it\}} + \beta_1 \text{C_Score}_{\{it\}} \cdot I(\text{SA}_{\{it\}} \leq \gamma) + \beta_2 \text{C_Score}_{\{it\}} \cdot I(\text{SA}_{\{it\}} > \gamma) + \varepsilon_{\{it\}}$$

Here, γ represents the unknown threshold we seek to estimate. $I(\cdot)$ denotes an indicator function, when the conditions in brackets hold, the value is 1, otherwise it is 0 ; β_1 and β_2 are

the coefficients of earnings conservatism under different financing constraint systems. We use the Bootstrap method to test the existence of the threshold effect and estimate the threshold value γ .

4.4. Robustness Tests

In order to ensure that the results are not driven by specific choices, this paper conducts a number of robustness tests : (1) Replace the cost of debt with (financial cost + capitalized interest) / total liability ; (2) Change the threshold variable from the SA index to the KZ index [13] ; (3) Adjust the sample period and eliminate the COVID-19 year (2020-2022) ; (4) Using explanatory variables with a lag of 1 year to deal with endogenous problems, in order to alleviate the concerns of reverse causality. See Chapter 5 for the results.

5. Findings and Empirical Analysis

In this chapter, we introduce and discuss the main empirical results, including descriptive statistics, correlation analysis, benchmark regression, threshold effect test and robustness test. In the next regression table, we use asterisks to indicate statistical significance : *, **, and *** correspond to thresholds of 10%, 5%, and 1%, respectively. The values reported in brackets are statistical, and we use robust standard error calculations. If the asterisk is not marked, the coefficient is not significant at the 10 % level.

5.1. Descriptive Statistics

Table 2 shows the descriptive statistics for all main variables, including the number of observations, mean, standard deviation, minimum, median, and maximum.

Table 2. Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Median	Max
Cost_Debt	8,520	2.45	1.32	0.12	2.21	6.89
C_Score	8,520	0.08	0.12	-0.25	0.07	0.41
SA	8,520	-3.71	0.58	-5.01	-3.69	-2.43
Size	8,520	22.45	1.26	20.01	22.30	25.89
Lev	8,520	0.43	0.20	0.08	0.42	0.88
Roa	8,520	0.04	0.05	-0.16	0.03	0.19
Growth	8,520	0.15	0.32	-0.41	0.11	1.85
Tang	8,520	0.23	0.17	0.01	0.20	0.68
Top1	8,520	0.35	0.15	0.09	0.33	0.75

Note : The mean, standard deviation, etc. are reported in the table, and there is no t value.

The mean value of Cost_Debt is 2.45%, but the standard deviation is 1.32, and the value is between 0.12% and 6.89%, indicating that the debt burden between enterprises is significantly different. The mean value of C_Score was 0.08, the median was 0.07, and the distribution was symmetrical. The mean value of SA was -3.71, which was close to previous studies. Other control variables are also in a reasonable range, such as Lev mean is 43%, Roa mean is 4%, Top1 mean is 35%. However, after grouping by SA = -3.841, the Cost_Debt of the high financing constraint group was significantly higher, while the C_Score showed the opposite direction, and the mean difference was significant at the 1 % level.

5.2. Correlation Analysis

Before the regression, we calculated the Pearson correlation between the main variables to examine the relationship and multicollinearity. Table 3 gives these correlation coefficients.

Table 3. Correlation Analysis

	Cost_Debt	C_Score	SA	Size	Lev	Roa
Cost_Debt	1					
C_Score	-0.089*	1				
SA	-0.134*	0.231*	1			
Size	-0.052*	0.185***	0.827*	1		
Lev	0.284*	-0.062*	-0.118***	0.157***	1	
Roa	-0.197*	0.038	0.065*	0.051*	-0.351*	1

Note : the value in parentheses is t statistic ; ***, **, * are significant at the 1 %, 5 % and 10 % level, respectively.

