5. HETEROGENEOUS DEBT FINANCING AND SHARE RETURN VOLATILITY

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Abstract

The debt financing of Chinese listed firms includes trade credit and bank credit. This study empirically investigates the impact of different debt financings on the share return volatility and examines whether there exists the heterogeneous corporate governance effect by two different debt financings. This study finds that trade credit debt financing decreases the risk of share return volatility. The trade-credit debt financing plays a good monitoring role in the investing behavior of firms and alleviates the agency conflict between shareholders and creditors. The bank credit debt financing increases the risk of share return volatility, indicating that the bank credit debt financing has difficulty playing a good monitoring role on the firm and deteriorates the agency conflict between shareholders and creditors. The finding provides a new analytical perspective for investigating investment and financing interaction

1. Introduction

Due to different return modes, shareholders and creditors may have conflicting interests over different investment choices with various risk levels. There are no short cases in which listed firms cause creditors' losses due to excessive investment risks in the Chinese capital market. Both theoretical analysis and practical cases illustrate that, although the creditors, as stakeholders, have the right to monitor the firm and influence corporate governance, they may also be subject to loss of interest caused by firms' risky or inefficient investments. The role of debt financing in corporate governance and related research issues such as the shareholder-creditor conflict of interest have been receiving attention from both academic and practical circles. Smith and Warner (1979) argue that, in addition to excessive distribution and dilution of claims, shareholders mainly infringe on the interests of creditors

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by some distorted investments such as increasing investments risk. Jensen (1986) argues that debt plays a governance role as firms exert pressure on managers through debt financing, and creditors monitor managers. Wang (2003) demonstrates that Chinese debt financing strengthens the effect of corporate governance.

Based on the financial behavior in practice, firms' debt financing includes bank credit and trade credit. Assuming firm debt, or creditors, as a homogeneous whole likely obscure the differences in monitoring roles arising from different types of debt, affecting the analysis of interest conflicts among shareholders and creditors. The data of this study show that the overall level of trade credit debt financing of listed firms exceeds that of bank credit debt financing, which draws much attention to the role of trade credit debt financing, a non-traditional form of debt financing, in monitoring firms. Huang and Qu (2010) note that trade credit debt financing plays a very important role in the operation of firms (Bai *et al*., 2021). However, on shareholder-creditor conflict of interest and the governance effect in debt financing, existing studies do not adequately consider the influence of creditor heterogeneity but treat creditors as a homogeneous whole (Childs *et al*., 2005). Under the current situation where the misuse of funds by listed firms in China is generally more serious, not taking into account the heterogeneity of creditors may be more detrimental to the differentiated development of measures to protect the interests of creditors.

Regarding the causes of debt generation, trade-credit debts originate from suppliers with stable business partnerships, while bank credit debts originate from banks with specialized lending capabilities. The former can collect more detailed debtor information based on business partnerships, while the latter can only obtain relevant information based on debt contracts. Therefore, based on the analysis of the causes arising from the two types of debt and the differences in the characteristics of the two types of creditors, these two types of debt financing may have a differentiated impact on the shareholder-creditor relationship within the firm and reflect different monitoring effects through the effect on the volatility of firm share returns in the capital market. The contribution of this study is mainly reflected in that distinguishing debts into trade credit debts and bank credit debts based on debt heterogeneity and then finding, through comparative analysis, that trade credit debts and bank credit debts have significantly different effects on the risk of share return volatility of firms, which verifies the hypothesis that the two types of creditors can play a differentiated corporate governance monitoring role on firms, and contributes to the shareholder creditor conflict-of-interest theory.

The remainder of this paper is organized as follows: the next section reviews the relevant literature; the third section introduces the institutional background; the fourth section develops the hypothesis; the fifth section describes the research design; the sixth section presents the empirical analysis; the final section concludes.

2. Literature Review

Regarding the impact of shareholder-creditor conflict on firms' investment decisions, Jensen and Meckling (1976) reveal the possibility of asset substitution through increased risk by shareholders (or managers as agents) in investment decisions, while Myers (1977) dissects the phenomenon of underinvestment. Based on Jensen and Meckling's (1976) study, many other scholars have explored the above issues from various aspects. For example, Stulz and Johnson (1985) and Berkovitch and Kim (1990), among others, have conducted studies on the relationship between over-debt financing and corporate investment behavior. Their study argues that the over-debt of firms is likely to lead to under-investment, which harms

the interests of creditors. Furthermore, Maksimovic and Zechner (1991) find that after including the tax shield effect of debt in the model, firms with high debt levels choose projects with lower earnings before interest and taxes (EBIT) or higher cash flow risk relative to firms with low debt levels. To summarize, Stulz and Johnson (1985) focus on two mechanisms that generate corporate underinvestment in high debt, while Maksimovic and Zechner (1991) address the issue of investment risk selection in the presence of high debt. Both underinvestment and over-risky investment distort firms' investment. Miguel and Pindado (2001) argue that in an environment of information asymmetry, firms can be both overinvested and underinvested, depending on the firm's level of cash flow and the level of debt, so there may be a trade-off between overinvestment and underinvestment. Braouezec (2009) argues that overinvestment is more likely to occur than underinvestment and that the degree of overinvestment is negatively related to the shareholders' ownership. Their study notes that debt financing can lead to risky investment behavior by shareholders, which in turn infringes on the interests of creditors.

From the current state of Chinese research, there is more literature that studies financing structure and investment separately, fewer that link them together, and few that specifically examine the impact of debt financing on corporate investment behavior. The only literature on the relationship between debt financing and investment behavior is mostly an investigation of the scale of investment. There is no study on the impact of debt financing on corporate investment risk, nor the reflection of such investment behavior in the capital market. Tong and Lu (2005) verified the effects mentioned above of debt financing on corporate investment behavior. They concluded that the higher the proportion of debt among Chinese listed firms, the smaller the scale of corporate investment, and the degree of correlation between the two is influenced by the relationship between the risk of new investment projects and the magnitude of corporate risk before investing in new projects. The investment volume of low project risk firms decreases more rapidly with the increase of debt ratio than that of high project risk firms. In addition, considering the maturity structure of debts, Tong and Zhi (2005) find that short-term debts not only bring agency costs, but their agency costs may even be higher than those of long-term debts. Both Jiang and Shen (2008) and Song (2014) also focus on the conflict of interest between major shareholders and creditors. The former, based on the perspective of the relationship between listed firms and their subsidiaries, and the latter, based on the perspective of the separation of control and cash flow rights of the ultimate controllers of listed firms, respectively, reach similar conclusions: debts not only hardly play a proper role in corporate governance, but may instead become an object of misappropriation of the interests of major shareholders. Some of the above literature initially considers the heterogeneity of debt from the perspective of maturity. Still, none of these issues has yet analyzed the role of creditors in supervising the firm based on risk.

