

Independent Audit and Bond Covenants—— Research on Corporate Bonds in China

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Abstract: Based on the bond data of corporate bonds in China, this paper examines the impact of independent audit on the design of bond contract protection terms. Using the audit quality of the accounting firm in the year of issuing bonds and the audit opinion of the previous year, the empirical study finds that high quality audit is positively related to the number of bond contract terms, while the standard unqualified audit opinion of the previous year is negatively related to it; moreover, the impact of high quality audit on bond issuance is more significant than that of audit opinion of the previous year. Further research shows that the above effects are more significant in state-owned enterprises and enterprises with high bond credit rating. This study provides a theoretical reference for independent audit to play the role of bond default governance in bond issuance.

Keywords: Bond covenants, Independent Audit, Audit Quality, Audit Opinion

1. Introduction

Since 2018, China's bond default risk has increased significantly, the number and scale of bond default have increased, and bond default tends to be normalized, and private enterprises have become the hardest hit areas of bond default. In 2020, the number of local state-owned enterprises and high-grade bond holders also increased significantly. The default events of credit bonds represented by brilliance motor, Ziguang group and Yongcheng Coal and power holding group triggered the fluctuation of bond market. Downtown pressure on the economy and the novel coronavirus pneumonia are the main causes of the frequent default of bond market. The impact of economic downlink pressure and new crown pneumonia epidemic situation, as well as the high leverage and high operating pressure of enterprises, make some enterprises have low willingness to pay for their subjective interests.

The meeting of the State Finance Commission has put forward the requirements for standardizing the development of the bond market. It is required to increase the illegal cost of "evasion and abolition of bonds", establish a market-oriented credit risk restraint mechanism, increase the cost of damaging the interests of investors, and protect the bondholders by adding restrictive clauses in the bond issuance; improve the bondholders' meeting system, and promote the collective resolution of bond investors The effective completion of the platform; standardize and supervise the performance of Information Disclosure Responsibilities of credit rating agencies and market intermediaries, and enhance their risk disclosure function.

In academic circles, Smith and Warner (1979), Chen Chao (2014) and Zhen Hongxian (2019) study and classify the common creditor protection clauses, and theoretically analyze the positive effect of bond contract design on reducing bond credit risk and improving debt entity accounting conservatism. Chen Yiyun and Lin Wanfa (2018) found that market intermediaries have a significant impact on bond issuance, and highly acclaimed auditors and underwriters have a greater impact on bond issuance duration and scale.

This paper takes corporate bonds and corporate bonds in China as the research object, uses the data of audit quality and audit opinion to measure independent audit, and studies the effect of independent audit on bond contract design. It is found that the higher the quality of the intermediary audit institutions employed in the year of issuing bonds, the more the contract terms; the better the audit opinions in previous years, the less the contract terms; but the impact of audit quality in the year of issuing bonds is higher than that of standard unqualified audit opinions in previous years, which significantly improves the number of contract terms. In the robustness test, after we replace the total contract terms with financial contract terms, the main conclusions remain unchanged.

There are four innovations in this paper: first, it enriches the research content of independent audit and bond contract, which is different from the previous research on the impact of intermediaries and basic terms of bonds. This paper takes the special protective terms of bonds collected by hand as the research object. Second, it expands the research scope of debt research and accounting audit, which is different from the influence of bank loan contract and independent audit in the past. This paper studies the relationship between independent audit and bond issuance and creditor protection. Bondholders and banks have completely different supervision and control ability as creditors, so the influence mode and effect of independent audit are also greatly different same as. Third, it expands the research on the function and role of intermediaries in the bond market. Different from the previous research on the audit opinion of annual report or the reputation of annual report audit institutions, this paper studies the audit data of the year of issuing bonds and the previous year respectively, and refines the influence mode and effect of independent audit on bond issuance. Fourth, different from the previous sample selection of bond contract protection terms, this paper also selects corporate bonds to join the sample, that is, the sample companies are not only listed companies, but also private enterprises, small and medium-sized enterprises, etc., which expands the research scope of bond contract terms and deepens the theoretical research scope of the protection of small and medium-sized investors.

Other parts are arranged as follows: the second part is literature review, the third part is theoretical analysis and hypothesis, the fourth part is data sources and research design, the fifth part is empirical results and analysis, the sixth part is robustness test, and the seventh part is conclusion.

2. Literature review and research hypothesis

2.1 Literature review

In this paper, the formation of the bond contract, the role of the bond contract and the research of independent audit are reviewed.