Correlation analysis showed that the correlation coefficient between C_Score and Cost_Debt was -0.089, which was significantly negative at the 1% level, which preliminarily supported the hypothesis H1. SA is also significantly negatively correlated with Cost_Debt, which is consistent with the judgment that the smaller the SA value (the larger the absolute value) indicates the tighter the financing constraints and the higher the debt cost. The correlation coefficient between Size and SA is 0.827, which is high, but this is because Size is used to calculate SA. The absolute value of the correlation coefficient between the remaining variables is less than 0.5. In addition, this paper also calculates the variance inflation factor (VIF). All VIF values are much lower than the commonly used threshold of 10, indicating that the model does not have serious multicollinearity problems.

5.3. Main Regression Findings

The fixed effect estimation results are shown in Table 4. These results test the direct impact of earnings conservatism on debt costs, corresponding to H1.

Table 4. Main Regression Findings

Variable	Coefficient	t-value
C_Score	-0.821***	(-3.42)
Size	-0.105**	(-2.15)
Lev	2.145***	(8.91)
Roa	-3.892***	(-5.67)
Growth	0.158*	(1.72)
Tang	-0.678**	(-2.33)
Top1	-0.501	(-1.43)
Constant	5.892***	(4.88)
Year/Industry FE	Yes	
Observations	8,520	
Within R ²	0.285	

Note : the numbers in brackets are statistics ; ***, ** and * denote the statistical significance at the 1 %, 5 % and 10 % thresholds, respectively.

The coefficient of C_Score is -0.821, which is significant at the 1% level (t = -3.42), which strongly supports H1, indicating that earnings conservatism helps to alleviate information asymmetry and agency costs.

In terms of controlling variables, the Size coefficient is significantly negative, indicating that larger companies have lower debt costs ; Lev is significantly positive, which is in line with the expectation that high leverage will increase financial risks and costs ; Roa is significantly negative, indicating that enterprises with strong profitability have better solvency ; Tang is negative, which is consistent with the logic that tangible assets can be collateral. Growth and Top1 are not significant in this sample.

5.4. Threshold Effect Tests

In order to test H2 (whether the effect of earnings conservatism depends on the nonlinear threshold of financing constraints), panel threshold regression is carried out.

5.4.1. Threshold Existence Test

The Bootstrap method was used to perform 300 repeated single-threshold and double-threshold tests. The results of these tests are summarized in Table 5.

Table 5. Threshold Effect Test

Hypothesis	F-value	p-value	10%	5%	1%
Single threshold	18.732	0.027	13.245	15.891	21.403
Double threshold	9.156	0.187	11.892	14.556	18.972

Note : The threshold is based on 300 Bootstrap repeats.

For the single-threshold test, the computed F-statistic is 18.732 with a p-value of 0.027, leading to rejection of the null hypothesis (no threshold exists) at the 5% significance level. The double threshold F-statistic is 9.156 ($p = 0.187$), not significant. Thus, there is a significant single threshold effect, consistent with H2.

For the single threshold test, the calculated F statistic is 18.732, the p value is 0.027, and the null hypothesis is rejected at the 5% significance level (no threshold). The double threshold F statistic was 9.156 ($p = 0.187$), which was not significant. Therefore, there is a significant single threshold effect, which is consistent with H2.

5.4.2. Threshold Estimate

The threshold was estimated to be $\gamma = -3.841$, 95% confidence interval was $-3.912 \sim -3.775$.

5.4.3. Threshold Regression Results

Using the estimated threshold value, the sample is divided into a high financing constraint group ($SA \leq -3.841$) and a low financing constraint group ($SA > -3.841$). Table 6 reports the coefficients of earnings conservatism for each group.

Table 6. Threshold Model Regression Results

Variable	Coefficient	t-value
$SA \leq -3.841$ (High constraint group)		
C_Score	-1.524***	(-4.19)
$SA > -3.841$ (Low constraint group)		
C_Score	-0.417	(-1.58)
Control variables	Controlled	
Individual effects	Controlled	
Observations	8,520	
Within R^2	0.301	

Note : The values in parentheses are statistically significant ; ***, ** and * are significant at 1 %, 5 % and 10 %, respectively. The coefficients of the control variables are similar to those reported in Table 5-3, which are omitted here to save space.