Based on the studies mentioned above, subsequent scholars began to consider the impact of debt heterogeneity in which scholars such as Arena (2011) analyzed from the perspective of debt sources, arguing that the credit quality of a firm is related to the sources of debt financing and that there are significant differences in the debt channels chosen by firms with different credit quality. Luo (2011) also analyzed from the perspective of debt maturity and corporate nature and concluded that debt, in general, can play a certain inhibiting effect on the encroachment of interests of major shareholders of Chinese private listed firms. Still, long-term debt not only fails to play a role in inhibiting the encroachment of interests of major shareholders of Chinese private listed firms but also intensifies the encroachment of major shareholders. The study of Wang (2012) concluded that the defensive governance of banks

in private listed firms has a significant inhibitory effect on inefficient investment in listed firms, and defensive governance of trade credit creditors fails and has a stimulating effect on the level of inefficient investment. However, the research conclusions of Huang and Huang (2012) are the opposite. Their analysis based on data from Chinese listed real estate firms concluded that the source of debt financing affects the level of overinvestment of firms, where trade credit debts can inhibit overinvestment and bank credit debts can exacerbate overinvestment. Ayyagari *et al*. (2010), based on data from China, also concluded that bank credit among private firms is more able to promote investment by firms relative to trade credit (Yang *et al*., 2021). Still, Huang *et al*. (2016) argued that trade credit could promote investment by firms, especially during periods of monetary policy tightening when investment by firms that use more trade credit grows faster(Yang *et al*., 2021).

A review of the studies conducted in the literature above reveals that more scholars have analyzed the impact of debt on corporate financial behavior from the perspective of debt heterogeneity. However, such literature, in analyzing the impact of debt heterogeneity on corporate investment and thus shareholder-creditor conflict, has remained limited to designing empirical indicators to measure interest encroachment or to measure inefficient investment at the firm level, without ultimately examining whether such financial behavior of firms would react in the capital market. For example, a study by Gu *et al*. (2017) found that the level of risk-taking of listed firms is significantly and positively related to the cost of bond financing. Their findings note that a firm's level of investment risk is identified by investors in the capital market and given a differentiated cost of capital. Based on the above findings of the literature analysis, this study examines whether agency conflicts between shareholders and creditors are affected by the heterogeneity of debts and can be reflected in the capital market from the perspective of capital market response.

3. Institutional Background

Since 2005, China has carried out both the reform of the share split and simultaneously amended many of the Company Law and Bankruptcy Law concerning corporate governance and enacted many measures to protect the interests of creditors (Feng, 2021). Over the years, China has made great progress in its legislative work and has developed many legal texts in various fields, forming a legal framework system with Chinese cultural and traditional characteristics. However, in law enforcement practice, legislation in many important areas appears to lag, resulting in a lack of lawful guidance for many corporate behaviors. As the most basic institutions and norms governing the conduct of firms, the specific rule-making of the Company Law and the Bankruptcy Law seriously affects the behavioral choices of firms (Zhu and Pi, 2021). In addition, the amendments to the Bankruptcy Law have not fully met the expectations of the rule-makers. The deviated rule-making has led to a large degree of alienation in the creation of bankruptcy administrators, in reality, resulting in corresponding changes in the liquidation process of firms and the expectations of stakeholders, which in turn affects the ex-ante behavioral choices of stakeholders and reduces the corporate governance role of the bankruptcy mechanism (Kong, 2020). The excessive involvement of government forces in the bankruptcy liquidation process also makes firms' expectations and behavioral choices different from the optimal decisions in a market economy. More importantly, for various reasons, the delisting system of Chinese listed firms has been difficult to implement effectively, including the bankruptcy constraints on listed firms and the effective enforcement of the Piercing the Corporate Veil rule. Thus,

the limited liability regime, which is supposed to be a shield to protect firms, may become a sharp spear for some firms to infringe on creditors' interests in reality (Liang, 2019).

On the other hand, the concentration of equity has led to more agency problems in both state-owned and private listed firms. Many studies and management practices have shown that agency conflicts in listed firms are mainly reflected in the misuse of funds (Liang and Chen, 2015). The misuse of capital may be manifested both in the inefficient use of capital and in excessive investment risk. The amendments to the Company Law and the Bankruptcy Law, which are concerned with corporate governance, have also added many measures to protect the interests of creditors. However, stemming from China's special cultural traditions, the problem of insufficient creditor protection still exists in the enforcement environment of the Chinese capital market. For example, as the most basic system and norm governing the behavior of firms, the new Company Law largely reaffirms the protection of shareholders' rights, emphasizing both the protection of shareholders' property rights and the protection of shareholders' rights to monitoring and information. However, the protection of creditors is still lagging and weak. In particular, the amendment to the Company Law in 2013 removed the minimum registered capital restriction, which objectively increased the concern about creditor protection. In addition, as the market competition becomes more and more intense, suppliers play a very important role in the development of firms[3] (Bai *et al*., 2021), and there is no shortage of cases in which suppliers sue their customers[4]. However, against the background that trade credit debts account for even more than 50% of total debts, there are still no more operational and specialized rules for protecting the rights and interests of the trade credit creditors. From the existing laws related to the protection of creditors, a simple distinction is mainly made between voluntary creditors (*e.g*., bank and supplier creditors) and involuntary creditors (creditors of corporate tort debts), without precisely taking into account the great differences between banks and supplier creditors.

4. Hypothesis Development

Trade credit creditors differ from bank creditors in several ways. Banks are creditors in the "subjective" sense only to obtain investment income. Still, this cross-industry "investment" makes it more difficult for banks to effectively monitor indebted firms in terms of their ability to do so. In contrast, trade credit creditors become "objective" creditors in the sense of business cooperation, making it easier for them to have comprehensive information about the borrowing firm than banks (Petersen and Rajan, 1997; Murfin and Njoroge, 2015). Being in the same industry chain also gives trade creditors the expertise and capacity to monitor bank creditors. Some studies have found that alliances lead to a greater alignment of interests between borrowing firms and suppliers and promote improved firm performance (Hewett and Bearden, 2001; Huang *et al*., 2014). Therefore, the alliance of interests between borrowing firms and suppliers that arises from market competition makes supplier monitoring more efficient and stable firm performance.