2.1.1 The formation of bond contract

In legal and financial literature, bond contracts are described as a tool to deal with agency conflicts between creditors and shareholders. A large number of literatures have studied the formation and mechanism of bond contract from the perspective of corporate finance and corporate internal and external governance. Because the bond market provides an asymmetric information environment, adverse selection before issuance and moral hazard after issuance will intensify the agency conflict between creditors, management and shareholders (Meckling, 1976). Therefore, in addition to the approval and supervision before and after the issuance of bonds, bond contracts are also used to limit the behavior of shareholders. Smith and Warner (1979) first proposed four types of bond contract terms for dividend payment, insufficient investment, frequent financing and asset replacement; Crabbe (1991) and BAE (1994) believed that bond contract should also contain event type terms; Feltham (1999) and Nikolaev (2010) proposed that debt limitation and reverse commitment guarantee clauses can protect the creditor's priority claim; ball, brown (1968) and reisel (2010) first proposed that accounting information such as interest coverage ratio, debt ratio and other financial indicators should be included in the scope of debt contract limitation clauses. Domestic scholars Li Rongyi (2013), Zhang Yixiang and Zhang Rui (2015) all use four kinds of classification criteria, which are options, investment, financing and asset transfer. Chen Chao (2014) found that compared with the United States, default clauses in China's bond contracts are fuzzy in design, less in advance constraints and less use of accounting data On the basis of the four types of clauses, this paper proposes the fifth type of "organizational structure" creditor governance with Chinese characteristics, and constructs China's bond investor protection index; Shi Yongdong and Tian Yuanbo (2016, 2017) put forward the repayment arrangement clauses, and further subdivides 15 specific clauses in the five types of clauses for the quantitative bond contract text form.

2.1.2 The function of bond contract

Based on the agency conflict theory and management defense theory, the early researches on bond contract explained the effects of bond contract on bond level factors such as bond price, bond risk premium, bond credit spread, bond rating and bond maturity. Jensen and Meckling (1976) and Myers (1977) found that reasonable bond contract terms can not only reduce the company's financing costs, but also ease the agency conflicts between shareholders and management and between shareholders and creditors, and increase the company's value. Each category of provisions, such as dividend payment, can limit shareholders' possession of funds by way of dividend, in 1976), asset replacement can prevent shareholders from transferring tangible assets obtained from creditors to intangible assets of enterprises,

such as research and development (malitz, 1986; Nash et al. (2003). Under investment clauses encourage shareholders to maintain dividend payment to reduce under investment (malitz, 1986). However, contrary to the agency conflict view, Stulz (1988) and Shleifer and Vishny (1989) put forward the management defense hypothesis, which holds that the bond contract restriction clause makes the management avoid venture capital behavior and market pressure, thus reducing the company's value. A large number of studies support Jensen's agency cost hypothesis, and on this basis, it is found that bond contract terms will increase the bond market price (BAE et al., 1997; Bradley and Roberts, 2004; reisel, 2010; Zhou Zhengyi and Wu Chongfeng, 2013; Chen Chao and Li Rong, 2014).

The existing research begins to investigate the effect of bond contract on the accounting information and stock information of bond issuers. Bolan (2014) found that there is endogeneity between debt contract and earnings management; Zhen Hongxian (2019) found that the more the number of special terms of corporate bonds, the higher the level of accounting conservatism of bond issuers; Pan Jun (2019) found that the higher the risk of stock price collapse, the more perfect the design of future bond contract terms; Wang Panna (2020) found that the downward pressure of stock price caused by the relaxation of short selling control makes the debt contract more stable Shareholders and management actively choose to shorten the issuance period of bonds; Du Li and Qu Shen (2020) found that the farther the borrowing distance is, the more stringent the contract design for borrowers is, and the probability of restricting the use of funds also increases significantly.

2.1.3 Existing research results of independent audit

In the field of accounting and economics, the influencing factors of audit opinion types are basically divided into two categories: the company level and the accounting firm level. The theories related to audit opinions mainly focus on information transmission theory, insurance theory and game theory. A large number of studies believe that audit opinions will transmit signals about the company's good and bad to the capital market, and ultimately affect the decision-making of investors. The formation of audit opinions is a dynamic game process of checks and balances of rights, responsibilities and interests between accounting firms and enterprises. Studies by big and Hilary (2006) and Yan Hanbing (2012) have confirmed that the worse the company's financial situation is, the higher the probability of receiving non-standard audit opinions is; carcello and et al (1995) and reynokls and Francis (2003) research shows that the larger listed companies are less likely to receive non-standard audit opinions; maggina and Anastasia (2011) find that the financial indicators of the company's operating ability and solvency ultimately affect the type of audit opinions; johl (2007) and Bai Xiansheng (2012) believe that the more serious the earnings management is, the more likely the non-standard audit opinions will be issued. In addition, a large number of empirical studies show that the level of corporate governance of listed companies, such as good organizational structure, the quality of internal control, the proportion of independent directors, the setting of audit committee, the change of controlling shareholders and other internal and external corporate governance activities, will affect the type of final audit opinion (carello, 2003; Jorge farinha, 2009; Dong Huina, 2012).

