

# Does Accounting Conservatism Affect the Cost of Capital?

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**Abstract:** This paper takes listed companies from 2011 to 2015 non-financial industry as samples, measured by the GLS, OJN, PEG and other models, to examine the influence of accounting conservatism on cost of equity and debt, which finds that accounting conservatism is ubiquitous, and it is negatively correlated with cost of equity capital but positively correlated with cost of debt capital.

## 1. Introduction

The separation of ownership and management is the primary feature of listed companies, causing agency problem. For investors and creditors, conservative accounting information can reduce the risk of information asymmetry, helping them to understand the development and financial level of companies, and make correct investment and financing decisions. Therefore, accounting conservatism is seen as an important factor affecting the cost of capital.

In the existing research, when exploring the relationship between the two, they usually choose one of cost of equity or debt capital as the object. This paper takes Chinese listed companies in 2011-2015 as a sample, and uses multiple measures to analyze the two and explores the impact of accounting conservatism on cost of capital in a more reliable way.

## 2. Theoretical Analysis and Research Hypothesis

### 2.1 Accounting Conservatism and Cost of Equity capital

From the perspective of contract and agency, investors usually entrust the decision-making power to managers, evaluating performance and give corresponding rewards. They hope managers to maximize enterprise value and carry out high return investment in the lowest risk to achieve higher dividend. However, managers need to improve performance and pursue personal benefits. From this, agency problem arises due to the different goals between the owner and the manager.

Due to the lag of compensation contract, managers have the incentive to confirm good news in advance and improve nominal performance before receiving salary. After obtaining compensation, they may have moral hazard and don't turn good news into real cash flow as promised before. When receiving bad news, managers with limited horizon will delay or even make risky investments to make up for the loss, or to put the blame on his successor[1]. Shareholders need to establish corporate governance and accounting systems to strengthen supervision like accounting conservatism which requires managers to disclose bad news timely and accurately but prudently in good news, helping shareholders to supervise and reduce potential investment distortion as well as the risks of hiring managers to reduce agency costs[2]. Therefore, investors may lower the risk premium for companies with conservative accounting systems and thus cut down the cost of equity capital.

From the perspective of signal transmission, unlike major shareholders, small investors' understanding of the company mainly relies on information disclosure. In China, listed companies, for their own interests, mostly delay the confirmation of *bad news* and excessively disclose *good news*. This is unfavorable for investors who are in information disadvantage. In order to compensate

for the losses caused by potential risks, they will demand a higher return on investment. Companies with high conservatism will disclose information and transmit signals of business conditions timely, and show the difference between them and companies with opaque information. Due to the full understanding and trust in such companies, investors will lower the expectation of return, thus reducing the cost of equity capital. In summary, this paper proposes the following hypothesis:

Hypothesis 1: Accounting conservatism is negatively correlated with the cost of equity capital.

## 2.2 Accounting Conservatism and Cost of Debt capital

Debt contract and agency problems have triggered demand of conservatism. For both parties to the debt contract, there is a serious information asymmetry between creditors and enterprises. Creditors evaluate the repayment ability according to the financial information, and decides whether to issue the loan. As mentioned above, conservative information will give creditors a signal of poor performance. Because accounting conservatism is an asymmetric confirmation of gains and loss, that is, the confirmation of profits is more stringent than loss[3], which may lead to underestimation of net assets and book profits, and even below market value. The market performance is worse than other firms with unconservative information, and increases default risk[4]. If creditors do not have ability to accurately identify the conservative information, instead of giving corresponding returns, they will raise the interest rate and lower credit limit because of self-protection when they face firms with conservative statements but market performance is not ideal. As a result, the cost of debt will rise.