There are also significant differences between the two types of creditors regarding their incentives to collect the information needed for monitoring. For example, some researchers

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[3] *In February 2017, Yili Group's 2017 Annual Supplier Conference was held in Hohhot, where nearly 500 suppliers from home and abroad came together to discuss development plans (http://www.northnews.cn/2017/0302/2412123.shtml).*

[4] *This listed firm's fraudulent world is revealed the supplier collective debt collection (http://news.sina.com.cn/c/zj/2018-08-16/doc-ihhvciiw0361385.shtml).*

have noted that only "long-term players" - *i.e.*, long-term collaborators or long-term traders - have sufficient incentives to provide monitoring (Coffee, 1991). Therefore, suppliers are more like long-term collaborators than banks in terms of the duration of their cooperation with firms. This is because the supplier's collaboration with the firm stems from the proprietary characteristics of its products. In contrast, the bank provides only monetary funds that do not vary much from one bank to another. The specificity of the supplier's products transforms the supplier into a less liquid "investor" in the firm. The highly concentrated supply chain relationships and highly specialized asset capabilities make the supplier less of a creditor and more of an equity investor, giving it more incentive to focus on the firm's long-term interests and significantly increasing its motivation to monitor. However, banks can "sell" their products to virtually any other firm that needs capital without change. Differences based on incentives to collect information will also allow trade-credit creditors to monitor the firm better and thus reduce the risk to the firm. Wilner (2000) also argues that suppliers may demand higher payment terms (higher cost of debt). They are likely to make more concessions relative to the bank in subsequent negotiations with the firm. Thus, trade credit financing also motivates firms to invest prudently and control their risk in terms of the cost of debt.

From another perspective, the firm providing trade credit objectively becomes a financial intermediary between the traditional financial intermediary (bank) and the borrowing firm (Jain, 2001). Thus, as secondary financial intermediaries, trade credit providers are generally more motivated than primary financial intermediaries (banks) to collect forward-looking information about borrowing and lending firms to determine various types of terms in their cooperation. On the other hand, bank credit creditors act as passive supervisors and mainly collect information of a prospective nature. Therefore, trade credit creditors with shorter maturities are also more concerned about the control of risk by the firm to ensure the realization of their interests. The study by Yang *et al.* (2009) also found that trade credit creditors played an active role in the forced replacement of CEOs of firms with negative performance, which shows that trade credit creditors can play a proper corporate governance role (Wang and Wang, 2018).

In contrast, the corporate governance of bank-based long-term creditors is not efficient enough, and the competition among banks makes banks' monitoring of listed firms inefficient, which makes it difficult to reflect the corporate governance role of such debt financing (Shen *et al.*, 2013; Zhang *et al.*, 2015). In general, trade credit debt financing can play a good role in monitoring corporate risks. In contrast, bank credit debt financing is unsuitable for this purpose and may intensify shareholder-creditor conflicts. Based on the above analysis, this study puts forward the hypothesis as follows:

Hypothesis 1: Heterogeneous credit debt financing is associated with share return volatility.

5. Research Design

5.1. Sample Selection

This study selects the annual reports of Chinese A-share firms listed on the Shanghai and Shenzhen markets from 2009 to 2020 as initial samples. The following deletions are made

based on the data availability: (1) eliminate financial firms; (2) eliminate ST firms[5]. This study winsorizes all dependent and independent variables and control variables with significant outliers such as return on net assets at **1**% and **99** % levels. Eventually, 38,875 firm-year observations are obtained. The data are extracted from the WIND financial database.

5.2. Variable Definition

5.2.1. Dependent variable

This study examines the association between the heterogeneous debt financing of listed firms and the share return volatility. This study first selects the beta value describing the risk of the firm share as the dependent variable. According to the definition and calculation, the beta value is the characteristic indicator of the share formed by investors in the state of free trade. The beta value can reflect the cash flow change and the firm's investment income. The beta value is used to measure the investment risk of a firm based on the assumption that the information disclosure of the firm is comprehensive and real, and the investors in the market can make a relatively timely response to the change of the firm operation. Although the efficiency of the Chinese capital market has yet to be improved, some studies (*e.g.*, Wu and Zhang, 2014; Yao and Zhao, 2016) based on the Chinese capital market have demonstrated that investors in the Chinese capital market respond effectively to disclosures risk.

Moreover, the literature reveals that the beta of a firm changes with the changes in the firm's operating matters and can even be expressed as a linear function of accounting variables such as financial leverage coefficient, earnings after interest and taxes, operating leverage coefficient, and market portfolio returns (Bozos *et al.*, 2013; Huang *et al.*, 2017). Accordingly, this study chooses the beta value of listed firms to measure the risk of share return volatility[6]. At the same time, to ensure the robustness of the analysis, this study also uses the standard deviation of share return in the following robust analysis and other beta value indicators measured in various periods.

5.2.2. Independent Variables

Based on the research questions, the independent variables in this study are mainly used to measure the extent of a firm's use of two types of debt financing, trade credit and bank credit (Lu and Yang, 2011). The measure of trade credit is set as (accounts payable + notes payable - prepayments) / total liabilities. The measure of bank credit is set as (short-term loans, long-term loans, bonds payable, and non-current liabilities due within one year) / total liabilities. To verify the stability of the regression results concerning the relevant literature (*e.g.*, Lu and Yang, 2011), this study sets the measure of trade credit debt financing advantage as trade credit dominance measured as trade credit - bank credit.