Under the risk oriented audit, auditors pay more and more attention to various forms of information risks related to enterprises. Bo Xianhui and Wu Liansheng (2010) take the volatility of the company's accrued profit as the alternative variable of information risk, and find that there is a significant positive correlation between information risk and non-standard audit opinion. Wang xiongyuan et al. (2017) pointed out that non-financial risk information disclosure plays a good role in reducing the audit risk of financial reports. Lin Zhonggao (2019) found that there is a significant positive correlation between audit opinion and risk information. After joining the executive tenure, he found that with the extension of tenure, the positive impact of the original annual report risk information on non-standard audit opinion will be more significant.

Previous studies have also explored the impact of audit quality (palmrose, 1988; L. Wong, 2008; Huang Tianxiao, 2012), auditor change (DEFOND and subramanyam, 1988, Chen Shufang, 2012), audit fees (Allen crashwell, 2002, Zhang Mao, 2012) on audit opinion types. Wang Fang and Zhou Hong (2015) conducted an empirical study on the relationship between guarantee mode and audit demand in bond contracts, and found that related party guarantee is significantly related to high-quality audit, and enterprise guarantee of local SASAC is significantly negatively related to high-quality audit.

2.2 Research hypothesis

Independent audit can reduce the financing cost of bond issuers by reducing the degree of information asymmetry and the level of credit risk in the bond market (Wan Fang, 2015). The more the number of

special terms of corporate bonds formulated by bond issuing companies, the higher the degree of protection for investors and the greater the degree of reducing the default risk of bonds (Wang SANFA, 2019). Therefore, to some extent, debt contract reflects the financial situation, accounting conservatism and bond default risk of bond issuing enterprises. The role of independent audit is closely related to the effect of other terms in the debt contract. From the information function of independent audit, independent audit can alleviate the prior information asymmetry faced by creditors, convey the debtor's business status and growth ability to investors, and reduce the cost of post supervision and re negotiation of debt, which is conducive to improving the efficiency of debt contract (Jensen) and Meckling, 1976). When the bond issuers employ high-quality audit institutions, they need higher quality accounting information and other information related to bond issuance to analyze the financial situation and solvency of the issuers, which may increase the requirements of contract terms and require more protective terms.

Therefore, this paper speculates that with the improvement of the quality of the accounting firms employed by the bond issuing companies, the number of contract terms increases

Hi: The higher the audit quality in the year of issuing bonds, the more protective terms of bond contracts.

On the other hand, the type of audit opinion is related to financial statements and bond rating. The text information of corporate annual report can convey the positive information of psychology, leading to the reduction of the probability of non-standard audit opinion (Li Shigang, 2020). At the same time, higher auditor industry expertise can weaken the strength of the above relationship. Non standard audit opinions are also significantly positively correlated with earnings management (Cao Qiong (2013)), and also affect bond rating (Lin Wanfa, 2016). Therefore, this paper speculates that the type of audit opinion will also affect the design of bond contract terms in the prospectus through the psychological framework effect mechanism. Based on this, hypothesis 2 is proposed

H2: The better the audit opinion of the bond issuing enterprise in the previous year, the less the contract terms of the bond issuing enterprise.

Thirdly, audit quality and audit opinion are important components of independent audit, but the higher the audit quality is, the more likely it is to issue non-standard audit opinion. Li Wanfu (2020) proposed that after he obtained "senior certified public accountant" when signing the audit, he is more likely to issue non-standard audit opinion. Independent audit is also an important part of the contract. Wang Fang (2015) proposed that when a contract can not reduce the credit risk of the debtor, the creditor will ask to supplement other terms to protect its investment rights and interests, so as to present a supplementary relationship between different contract terms. When a contract term can reduce the credit risk of the debtor, the creditor will reduce the demand for other terms to save the cost of the debt contract. At this time, there is a complementary or substitute relationship between different contract terms. Therefore, this paper also speculates that the audit quality of the current year and the previous year can be regarded as two complementary parts of the contract (Chen et al The impact of audit opinion and audit type on bond contract may be different, and audit quality may further supplement the effectiveness of audit opinion on bond issuance in previous years

H3: If the bond issuing enterprises that received standard audit opinions in previous years employ high-quality audit institutions in the year of bond issuance, the number of bond contract terms will increase.

3. Research design

3.1 Selection of samples and variables

This paper selects the bond contract data of China's non-financial enterprises from 2007 to 2019, and the sample types of bonds include corporate bonds and corporate bonds. Because corporate bonds and corporate bonds are for the vast number of scattered bond investors who lack the ability to supervise behavior, and the agency conflict is also the biggest, they need the protection of bond contract terms (Chen Chao, 2015). After eliminating the samples with missing data during the research period, we get a total of 4020 samples of bonds issued by 1936 non-financial companies. The data of bond contract terms are manually compiled from the bond prospectus. The data of audit quality, audit opinion and other data related to bond characteristics and bond issuing enterprises are from the wind database. In order to avoid the influence of extreme values on the regression results, this paper uses 1% to 99% tail reduction for all continuous variables.