The threshold regression results clearly reveal the nonlinear model of the impact of earnings conservatism. According to the estimated threshold value, the samples are divided into high financing constraint group ($SA \leq -3.841$) and low financing constraint group ($SA > -3.841$). In the high constraint interval, the coefficient of C_Score is -1.524, which is highly significant at the 1% level, indicating that for enterprises with severe financing constraints, the enhancement of earnings conservatism can effectively reduce the cost of debt financing, and the effect is

particularly strong. In contrast, in the low constraint interval, although the coefficient is still negative (-0.417), the test statistic is not significant, that is, the effect cannot be statistically distinguished from zero. These results fully support H2 : the effect of earnings conservatism on debt cost reduction is driven by financing constraints, showing a single threshold characteristic, and is only significant in the high financing constraint group.

The economic logic of this model is that the information environment of enterprises with high financing constraints is usually poor, and creditors have to rely more on accounting information for risk assessment. At this time, the marginal value of high-quality information provided by conservative earnings is large, which can significantly reduce the information premium. This also explains why the average earnings conservatism level of the high-constraint group (as shown in Table 5-2) is lower : because these companies generally lack sufficient robustness, the marginal benefits of improving robustness are more obvious. On the contrary, the creditor information sources of low financing constraint enterprises are diversified, and their dependence on earnings conservatism is low, so their marginal utility is decreasing.

5.5. Robustness Tests

In order to test the reliability of the research results, we conducted the following robustness tests : (1) Replace the dependent variable with debt cost (financial cost + capitalized interest) / total liability ; (2) Adjust the sample period by excluding the COVID-19 pandemic years (2020-2022). The results show that after these changes, the threshold effect still exists. For the high financing constraint group, the estimated coefficients of earnings conservatism (C_Score) are -1.412 and -1.601, respectively, and both are significant at the statistical level of 1%. Therefore, our conclusion is robust.

6. Conclusion

Based on the sample of China 's A-share listed companies from 2015 to 2024, this paper uses the panel threshold model to test whether the impact of earnings conservatism on debt financing costs changes with the degree of financing constraints. There are two main findings in the study.

First, earnings conservatism significantly reduces the cost of corporate debt financing, which supports the judgment that sound accounting information reduces the risk premium of creditors by alleviating information asymmetry and agency costs. Secondly, this cost reduction effect has a single threshold based on financing constraints ($SA = -3.841$). For companies whose financing constraints are higher than the threshold, the impact of earnings conservatism is significant in both economic and statistical senses ; for companies below the threshold, no significant effect was observed. It can be seen that the value of earnings conservatism is context-dependent and plays a role through non-linear threshold rather than simple linear relationship.

The theoretical contributions of this paper are mainly three points : first, it breaks through the traditional linear analysis framework and reveals the nonlinear threshold effect in the impact of earnings conservatism ; secondly, the specific threshold value of financing constraints ($SA = -3.841$) is identified, which provides a quantifiable benchmark for subsequent research. Third, it deepens the understanding of how the value of accounting information depends on the information environment. This effect is most obvious in enterprises with high financing constraints and opaque information. At the practical level, earnings conservatism can be used as an active strategy for highly constrained enterprises to reduce borrowing costs ; creditors should pay more attention to accounting conservatism when assessing the credit risk of such enterprises ; regulators may also consider strengthening robustness-related disclosure guidelines for industries with high financing constraints.

This study has two main limitations. First, C_Score, a earnings robustness indicator, may have measurement errors. Second, although panel fixed effects and lag variables have been used, endogenous problems such as missing variables or reverse causality are still difficult to completely rule out. Future research can use alternative indicators based on financial statements for cross-validation, or use natural experiments such as accounting standards changes to strengthen causal identification.

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