5.2.3. Control Variables

To increase the validity of the comparison between the two types of debts, this study adds the gearing ratio of the firm as a control variable in the regression analysis. In addition, this study selects variables such as firm size, profitability, firm investment, tangible asset ratio, growth, institutional ownership, share turnover rate, listing years, the proportion of shares

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[5] *An additional purpose of excluding ST firms and winsorizing the variables is to eliminate, as much as possible, the influence in the analysis of firms with excessive trade credit debt due to operational difficulties and passivity.*

[6] *Because the limited amount of bonds issued in the Chinese capital market and the beta value of bonds are not easy to obtain, this study uses only the beta value of shares to measure risk.*

outstanding, and year and industry as control variables (Xiang and Feng, 2008; Song, 2015). The names and definitions of the variables in the model are presented in Appendix, Table A1.[7]

Finally, the regression model is constructed as follows.

$$EXPLAINED\ VARIABLE_{i,t} = \alpha_0 + \alpha_1 EXPLAINING\ VARIABLE_{i,t-1}$$
$$+ \sum_i CONTROL_{i,t} + \varepsilon_{i,t}$$

（1）

6. Empirical Analysis

6.1. Descriptive Statistical Analysis

Table A2 (Appendix, available online) shows that the mean for the trade credit debt and bank credit debt financings are 25.7% and 32.1%, respectively. The results suggest that Chinese listed firms appear to rely heavily on trade credit debt financing, but both sources of debt play an important governance role in the firms (Ma and Ma, 2020). The average Beta value is 11.148, which is consistent with the literature. However, there are very few firms whose share changes inverse to those of the market, indicating a wide variation of share types. The average value of ROA, which measures a firm's profitability, is 8.300%, indicating that the firm's overall profitability is at a normal level. But the standard deviation of ROA also reaches about 8.326%, indicating a large difference in profitability among firms.

The average growth rate of firms' profit is about 20%, which indicates that firms' overall growth is good. In addition, the average shareholding ratio of the largest shareholder is about 35.5%, and the average ownership concentration is about 60%, which likely indicates that there are more serious agency problems in the firm. The average annual turnover rate of firm shares is 892%, while its standard deviation is large, which is also in line with the general understanding of the serious speculation in the Chinese share market[8].

6.2. Correlation Analysis

Table A3 (Appendix, available online) shows the correlation analysis[9]. The association among trade credit, bank credit, and share risk are consistent with the expectation, preliminarily verifying the hypothesis in this study. In addition, the larger the firm size, the higher the risk of share return volatility. The stronger the profitability of the firm, the lower

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[7] *The appendix is available online as supplemenmtary material.*

[8] *Share Turnover Rate = volume in a certain period / total number of shares issued x 100% in China. In China, the share is divided into public shares circulated in the secondary market and state and legal person shares that cannot be circulated in the secondary market. Generally, the turnover rate is calculated only for the shares in the circulating part to reflect the share's liquidity more realistically and accurately. In other countries, the turnover ratio is usually calculated as the ratio between the amount traded in a certain period and the market capitalization at a certain point in time. The turnover rates of the world's major share markets vary greatly from country to country, and in comparison, the Chinese share market is at the top of the list (Ni et al., 2021; Zhu et al., 2021; Liao et al., 2018).*

[9] *In the case that the correlation coefficient is less than 0.5, there is no multicollinearity among the variables, and the regression can be conducted according to the model established in this study.*

the risk of share return volatility. The higher the total asset-liability ratio of the firm, the higher the risk of the firm share. The profitability and institutional shareholdings effectively reduce the share risk, but the share turnover rate significantly increases the share risk.

6.3. The Analysis of Monitoring Effect

Table 1 shows the pooled OLS regression results of two types of debt financing on the risk of share return volatility (in addition to beta, this study calculates Beta1, a measure of risk based on weekly yields, based on data from the last 60 months). The comparison of regression results in Panel A and Panel B shows that on the premise of controlling the total asset-liability ratio, both current and lagged trade-credit significantly reduce the volatility risk of a share, while bank credit significantly increases the risk of share volatility. The findings indicate that the listed firms with the proportion of more trade credit than bank credit to the total debts lead creditors to better exert their monitoring over the borrowing firms to control the firms' investment and make the share volatility reflect well in the capital market. The regression results also demonstrate that more trade credit can better protect creditors as a whole. In comparison, this study also uses these two types of debt financing as the independent variables for regression analysis. The above regression results preliminarily suggest that the hypothesis proposed in this study is appropriate. To ensure the robustness of the regression results, this study utilizes the proportion of all kinds of debts to the total assets to construct the indicators Trade credit1 and Bank credit1. At the same time, the pooled OLS regression is redone based on the current and lagged data in Table 2. As a result, the conclusion remains very robust.

Table 1. Heterogeneous Debts and Share Risk

Panel A

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Trade credit	**-0.085***** **(-5.27**)		**-0.060***** **(-3.14**)	**-0.062***** **(-5.28**)		**-0.050***** **(-3.66**)
Bank credit		**0.071***** **(5.06**)	**0.044***** **(2.66**)		**0.043***** **(4.22**)	**0.021*** **(1.82**)
Asset	0.000 (**2.01**)	0.000 (**2.04**)	0.000 (**2.00**)	0.000 (**6.26**)	0.000 (**6.24**)	0.000 (**6.23**)
Leverage	0.001 (**5.10**)	0.000 (3.67)	0.000 (3.98)	0.001 (9.67)	0.001 (**8.29**)	0.001 (8.60)
ROA	-0.006 (-8.14)	-0.005 (-7.52)	-0.005 (-7.78)	-0.007 (-15.11)	-0.007 (-14.54)	-0.007 (-14.77)
Net income growth	-0.000 (-2.85)	-0.000 (-2.74)	-0.000 (-2.84)	-0.000 (-2.17)	-0.000 (-2.03)	-0.000 (-2.15)
Institution	-0.000 (-4.54)	-0.000 (-4.48)	-0.000 (-4.43)	-0.000 (-4.46)	-0.000 (-4.45)	-0.000 (-4.42)
Turnover rate	0.000 (13.54)	0.000 (13.41)	0.000 (13.50)	0.000 (10.32)	0.000 (10.19)	0.000 (10.29)
Largest shareholder	0.002 (8.91)	0.003 (**9.05**)	0.002 (8.98)	0.002 (8.96)	0.002 (**9.06**)	0.001 (**9.00**)

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Ownership concentration	-0.002 (-6.13)	-0.002 (-6.33)	-0.002 (-6.16)	-0.001 (-5.73)	-0.001 (-5.92)	-0.001 (-5.77)
Board size	0.010 (5.16)	0.009 (4.90)	0.010 (5.04)	0.004 (3.33)	0.004 (**3.04**)	0.004 (3.24)
Tangible asset	0.000 (2.41)	0.000 (2.29)	0.000 (2.32)	0.000 (2.00)	0.000 (**1.93**)	0.000 (**1.96**)
Age	0.003 (**5.20**)	0.003 (5.77)	0.003 (5.45)	0.001 (**3.05**)	0.001 (3.59)	0.001 (3.23)
Value	-0.000 (**-2.43**)	-0.000 (-2.42)	-0.000 (**-2.42**)	-0.000 (**-2.86**)	-0.000 (-2.81)	-0.000 (-2.83)
Intercept	0.782 (15.71)	0.751 (15.03)	0.767 (15.33)	0.811 (25.26)	0.793 (24.74)	0.803 (24.94)
Industry fixed-effect	yes	yes	yes	yes	yes	yes
Year fixed-effect	yes	yes	yes	yes	yes	yes
Adj-R^2	0.2778	0.2777	0.2781	0.1377	0.1371	0.1379
N	17845	17845	17845	14225	14225	14225