3.2 Variable definition

The explanatory variables of this paper refer to the definition and classification of bond contract terms in billett (2007) and Zhen Hongxian (2019). Combined with the actual situation of manual data collection, this paper collects the general terms, financial terms and restrictions of each bond (see table).

Table 1: Classification and description of bond contract terms

	Type of terms	Content of terms
Covenants	General	Related to going concern
		Related to governance
		Related to solvency
	Financial	Asset category
		Liabilities category
		Income category
	Restriction	Restricted asset transfer
		Restricted repayment guarantee
		Restricted investment
		Restricted options

The explanatory variable 1 of this paper refers to the research of Wang Fang (2015) and uses audit to express the audit quality. It uses the top eight firms in the comprehensive evaluation of top 100 accounting firms in 2019 published by China Institute of certified public accountants as the evaluation of audit quality. The explanatory variable 2 is measured by the type of audit opinions in the three years before bond issuance. If the audit opinions in the three years before bond issuance are "standard unqualified opinions", then the opinion is 1, otherwise the opinion is 0.

The control variables of this paper refer to the existing research (LV Huaili, 2019; Yang Guochao, 2019) and can be divided into three categories: first, the bond level control variables, including bond size, bond maturity and bond collateral. Second, the controlling variables at the level of bond issuing enterprises, including property right, rating of bond issuing entities, SOE, size of bond issuing enterprises, roe, CFO of operating cash flow and leverage; third, year and industry dummy variables, which are used to control the influence of year and industry of bond issuing Enterprises.

Table 2: Variable definition

Variable type	Variables	Definition
Explained variable	Covenants	The number of bond contract terms is the sum of restricted, general and financial contract terms. The specific measurement method is shown in Table 1.
Critical explanatory variable 1	Audit	Audit quality, fictitious variable, if the audit institution employed by the bond issuer is the top eight audit institutions, then audit = 1, otherwise audit = 0.
Critical explanatory variable 2	Opinion	If the audit opinion of the previous year is "standard unqualified opinion" in the three years before bond issuance, then opinion = 1, otherwise opinion = 0.
Bond characteristic variables	Bond Size	The scale of bond issuance is the logarithm of the scale of bond issuance.
	Bond Maturity	Bond maturity, dummy variable, if the bond maturity length is greater than the mean, it is 1, otherwise it is 0.
	Bond Collateral	For bond guarantee, the value is 1 when there is guarantee, otherwise it is 0.
Characteristic variables of bond issuing Enterprises	Firmrating	If the rating of the issuing entity in the year of issue is "AAA", the value is 1, otherwise it is 0.
	SOE	The property right of the main body of issuing bonds is 1 when the main body of issuing bonds is state-owned enterprises, otherwise it is 0.
	Size	The scale of the issuers is the natural logarithm of the total assets of the issuers.
	ROE	Average return on assets in the year before issuance.
	CFO	The proportion of net operating cash flow of debt issuers is the ratio of net operating cash flow of debt issuers to operating income.
	Leverage	Asset liability ratio of the year before issuance.
Industry control variables	Industry	Industry dummy variable is used to control the influence of the main industry.
Year control variable	Year	The year dummy variable is used to control the influence of time.

3.3 Descriptive statistics

Table 3 shows the descriptive statistical results of the whole sample, eight audit samples and non eight audit samples. The results show that the average values of Covent, restriction, general and financial of the top eight audit samples are 16, 3, 13 and 3 respectively, which are higher than the average values of 11, 2, 10 and 2 of the non eight audit samples, and the differences are significant at the level of 1%.

This shows that enterprises that employ higher quality audit institutions to audit bonds before issuing will issue more bonds the contract protection clause. In terms of bond characteristics, the average bond size of the top eight audit samples and the non eight audit samples is 0.26 and 0.18 respectively; the average bond maturity is 2.4 and 2.18, and the bond guarantee is 0.26 and 0.18 respectively The average value of collateral is 0.8 and 0.7, and the average difference is significant at the level of 1%, which indicates that enterprises issuing larger and longer-term bonds and bonds with guarantee are more willing to employ eight audit institutions to audit. In terms of company characteristics, the sample mean difference of CFO of operating cash flow is large, the average CFO of eight audit samples is 10.59, and the average CFO of non eight audit samples is -4.233, which indicates that the operating cash flow of non eight audit enterprises accounts for less, and the liquidity of enterprises is poor, so they may not be willing to spend large expenses to hire high-quality audit institutions.