Therefore, although accounting conservatism can alleviate agency conflict between the debt contract parties, the premise must be that creditors have ability to accurately identify the conservative information. Otherwise, it will result in higher cost due to poor market performance[5]. At present, the company's main financing method is bank loans, and the main creditors are banks. Under the same operating conditions, companies with low levels of conservatism have a more substantial financial surplus and company value. Compared with investors, Chinese creditors do not pay enough attention to conservatism. In particular, local small banks do not have a wide range of business, and the need for profit are more urgent. They have no ability to identify conservatism effectively. Instead, they consider the existence of default risk due to poor performance at nominal market. Therefore, enterprises with conservatism cannot get a lower return on interest rates, but will increase cost of debt capital due to the lower company value. In summary, this paper proposes the following assumptions:

Hypothesis 2: Accounting conservatism is positively correlated with the cost of debt capital.

## 3. Research Design

### 3.1 Samples and data

The samples selected in this paper are A-share listed companies in non-financial industries from 2011 to 2015. After excluding missing data and the IPO and ST companies, a total of 5,589 observations are obtained. In order to eliminate the influence of outliers, Winsorize is performed on continuous variables at 1% and 99% quantile respectively.

### 3.2 Models and Variables

To test the hypotheses above, the following models are used for regression:

Cost of equity capital regression model:

$$R = \alpha_0 + \alpha_1 Cscore + \alpha_2 Size + \alpha_3 Lev + \alpha_4 Roa + \alpha_5 Growth + \alpha_6 Dual + \alpha_7 Insti + \alpha_8 State + \alpha_9 Turnover + \sum \alpha Year + \sum \alpha Indus + \varepsilon \quad (1)$$

where cost of equity capital(R), measured by PEG, OJN and GLS model[6]. Cscore represents accounting conservatism[4]. The control variables are firm size(Size), leverage(Lev), return on assets(Roa), growth rates of main business incomes(Growth), whether the general manager or the chairman being one person(Dual), and stock-holding of institutional investors(Insti), state-owned(State) and asset turnover (Turnover). In addition, the year and industry are also controlled.

Cost of debt capital tobit regression model:

$$\text{Cod} = \beta_0 + \beta_1\text{Cscore} + \beta_2\text{Size} + \beta_3\text{Lev} + \beta_4\text{Roa} + \beta_5\text{Growth} + \beta_6\text{Dual} \\ + \beta_7\text{Insti} + \beta_8\text{State} + \beta_9\text{Debt} + \sum\beta\text{Year} + \sum\beta\text{Indus} + \varepsilon \quad (2)$$

where cost of debt capital(Cod), measured by these methods: Cod1= financial expenses /average interest-bearing liabilities; Cod2= interest expense /average of long-term and short-term debt; Cod3 = (interest expense + capitalized interest) /average total liabilities[5]. For the control variables, considering correlation, this paper replace asset turnover(Turnover) in (1) with loan-to-liabilities ratio(Debt). In addition, since there are many zero values of Cod, this model adopts tobit regression.

## 4. Empirical results and analysis

### 4.1 Descriptive statistics

Table 1 shows descriptive statistics of major variables. The median of accounting conservatism (Cscore) is 0.036, and the minimum and maximum values are -0.263 and 0.160, respectively. It shows that accounting conservatism is common in companies, but the overall level is not high. For cost of equity capital(R), the results of three models are different, but the distribution is concentrated. In the three measurement of cost of debt capital (Cod), both Cod2 and Cod3 have a large number of samples with the value of 0.000, indicating that many listed companies do not debit or credit, which is basically consistent with China's national conditions.

Table 1 Descriptive statistics of major variables

Variables	N	Mean	Median	SD	Min	Max
Rpeg	5589	0.112	0.111	0.035	0.037	0.223
Rojn	5589	0.391	0.382	0.043	0.329	0.531
Rgls	5589	0.049	0.054	0.071	-0.566	0.133
Cod1	5303	-0.255	0.030	1.500	-12.280	0.247
Cod2	5303	0.000	0.000	0.000	0.000	0.001
Cod3	5303	0.002	0.000	0.005	0.000	0.031
Cscore	5589	0.027	0.036	0.074	-0.263	0.160

### 4.2 Regression analysis

Table 2 shows regression results of (1)(2). In the regression results of PEG and OJN model, the coefficients of Cscore are -0.017 , -0.024 , which are significant at 1% , verifying the hypothesis 1. It indicates that accounting conservatism of Chinese listed companies is negatively correlated with cost of equity capital, and companies with high levels of conservatism can get more returns. However, in the GLS model, the coefficient is not significant, which may be the result of the small span of sample yaer and the lack of analyst forecast data. In general, accounting conservatism is widespread and is valued by investors. Conservative financial statements can reduce agency risks, help investors to supervise managers, lower agency costs, and enhance contract effectiveness.