Panel B

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Lag Trade credit	**-0.098***** (**-5.32**)		**-0.059***** (**-3.09**)	**-0.072***** (**-5.83**)		**-0.054***** (**-3.82**)
Lag Bank credit		**0.080***** (**5.50**)	**0.056***** (**3.28**)		**0.052***** (**5.02**)	**0.030***** (**2.49**)
Asset	0.000 (0.61)	0.000 (0.58)	0.000 (0.58)	0.000 (**4.29**)	0.000 (**4.30**)	0.000 (**4.29**)
Leverage	0.001 (**3.72**)	0.001 (**2.87**)	0.000 (3.05)	0.001 (10.36)	0.001 (9.15)	0.001 (9.44)
ROA	-0.005 (-7.48)	-0.005 (-6.92)	-0.005 (-7.15)	-0.007 (-14.39)	-0.007 (-13.87)	-0.007 (-14.09)
Net income growth	-0.000 (-2.48)	-0.000 (-2.34)	-0.000 (-2.37)	-0.000 (-2.07)	-0.000 (-1.84)	-0.000 (-1.95)
Institution	-0.000 (-4.83)	-0.000 (-4.83)	-0.000 (-4.82)	-0.000 (-4.75)	-0.000 (-4.70)	-0.000 (-4.70)
Turnover rate	0.000 (12.65)	0.000 (12.51)	0.000 (12.59)	0.000 (**9.83**)	0.000 (9.69)	0.000 (**9.78**)
Largest shareholder	0.002 (8.62)	0.002 (8.78)	0.002 (8.72)	0.001 (**8.47**)	0.001 (**8.60**)	0.001 (**8.55**)
Ownership concentration	-0.002 (-5.83)	-0.002 (-5.95)	-0.002 (-5.82)	-0.001 (-5.07)	-0.001 (-5.25)	-0.001 (-5.10)
Board size	0.010 (5.05)	0.010 (4.76)	0.010 (4.89)	0.004 (3.43)	0.004 (**3.04**)	0.004 (3.27)

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Tangible asset	0.000 **(1.49)**	0.000 **(1.37)**	0.000 **(1.46)**	0.000 **(4.82)**	0.000 **(4.66)**	0.000 **(4.77)**
Age	0.003 (4.98)	0.003 (5.47)	0.003 **(5.19)**	0.001 (2.58)	0.001 (3.20)	0.001 (2.81)
Value	-0.000 (-2.66)	-0.000 (-2.71)	-0.000 (-2.71)	-0.000 (-3.34)	-0.000 (-3.41)	-0.000 (-3.38)
Intercept	0.686 (12.00)	0.660 (11.71)	0.669 (11.71)	0.802 (24.04)	0.771 (23.05)	0.779 (23.04)
Industry fixed-effect	yes	yes	yes	yes	yes	yes
Year fixed-effect	yes	yes	yes	yes	yes	yes
Adj-R^2	0.2820	0.2821	0.2825	0.1395	0.1389	0.1399
N	16693	16693	16693	13235	13235	13235

*Notes: Beta and Beta1 in Panel A and Panel B are measured based on the weekly yield and trading data of the last 60 months and the last 24 months separately. Trade credit and Bank credit are measured as (accounts payable + notes payable – prepaid accounts) / total liabilities, and (short-term liabilities + long-term liabilities + bonds payable + non-current liabilities due within one year) / total liabilities. Lag Trade credit and Lag Bank credit are the variables trade credit, and bank credit lagged one-phase. *, ** and *** indicate a significant level of 10%, 5% and 1%, respectively. The standard error is adjusted by the variance, with a t-value inside parentheses.*

Table 2. Heterogeneous debts and Share Risk (Analysis-1 Based on Variable Setting)

Panel A

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Trade credit1	-0.235*** (-6.36)		0.155*** (-3.57)	-0.172*** (-6.84)		-0.148*** (-5.07)
Bank credit1		0.193*** (6.61)	0 .139*** (3.80)		0 .097*** (4.82)	0.038** (1.66)
Asset	0.000 **(1.91)**	0.000 (1.91)	0.000 (1.84)	0.000 **(6.16)**	0.000 **(6.16)**	0.000 **(6.12)**
Leverage	0.001 (7.31)	0.000 (0.31)	0.000 (2.25)	0.001 (11.69)	0.000 **(5.04)**	.0001 (6.93)
ROA	-0.005 (-8.09)	-0.004 (-7.50)	-0.0051 (-7.72)	-0.006 (-15.10)	-0.006 (-14.58)	-0.006 (-14.88)
Net income growth	-0.000 (-2.82)	-0.000 (-2.64)	-0.000 (-2.75)	-0.000 (-2.18)	-0.000 (-1.97)	-0.000 (-2.14)
Institution	-0.000 (-4.43)	-0.000 (-4.41)	-0.000 (-4.35)	-0.000 (-4.37)	-0.000 (-4.44)	-0.000 (-4.33)
Turnover rate	0.000 (13.55)	0.000 (13.35)	0.000 (13.45)	0.000 (10.33)	0 .000 (10.14)	0.000 (10.29)
Largest shareholder	0.002 (8.89)	0.002 **(9.06)**	0.002 (8.98)	0.001 (8.93)	0.001 **(9.04)**	0.001 (8.96)
Ownership concentration	-0.002 (-6.12)	-0.002 -**(6.33)**	-0.002 (-6.16)	-0.001 (-5.70)	-0.001 (-5.90)	-0.001 (-5.72)