Table 3: Descriptive Statistics

	Mean	Median	Sd	Min	Max
<i>Panel A: Full sample (n=4020)</i>					
<i>Covenants</i>	13.12	18	8.594	0	34
<i>Restriction</i>	2.100	2	2.284	0	16
<i>General</i>	11.01	15	7.318	0	30
<i>Financial</i>	2.084	3	1.518	0	13
<i>Bond size</i>	2.255	2.303	0.742	0.0953	4.174
<i>Bond maturity</i>	0.207	0	0.405	0	1
<i>Bond Collateral</i>	0.738	1	0.440	0	1
<i>Firmrating</i>	0.346	0	0.476	0	1
<i>Soe</i>	0.687	1	0.464	0	1
<i>Cfo</i>	0.358	9.422	67.98	-351.7	184.2
<i>Roe</i>	4.903	3.931	9.757	-61.72	29.61
<i>Size</i>	24.83	24.69	1.443	21.99	28.64
<i>Lev</i>	44.21	44.60	19.82	1.437	87.90
<i>Panel B: "Big eight" (n=1245)</i>					
<i>Covenants</i>	16.47	18	6.566	0	32
<i>Restriction</i>	2.633	4	2.332	0	15
<i>General</i>	13.83	15	5.712	0	29
<i>Financial</i>	2.611	3	1.283	0	13
<i>Cfo</i>	10.59	10.30	49.45	-351.7	184.2
<i>Panel C: "Non-big eight" (n=2775)</i>					
<i>Covenants</i>	11.61	17	8.964	0	34
<i>Restriction</i>	1.861	0	2.221	0	16
<i>General</i>	9.750	14	7.601	0	30
<i>Financial</i>	1.847	3	1.556	0	10
<i>Cfo</i>	-4.233	9.422	74.36	-351.7	184.2
<i>Panel D: "Non-big eight -big eight"</i>					
			MeanDiff		p-Value
<i>Covenants</i>			-4.855		0.000***
<i>Restriction</i>			-0.772		0.000***
<i>General</i>			-4.084		0.000***
<i>Financial</i>			-0.764		0.000***
<i>Cfo</i>			-14.83		0.000***

4. Empirical test results

4.1 Research model

This paper establishes the following model to test the above hypothesis

$$Covenants_t = \beta_0 + \beta_1 Audit_{ijt} + \beta_2 Bond\ Size_{ijt} + \beta_3 Bond\ Maturity_{ijt} + \beta_4 Bond\ Collateral_{ijt} + \beta_5 Firmrating + \beta_6 SOE_{it} + \beta_7 CFO_{it} + \beta_8 Size_{it} + \beta_9 ROE_{it} + \beta_{10} Leverage_{it} + \Sigma Industry + \Sigma Year + \epsilon \quad (1)$$

$$Covenants_t = \beta_0 + \beta_1 Opinion_{ijt} + \beta_2 Bond\ Size_{ijt} + \beta_3 Bond\ Maturity_{ijt} + \beta_4 Bond\ Collateral_{ijt} + \beta_5 Firmrating + \beta_6 SOE_{it} + \beta_7 CFO_{it} + \beta_8 Size_{it} + \beta_9 ROE_{it} + \beta_{10} Leverage_{it} + \Sigma Industry + \Sigma Year + \epsilon \quad (2)$$

$$Covenants_t = \beta_0 + \beta_1 Opinion_{ijt} + \beta_2 Audit_{ijt} + \beta_3 Audit * Opinion_{ijt} + \beta_4 Bond\ Size_{ijt}$$

$$+\beta_5 Bond\ Maturity_{ijt} + \beta_6 Bond\ Collateral_{ijt} + \beta_7 Firmrating + \beta_8 SOE_{it} + \beta_9 CFO_{it} + \beta_{10} Size_{it} + \beta_{11} ROE_{it} + \beta_{12} Leverage_{it} + \Sigma Industry + \Sigma Year + \varepsilon \tag{3}$$

4.2 Regression analysis

4.2.1 Multiple regression results of audit quality and bond contract

Table 5 shows the OLS regression results of high quality audit and bond contract terms. First of all, this paper puts the summary of general and financial and covenants into the regression model to test the impact of high-quality audit on bond contract terms. It can be seen that the relationship coefficient between covenats and big8 is 1.77, which is significant at the level of 1%. This shows that if the enterprises that issue bonds decide to employ high-quality auditors, the high-quality auditors, out of reputation and investor protection, require the issuers to issue more and more perfect contract terms in the bond offer.

Table 4: Audit quality and bond contract terms

Variables	Estimate	T-value
<i>Audit</i>	1.777	8.20 ***
<i>Bond size</i>	-0.403	-2.43 **
<i>Bond maturity</i>	2.571	9.39 ***
<i>Firmrating</i>	2.437	7.69 ***
<i>Bond Collateral</i>	0.759	2.82 ***
<i>Soe</i>	-1.708	-7.46 ***
<i>Cfo</i>	0.009	5.07 ***
<i>Roe</i>	0.024	2.65 ***
<i>Size</i>	0.299	2.33 **
<i>Lev</i>	0.000	0.06
<i>Industry</i>	Control	Control
<i>Year</i>	Control	Control
<i>Constant</i>	-4.356	-0.97
<i>Observations</i>	3,590	
<i>R-squared</i>	0.484	