The three columns on the right are regression results of cost of debt capital. The coefficients of Cscore are 0.042, 0.000, and 0.006 , positive. The results of Cod1 and Cod3 are significant, verifying the hypothesis 2. It indicates that the agency conflict between creditors and shareholders and managers will not arouse creditors' attention to conservatism. It could be that creditors do not attach much importance to whether debtors' accounting information is conservative or not, but more to net profit when lending. If creditors could not identify, the financial statements with high level of conservatism may not be ideal. Nominal market performance of these companies is lower than others at the same level, and net assets and profit are underestimated. Therefore, to avoid default risk, creditors will raise the interest rate, and cost of debt capital will increase accordingly.

Table 2 Regression analysis

Variables	Cost of equity capital			Cost of debt capital		
	Rpeg	Rojn	Rgls	Cod1	Cod2	Cod3
Cscore	-0.017***	-0.024***	-0.017	0.042***	0.000	0.006**
	(-2.63)	(-3.01)	(-1.14)	(3.32)	(0.17)	(2.16)
Size	0.004***	0.012***	0.005***	-0.004***	0.001***	0.002***
	(-10.47)	(-22.86)	(-4.97)	(-5.13)	(6.03)	(10.83)
Lev	0.036***	-0.028***	0.016**	0.125***	0.001**	0.009***
	(-12.60)	(-7.52)	(-2.26)	(20.05)	(2.12)	(6.16)
Roa	0.028***	0.135***	0.030	-0.040**	0.004**	-0.014***
	(-2.92)	(-11.06)	(-1.32)	(-1.98)	(1.99)	(-2.83)
Growth	0.002*	-0.017***	0.003	0.001	-0.000	0.001*
	(-1.72)	(-8.76)	(-1.36)	(0.65)	(-0.49)	(1.94)
Dual	0.001	-0.001	-0.002	-0.004*	0.000**	-0.001**
	(-0.62)	(-0.91)	(-0.89)	(-1.93)	(2.38)	(-2.06)
Insti	0.000	-0.000**	0.000*	0.000	-0.000*	0.000***
	(-1.63)	(-2.33)	(-1.82)	(0.34)	(-1.87)	(3.31)
State	-0.013***	-0.012***	0.003	-0.001	-0.000	0.000
	(-13.37)	(-9.70)	(-1.18)	(-0.39)	(-0.77)	(0.86)
Turnover	0.000	0.005***	-0.005*			
	(-0.46)	(-3.75)	(-1.94)			
Debt				0.061***	-0.000	0.016***
				(15.26)	(-0.76)	(17.44)
Constant	0.034***	0.146***	-0.071***	0.039**	-0.017***	-0.067***
	(-3.78)	(-12.64)	(-3.30)	(2.07)	(-6.74)	(-14.84)
Year	Control	Control	Control	Control	Control	Control
Indus	Control	Control	Control	Control	Control	Control
N	5589	5589	5589	5303	5303	5303
adj.R-sq	0.342	0.269	0.079			
F	101.200	71.970	17.520			

## 5. Conclusions and prospects

This paper takes the 2011-2015 listed companies as a sample, dividing cost of capital into equity and debt capital and uses various measures to explore the impact of accounting conservatism on them respectively. This study finds that accounting conservatism is widespread in Chinese companies, and is negatively correlated with cost of equity capital, and positively related to cost of debt capital.

This paper has some limitations. On the one hand, the measure of accounting conservatism is single. On the other hand, this study explores cost of debt and equity capital separately, and lacks the overall analysis of cost of capital. Therefore, further studies are needed.

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