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Board size	0.010	0.009	0.010	0.004	0.004	0.004
	(5.17)	(4.79)	(4.96)	(3.35)	(2.97)	(3.24)
Tangible asset	0.000	0.000	0.000	0.000	0.000	0.000
	(2.46)	(2.26)	(2.33)	(2.05)	(**1.91**)	(2.00)
Age	0.003	0.003	0.003	0.001	0.001	0.001
	(**5.32**)	(5.87)	(5.63)	(3.19)	(3.63)	(3.33)
Value	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-2.41)	(-2.38)	(-2.38)	(-2.83)	(-2.77)	(-2.79)
Intercept	0.759	0.778	0.767	0.795	0.808	0.797
	(15.23)	(15.69)	(15.42)	(24.74)	(25.29)	(24.83)
Industry fixed-effect	yes	yes	yes	yes	yes	yes
Year fixed-effect	yes	yes	yes	yes	yes	yes
Adj-R^2	0.2783	0.2784	0.2789	0.1388	0.1374	0.1390
N	17845	17845	17845	14225	14225	14225

Panel B

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Lag Trade credit1	**-0.230*****		**-0.147*****	**-0.179*****		**-0.134*****
	(-5.83)		**(-3.41)**	**(-6.83)**		**(-4.64)**
Lag Bank credit1		**0.205*****	**0.163*****		**0.124*****	**0.083*****
		(6.69)	**(5.07)**		**(6.33)**	**(3.99)**
Asset	0.000	0.000	0.000	0.000	0.000	0.000
	(0.57)	(0.50)	(**0.48**)	(**4.23**)	(**4.25**)	(**4.20**)
Leverage	0.001	0.000	0.000	0 .002	0.001	0 .001
	(**4.61**)	(**1.04**)	(**2.03**)	(11.78)	(6.28)	(7.60)
ROA	-0.005	-0.005	-0.005	-0.007	-0.007	-0.007
	(-7.34)	(-7.11)	(-7.19)	(-14.24)	(-14.14)	(-14.21)
Net income growth	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-2.66)	(-1.93)	(-2.14)	(-2.29)	(-1.49)	(-1.84)
Institution	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-4.74)	(-4.77)	(-4.72)	(-4.72)	(-4.62)	(-4.60)
Turnover rate	0.000	0.000	0.000	0.000	0.000	0.000
	(12.62)	(12.43)	(**12.51**)	(**9.84**)	(9.63)	(**9.74**)
Largest shareholder	0.002	0.002	0.002	0.001	0.001	0.001
	(8.55)	(8.91)	(8.79)	(**8.39**)	(8.69)	(**8.56**)
Ownership concentration	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001
	(-5.78)	(-6.09)	(-5.88)	(-4.94)	(-5.38)	(-5.09)
Board size	0.010	0.010	0.010	0.004	0.004	0.004
	(5.09)	(4.67)	(**4.82**)	(3.43)	(2.96)	(3.19)
Tangible asset	0.000	0.000	0.000	0.000	0.000	0.000
	(**1.40**)	(**1.39**)	(**1.42**)	(**4.65**)	(**4.58**)	(**4.64**)
Age	0.003	0.003	0.003	0.001	0.001	0.001
	(**5.32**)	(**5.30**)	(**5.31**)	(2.91)	(3.12)	(3.06)
Value	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-2.67)	(-2.73)	(-2.72)	(-3.36)	(-3.43)	(-3.41)

	Beta1			Beta		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.664 (11.47)	0.687 (12.32)	0.673 (**11.79**)	0.772 (22.99)	0.789 (23.73)	0.789 (23.22)
Industry fixed-effect	yes	yes	yes	yes	yes	yes
Year fixed-effect	yes	yes	yes	yes	yes	yes
Adj-R^2	0.2823	0.2830	0.2835	0.1403	0.1399	0.1414
N	16692	16692	16692	13234	13234	13234

*Notes: Beta and Beta1 in Panel A and Panel B are measured based on the weekly yield and trading data of the last 60 months and the last 24 months separately. Trade credit1 and Bank credit1 are measured as (accounts payable + notes payable – prepaid accounts) / total assets, and (short-term liabilities + long-term liabilities + bonds payable + non-current liabilities due within one year) / total assets. Lag Trade credit1 and Lag Bank credit1 are the variables trade credit1 and bank credit1 lagged one-phase. *, ** and *** indicate a significant level of 10%, 5% and 1%, respectively. The standard error is adjusted by the variance, with a t-value inside parentheses.The regression results of the above model show that there are significant differences in the impact of trade credit and bank credit debt financing on corporate governance. The former can reduce the firm investment risk, while the latter prefers high investment risk. The relevant results seem not to suggest that debt financing plays a good role in corporate governance, as mentioned in the previous literature (Jiang and Huang, 2011). Nor is debt financing certainly the object of interest embezzlement of large shareholders (Song, 2014). The role of debts in corporate governance shows significant differences based on the different sources of the debt. Because of the characteristics of creditors, trade credit creditors strengthen the consistency of interests between themselves and listed firms.*

In contrast, bank credit creditors aggravate the agency conflict with listed firms and turn themselves into parties whose interests are infringed. The differential monitoring function of different types of debts also implies the differences in the different stakeholders' roles. According to the relevant theory of the law of obligation, the essence of debt lies not in the behavior of creditors demanding payment but in the payment of debtors, especially behaviors that ensure sufficient payment[10]. For the trade credit, the debtor fulfills the obligation by "paying" in the sense of controlling the firm risk[11]. But the debtor fails to fulfill the necessary legal obligation to the bank credit.

To ensure the robustness of the regression results, this study also constructs new indicators: trade credit dominance and trade credit dominance1. The former is measured as trade credit - bank credit while the latter is measured as trade credit1 - bank credit1. These two new indicators are utilized to measure the advantages of trade credit over bank credit and to re-test the regression model. The regression results in Table 3 show that the firms with more trade credit than bank credit decrease with the risk of share volatility, which is beneficial to the protection of investors. This study also employs the standard deviation of the share return to measure the risk and re-test the regression model.