***, **, * were significant at the levels of 1%, 5% and 10%, respectively, and adjusted for heteroscedasticity

4.2.2 Multiple regression results of audit opinion and bond contract

Table 5: Audit opinion and bond contract terms

VARIABLES	Estimate	T-value
<i>Opinion</i>	-1.060	-1.87 *
<i>Bond size</i>	-0.340	-2.05 **
<i>Firmrating</i>	2.759	8.77 ***
<i>Bond maturity</i>	2.619	9.52 ***
<i>Bond Collateral</i>	0.787	2.89 ***
<i>Soe</i>	-1.786	-7.70 ***
<i>Cfo</i>	0.010	5.23 ***
<i>Roe</i>	0.026	2.78 ***
<i>Size</i>	0.311	2.39 **
<i>Lev</i>	-0.002	-0.29
<i>Industry</i>	Control	Control
<i>Year</i>	Control	Control
<i>Observation</i>	3590	
<i>Constant</i>	-2.228	-0.47
<i>R-squared</i>	0.476	

***, **, * were significant at the levels of 1%, 5% and 10%, respectively, and adjusted for heteroscedasticity

The regression results in Table 6 test the impact of audit opinions received by bond issuers in previous years on bond contract terms. The regression coefficient of opinion is -1.060, and it is significant at the level of 10%, which indicates that the audit opinions issued in the previous years have a certain impact on the contract design of the year when the bonds are issued. If the audit opinions of the previous years are good, the enterprises will issue relatively few protective clauses; if the audit opinions of the previous years are poor, especially received non-standard and unreserved "negative" audit opinions. In order to meet the compensation requirements of investors for the risk of creditor's rights, enterprises will issue more contract terms.

4.2.3 Multiple regression analysis of bond issuing audit quality, audit opinion of previous years and bond contract

The results in Table 7 further test the impact of the interaction between audit opinion and audit quality on bond contract terms. The audit * opinion is 2.186, which is significant at the level of 10%. This shows that if all the previous years are standard audit opinions, but compared with the bond issuing enterprises that have not engaged the top eight for audit, the bond issuing enterprises that have engaged the top eight for audit will issue more contract terms.

Table 6: Audit quality of bond issuance, audit opinions of previous years and bond contract terms

VARIABLES	Estimate	T-value
<i>Opinion</i>	-1.815	-2.79 ***
<i>Audit</i>	-0.225	-0.17
<i>Audit*Opinion</i>	2.186	1.65 *
<i>Bond size</i>	-0.398	-2.47 **
<i>Firmrating</i>	2.518	8.09 ***
<i>Bond maturity</i>	2.592	9.43 ***
<i>Bond Collateral</i>	0.837	3.10 ***
<i>Soe</i>	-1.802	-7.88 ***
<i>Cfo</i>	0.001	1.80 *
<i>Roe</i>	0.003	1.03
<i>Size</i>	0.292	2.63 ***
<i>Lev</i>	-0.001	-2.37 **
<i>Industry</i>	Control	Control
<i>Year</i>	Control	Control
<i>Observations</i>	3,590	
<i>Constant</i>	-1.791	-0.42
<i>R-squared</i>	0.482	

***, **, * were significant at the levels of 1%, 5% and 10%, respectively, and adjusted for heteroscedasticity

4.3 Robustness test

This paper also uses financial and restriction clauses as the measurement indicators of bond contract to test the impact of audit quality and audit opinion on bond contract clauses. The financial contract terms are more related to the financial status and operation ability of the enterprise, and more related to the independent audit in theory. In the regression results, the coefficient of audit in column (1) is 0.279, which is significant at the level of 1%; the coefficient of opinion in column (2) is -0.203, which is significant at the level of 10%; the coefficient of audit * opinion in column (3) is 0.537, which is significant at the level of 5%. Similarly, the result of using restriction as a substitute is consistent with the original assumption. The results show that the higher the audit quality of the accounting firm, the more financial contract terms will be designed; if the audit opinion of the enterprise is good for three consecutive years, fewer investor protection terms can be issued; however, if the high-quality audit firm is employed, the high-quality auditor has independent insurance consciousness and investor protection. In the process of bond issuance, the number of corresponding financial contract terms will be increased. The above results are consistent with the total contract terms, which can support hypothesis 1, hypothesis 2 and hypothesis 3.