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[10] *According to Guthrie and Savigny (2010), the association of debts is established on the free will of debtors who decide to give up their freedom on particular behaviors while maintaining prime dignity and liberty.*
[11] *Risk control is only part of the debtor's obligation, and the repayment of principal on time is a more important part of the obligation.*

Table 3. Heterogeneous Debts and Share Risk
(Analysis-2 Based on Variable Setting)

	Beta1				Beta			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trade credit dominance	-0.141*** (-7.60)				-0.084*** (-6.63)			
Lag Trade credit dominance		-0.156*** (-7.93)				-0.104*** (-7.88)		
Trade credit dominance			-0.052*** (-6.06)				-0.034*** (-5.49)	
Lag Trade credit dominance				-0.057*** (-6.37)				-0.041*** (-6.34)
Asset	0.000 (1.86)	0.000 (0.50)	0.000 (2.00)	0.000 (0.58)	0.000 (6.12)	0.000 (4.22)	0.000 (6.21)	0.000 (4.29)
Leverage	0.000 (2.90)	0.000 (2.59)	0.000 (3.94)	0.000 (3.10)	0.001 (7.50)	0.001 (8.54)	0.001 (8.52)	0.001 (9.41)
ROA	-0.005 (-7.74)	-0.005 (-7.22)	-0.005 (-7.78)	-0.005 (-7.17)	-0.006 (-14.76)	-0.007 (-14.22)	-0.006 (-14.79)	-0.007 (-14.10)
Net income growth	-0.000 (-2.75)	-0.000 (-2.18)	-0.000 (-2.83)	-0.000 (-2.36)	-0.000 (-2.06)	-0.000 (-1.73)	-0.000 (-2.10)	-0.000 (-1.90)
Institution	-0.000 (-4.33)	-0.000 (-4.70)	-0.000 (-4.47)	-0.000 (-4.82)	-0.000 (-4.32)	-0.000 (-4.57)	-0.000 (-4.41)	-0.000 (-4.69)
Turnover rate	0.000 (13.46)	0.000 (12.53)	0.000 (13.50)	0.000 (12.60)	0.000 (10.23)	0.000 (9.72)	0.000 (10.27)	0.000 (9.76)
Largest shareholder	0.002 (8.99)	0.002 (8.79)	0.002 (9.00)	0.002 (8.73)	0.001 (9.01)	0.001 (8.62)	0.001 (9.04)	0.001 (8.58)
Ownership concentration	-0.002 (-6.18)	-0.002 (-5.87)	-0.002 (-6.18)	-0.002 (-5.82)	-0.001 (-5.79)	-0.001 (-5.17)	-0.001 (-5.82)	-0.001 (-5.14)
Boardsize	0.009 (4.95)	0.010 (4.84)	0.010 (5.02)	0.010 (4.89)	0.004 (3.09)	0.004 (3.13)	0.004 (3.16)	0.004 (3.20)
Tangible asset	0.000 (2.33)	0.000 (1.53)	0.000 (2.31)	0.000 (1.47)	0.000 (1.93)	0.000 (4.79)	0.000 (1.94)	0.000 (4.74)
Age	0.003 (5.67)	0.003 (5.30)	0.003 (5.53)	0.003 (5.22)	0.001 (3.54)	0.001 (3.08)	0.001 (3.41)	0.001 (2.96)
Value	-0.000 (-2.38)	-0.000 (-2.72)	-0.000 (-2.41)	-0.000 (-2.69)	-0.000 (-2.75)	-0.000 (-3.43)	-0.000 (-2.81)	-0.000 (-3.39)
Intercept	0.768 (15.47)	0.671 (11.86)	0.764 (15.37)	0.668 (11.72)	0.802 (25.10)	0.779 (23.31)	0.798 (24.96)	0.775 (23.16)
Industry fixed-effect	yes	yes	yes	yes	yes	yes	yes	yes

	Beta1				Beta			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Year fixed-effect	yes	yes	yes	yes	yes	yes	yes	yes
Adj-R^2	0.2789	0.2835	0.2781	0.2825	0.1386	0.1412	0.1378	0.1398
N	17845	17845	17845	17845	17845	17845	17845	17845

*Note: *,** and *** Indicate a significant level of 10%, 5% and 1%, respectively. The standard erroris adjusted by the variance, with at-value inside parentheses. All variables as previously defined.*

The results in Table 4 show that the conclusion of this study is very robust. To compare the differential effect of two kinds of debts on the share risk, this study conducts the variance test on the coefficients of the two types of debts in Table 4. The regression results of columns (3) and (6) of Panel A and Panel B in Table 4 show that there is a significant difference in the coefficients between the trade credit and the bank credit, indicating that the trade credit can better reduce the risk of the share volatility. The findings suggest that debt financing fails necessarily to play a good role in corporate governance, taking into account the structural differences of the debts. The share risk regarded as the firm risk assessment by investors leads to the significantly different impact of different types of financial leverage on the share risk, likely indicating that there is a significant difference in the signal delivered to the capital market by different types of debts.

Table 4. Heterogeneous Debts and Share Risk
(Analysis-3 Based onVariable Setting)

Panel A

	Risk			Risk1		
	(1)	(2)	(3)	(4)	(5)	(6)
Tradecredit	**-2.132***** **(-4.79)**		**-2.912***** **(-5.68)**	**-1.284***** **(-2.85)**		**-1.971***** **(-3.76)**
Bankcredit		**-0.130** **(-0.32)**	**-1.364***** **(-2.93)**		**-0.345** **(-0.85)**	**-1.222***** **(-2.60)**
Asset	0.000 (1.77)	0.000 (1.85)	0.000 (1.83)	0.000 **(3.50)**	0.000 (3.58)	0.000 **(3.52)**
Leverage	0.050 **(7.26)**	0.053 **(7.14)**	0.056 **(7.65)**	0.050 **(6.96)**	0.054 **(7.07)**	0.056 **(7.38)**
ROA	-0.033 (-1.60)	-0.027 (-1.39)	-0.039 (-1.97)	0.102 (4.86)	0.103 (4.89)	0.095 (4.49)
Net income growth	0.032 **(9.33)**	0.032 **(9.45)**	0.032 **(9.32)**	0.043(10.35)	0.044 (10.44)	0.043 (10.36)
Institution	-0.084 (-13.94)	-0.085 (-14.04)	-0.085 (-13.99)	-0.040 (-8.04)	-0.040 (-8.10)	-0.040 (-8.09)
Turnover rate	0.006 (27.70)	0.006 (27.58)	0.006 (27.78)	0.012 (47.55)	0.012 (47.49)	0.012 (47.60)
Largest shareholder	-0.030 (-3.36)	-0.031 (-3.35)	-0.031 (-3.43)	-0.038 (-4.88)	-0.038 (-4.87)	-0.039 (-4.95)
Ownership concentration	0.065 (6.56)	0.063 (6.39)	0.065 (6.61)	0.041 (4.20)	0.039 (4.03)	0.041 (4.22)