Table 7: Number of contract terms of independent audit and financial bonds

VARIABLES	Financial covenantss		
	(1)	(2)	(3)
<i>Opinion</i>		-0.203*	-0.366***
		(-1.83)	(-2.82)
<i>Audit</i>	0.279***		-0.230
	(6.49)		(-1.02)
<i>Audit*opinion</i>			0.537**
			(2.32)
<i>Bond size</i>	-0.091***	-0.080**	
	(-2.85)	(-2.52)	
<i>Bondmaturity</i>	0.331***	0.338***	0.329***
	(6.31)	(6.42)	(6.28)
<i>Firmrating</i>	0.426***	0.476***	0.396***
	(6.92)	(7.79)	(6.46)
<i>Bond Collateral</i>	0.113**	0.118**	0.113**
	(2.29)	(2.36)	(2.30)
<i>Soe</i>	-0.237***	-0.250***	-0.254***
	(-5.29)	(-5.56)	(-5.64)
<i>Cfo</i>	0.001***	0.001***	0.001***
	(4.20)	(4.38)	(4.26)
<i>Roe</i>	0.003	0.003	0.003
	(1.47)	(1.57)	(1.59)
<i>Size</i>	0.038	0.040	0.015
	(1.51)	(1.58)	(0.62)
<i>Lev</i>	-0.003*	-0.003**	-0.002*
	(-1.90)	(-2.16)	(-1.71)
<i>Industry</i>	Control	Control	
<i>Year</i>	Control	Control	
<i>Constant</i>	-0.386	-0.046	0.426
	(-0.52)	(-0.06)	(0.59)
<i>Observations</i>	3,590	3,590	3,590
<i>R-squared</i>	0.406	0.399	0.407

***, **, * were significant at the levels of 1%, 5% and 10%, respectively, and adjusted for heteroscedasticity

5. Further study

As an important external corporate governance mechanism, independent audit is closely related to institutional environment, property right nature, corporate governance environment and other factors. Bond factors related to the default risk of bond issuers and the level of agency conflict between bond issuers and bondholders also affect the design of bond contracts. Therefore, this paper also explores the mechanism of the influence of independent audit on the design of protective clauses of corporate bonds from the perspective of property rights and bond rating.

5.1 Nature of company property rights

Compared with non-state-owned enterprises, state-owned enterprises are more vulnerable to high reputation constraints and high regulatory requirements at the political level (Wang SANFA, 2019). Therefore, independent audit may be more sensitive to the impact of bond contract terms, prompting state-owned enterprises to issue more protective terms, so as to reduce the risk of debt default and avoid the political impact of reputation loss. The empirical results are shown in Table 9. From the number of samples, the number of corporate bonds issued by state-owned enterprises is 2394, which is more than 1196 issued by non-state-owned enterprises. In terms of regression coefficient, the coefficients of audit opinion, audit quality and interaction items are significant in state-owned enterprises, which are greater than those of non-state-owned enterprises; in non-state-owned enterprises, only hypothesis 1 is significant, and the rest are not significant.

Table 8: Regression results of property rights

VARIABLES	State-owned enterprise			Non-state-owned enterprise		
	(1)	(2)	(3)	(1)	(2)	(3)
<i>Opinion</i>		-1.357** (-1.97)	-2.446*** (-3.16)		0.347 (0.36)	1.144 (0.98)
<i>Audit</i>	1.830*** (6.05)		-2.334 (-1.51)	0.685*** (2.60)		3.413* (1.74)
<i>Audit*opinion</i>			4.428*** (2.79)			-2.831 (-1.43)
<i>Bond size</i>	-0.799*** (-3.47)	-0.725*** (-3.13)	-0.782*** (-3.42)	0.398** (2.04)	0.430** (2.19)	0.387** (2.00)
<i>Bond maturity</i>	3.317*** (8.18)	3.356*** (8.26)	3.272*** (8.08)	0.827*** (2.66)	0.835*** (2.67)	0.836*** (2.69)
<i>Firmrating</i>	2.534*** (5.69)	2.845*** (6.45)	2.450*** (5.55)	0.328 (0.75)	0.396 (0.91)	0.369 (0.84)
<i>Bond collateral</i>	0.663* (1.82)	0.761** (2.07)	0.700* (1.94)	0.268 (0.84)	0.246 (0.77)	0.263 (0.83)
<i>Cfo</i>	0.010*** (4.91)	0.010*** (5.10)	0.010*** (4.88)	-0.006* (-1.94)	-0.007** (-2.06)	-0.006** (-1.97)
<i>Roe</i>	0.174*** (5.53)	0.195*** (5.74)	0.176*** (5.52)	-0.007 (-0.92)	-0.008 (-0.99)	-0.006 (-0.84)
<i>Size</i>	0.432** (2.57)	0.438*** (2.58)	0.437*** (2.62)	-0.135 (-0.79)	-0.132 (-0.77)	-0.140 (-0.81)
<i>Lev</i>	0.005 (0.51)	0.003 (0.28)	0.005 (0.57)	0.000 (0.04)	-0.001 (-0.09)	0.001 (0.11)
<i>Industry</i>	Control	Control	Control	Control	Control	Control
<i>Year</i>	Control	Control	Control	Control	Control	Control
<i>Constant</i>	-13.15*** (-3.39)	-11.70*** (-3.01)	-9.66** (-2.34)	15.16*** (3.85)	15.13*** (3.84)	14.22*** (3.55)
<i>Observations</i>	2,394	2,394	2,394	1,196	1,196	1,196
<i>R-squared</i>	0.502	0.495	0.505	0.439	0.436	0.441

5.2 Bond rating of enterprises

Table 9: Regression results of bond rating groups

VARIABLES	Bondrating="AAA"			Bondrating<"AAA"		
	(1)	(2)	(3)	(1)	(2)	(3)
<i>Opinion</i>		-1.465* (-1.92)	-2.528*** (-3.10)		-0.450 (-0.52)	-0.166 (-0.16)
<i>Audit</i>	1.162*** (3.45)		-3.645 (-1.62)	1.745*** (6.35)		2.389 (1.37)
<i>Audit*opinion</i>			5.111** (2.25)			-0.676 (-0.38)
<i>Bond size</i>	-0.793*** (-2.94)	-0.747*** (-2.79)	-0.784*** (-2.93)	-0.261 (-1.30)	-0.213 (-1.06)	-0.258 (-1.29)
<i>Bond maturity</i>	3.517*** (8.71)	3.585*** (8.90)	3.490*** (8.64)	1.300*** (3.59)	1.279*** (3.53)	1.297*** (3.60)
<i>Firmrating</i>	0.378 (0.47)	0.409 (0.51)	0.307 (0.39)	3.597*** (3.71)	3.483*** (4.06)	3.370*** (3.10)
<i>Bond collateral</i>	1.657** (2.26)	1.798** (2.45)	1.639** (2.25)	1.191*** (4.05)	1.192*** (4.02)	1.191*** (4.04)
<i>Soe</i>	0.382 (0.96)	0.303 (0.77)	0.364 (0.92)	-2.813*** (-9.27)	-2.870*** (-9.35)	-2.806*** (-9.24)
<i>Cfo</i>	0.011*** (3.30)	0.011*** (3.29)	0.011*** (3.21)	0.008*** (3.74)	0.008*** (3.71)	0.008*** (3.75)
<i>Roe</i>	0.109*** (3.81)	0.122*** (4.13)	0.109*** (3.76)	0.016* (1.80)	0.016* (1.73)	0.016* (1.77)
<i>Size</i>	0.318* (1.70)	0.332* (1.77)	0.335* (1.80)	0.318* (1.89)	0.325* (1.93)	0.321* (1.91)
<i>Lev</i>	-0.024** (-2.02)	-0.028** (-2.28)	-0.024* (-1.94)	0.017** (2.09)	0.016** (2.01)	0.016** (2.06)
<i>Industry</i>	Control	Control	Control	Control	Control	Control
<i>Year</i>	Control	Control	Control	Control	Control	Control
<i>Constant</i>	-7.965* (-1.77)	-7.391 (-1.61)	-6.206 (-1.37)	-1.400 (-0.35)	-1.588 (-0.39)	-1.349 (-0.33)
<i>Observations</i>	1,539	1,539	1,539	2,051	2,051	2,051
<i>R-squared</i>	0.292	0.289	0.299	0.584	0.576	0.584

Bond rating is a kind of credit risk judgment made by rating agencies based on the possibility of default in a period of time in the future. Rating agencies rely on the accounting information of bond issuers to a large extent (Lin Wanfa, 2020). Therefore, the effect of independent audit on bond contract may be different for bonds with different ratings. For bonds with higher ratings, their accounting information and audit results are often more convincing, so they have a more profound impact on bond contract terms. The empirical results are shown in table 10. There are 1539 bonds with "AAA" credit rating, which is less than 2051 bonds with "AAA" rating. From the regression coefficient, the audit opinion, audit quality and interaction coefficient are significant in the 3A rated bond group, while only hypothesis 1 is significant in the non 3A rated bond group, and the rest are not significant.

6. Conclusion

Previous studies have shown that the bond contract can alleviate the agency conflict between shareholders and management and between shareholders and creditors, increase the value of the company, which is a direct reflection of investor protection; at the same time, independent audit can reduce the credit default risk of bond issuance by reducing the degree of information asymmetry in the bond market. Based on this perspective, this paper examines the impact of independent audit on the design of bond contract protection terms by taking manually collected bond contract terms as samples. Using the audit quality of the accounting firm in the year of issuing bonds and the audit opinion of the previous year, the empirical study finds that the high quality audit is positively related to the number of bond contract terms, while the standard unqualified audit opinion of the previous year is negatively related to it. Moreover, if the bond issuing enterprises with audit opinion standards in previous years employ high-quality audit institutions in the year of bond issuance, the number of contract terms will also be increased. The above results show that the impact of high-quality audit at the time of issuance is greater than that of audit opinions in previous years, and it has more significant impact on the design of contract terms. Further research also finds that the above effects are more significant in state-owned enterprises and enterprises with high bond rating.

Firstly, it affirms the effectiveness of the audit mechanism of the bond issuing intermediaries in protecting the interests of bondholders. The return of the independent audit and the supervision of the bond market should be given more explicit guidance and attention. Secondly, as the most direct means to protect the interests of bondholders, the bond contract protection clause should be reformed and marketized effectively, so that it can really help to alleviate the market information asymmetry and the risk of bond default, and realize the protection of the interests of bond investors.

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