	Risk			Risk1		
	(1)	(2)	(3)	(4)	(5)	(6)
Boardsize	-0.525 (-10.26)	-0.535 (-10.43)	-0.517 (-10.08)	-0.363(-7.11)	-0.366 (-7.17)	-0.356 (-6.98)
Tangible asset	0.000 (**-0.12**)	0.000 (**-0.19**)	0.000 (**-0.07**)	-0.000(-0.05)	-0.000 (-0.09)	-0.000 (-0.02)
Age	-0.112 (**-6.31**)	-0.110 (**-6.14**)	-0.119 (-6.63)	-0.080(-4.73)	-0.079 (-4.64)	-0.085 (-4.98)
Value	-0.000 (-2.68)	-0.000 (-2.76)	-0.000 (-2.82)	-0.000(-2.69)	-0.000 (-2.75)	-0.000 (-2.77)
Intercept	57.805 (**52.07**)	57.680 (**51.74**)	58.272 (**52.13**)	48.488 (**38.88**)	48.474 (**38.74**)	49.906 (**39.05**)
Industry fixed-effect	yes	yes	yes	yes	yes	yes
Year fixed-effect	yes	yes	yes	yes	yes	yes
Adj-R2	0.3565	0.3555	0.3569	0.5131	0.5129	0.5133
Differential coefficient test (P-value)	/	/	0.00	/	/	0.17
N	14225	14225	14225	17845	17845	17845

Panel B

	Risk			Risk1		
	(1)	(2)	(3)	(4)	(5)	(6)
Trade credit1	**-4.468*** (-4.68)**		**-6.475*** (-5.74)**	**-3.485*** (-3.38)**		**-4.989*** (-4.11)**
Bank credit1		**-0.714 (-0.91)**	**-3.253*** (-3.51)**		**-0.449 (-0.54)**	**-2.458*** (-2.50)**
Asset	0.000 (1.72)	0.000 (1.89)	0.000 (1.84)	0.000 (**3.45**)	0.000 (**3.58**)	0.000 (**3.51**)
Leverage	0.061 (**8.45**)	0.056 (**6.33**)	0.080 (8.06)	0.058 (**7.72**)	0.054 (6.03)	0.074 (7.08)
ROA	-0.031 (-1.52)	-0.027 (-1.43)	-0.036 (-1.87)	0.102 (4.89)	0.104 (4.93)	0.098 (4.60)
Net income growth	0.032 (**9.36**)	0.032 (**9.44**)	0.032 (**9.29**)	0.043 (10.36)	0.044 (10.43)	0.043 (10.35)
Institution	-0.084 (-13.90)	-0.085 (-14.05)	-0.084 (-13.94)	-0.040 (-7.98)	-0.040 (-8.09)	-0.040 (-8.03)
Turnover rate	0.006 (27.68)	0.006 (27.59)	0.006 (27.79)	0.012 (47.55)	0.012 (47.48)	0.012 (47.60)
Largest shareholder	-0.031 (-3.38)	-0.031 (-3.35)	-0.031 (-3.45)	-0.038 (-4.90)	-0.038 (-4.86)	-0.039 (-4.96)
Ownership concentration	0.065 (6.54)	0.063 (6.38)	0.065 (6.59)	0.041 (4.20)	0.039 (4.04)	0.041 (4.23)

	Risk			Risk1		
	(1)	(2)	(3)	(4)	(5)	(6)
Boardsize	-0.528 (-10.30)	-0.534 (-10.40)	-0.517 (-10.04)	-0.363 (-7.11)	-0.366 (-7.17)	-0.356 (-6.95)
Tangible asset	0.000 (**-0.14**)	0.000 (**-0.20**)	0.001 (**-0.12**)	-0.000 (-0.05)	-0.000 (-0.10)	-0.000 (-0.04)
Age	-0.110 (-6.19)	-0.110 (-6.19)	-0.116 (-6.53)	-0.079 (-4.68)	-0.078 (-4.62)	-0.083 (-4.88)
Value	-0.000 (-2.64)	-0.000 (-2.80)	-0.000 (-2.86)	-0.000 (-2.65)	-0.000 (-2.75)	-0.000 (-2.76)
Intercept	57.354 (51.52)	57.626 (51.77)	57.156 (**50.98**)	48.151 (38.59)	48.364 (38.69)	48.004 (38.33)
Industry fixed-effects	yes	yes	yes	yes	yes	yes
Year fixed-effects	yes	yes	yes	yes	yes	yes
Adj-R2	0.3565	0.3555	0.3571	0.5132	0.5129	0.5134
Differential coefficient test(P-value)	/	/	0.02	/	/	0.00
N	14225	14225	14225	17845	17845	17845

Notes: Risk and Risk1 in Panel A and Panel B are measured standard deviation of firm share returns calculated based on the weekly yield, and trading data of the last 60 months and of the last 24 months separately. In Panel A, Trade credit and Bank credit are measured as (accounts payable + notes payable – prepaid accounts) / total liabilities, and (short-term liabilities + long-term liabilities + bonds payable + non-current liabilities due within one year) / total liabilities. In Panel B Trade credit1 and Bank credit1 are measured as (accounts payable + notes payable – prepaid accounts) / total assets, and (short-term liabilities + long-term liabilities + bonds payable + non-current liabilities due within one year) / total assets. *, ** and *** indicate a significant level of 10%, 5% and 1%, respectively. The standard error is adjusted by the variance, with a t-value inside parentheses.

7. Conclusion

There is a large body of literature on the roles of debt financing in corporate governance. But most of the literature regards different creditors as a whole. Little literature considers the heterogeneity of debt sources and analyzes the effects of different debts. This study empirically finds that the trade credit can better reduce the firm risk than the bank credit, indicating that the trade credit plays a good monitoring role for firms. However, the bank credit increases firm share risk. The analysis results show that the heterogeneity of debts comes out with differentiated creditor monitoring. Concerning the Chinese capital market practice, both listed firms in improving corporate governance mechanisms and regulatory authorities in the formulation of regulatory policies should consider the differentiated monitoring roles of the different creditors in corporate governance. With the development of the capital market, the financing mode of firms becomes more and more diversified. Therefore, the regulatory authorities need to consider effectively distinguishing the monitoring role of different creditors in corporate governance. Furthermore, making effective policies for the different creditors, as important stakeholders, play an effective monitoring role and protect them from the encroachment of the largest shareholders of listed firms

requires effective identification of the differences of different types of creditors in various aspects.

In the Company Law and Bankruptcy Law, which concerns the protection of creditors, there should not be such a protecting mechanism that only facilitates the establishment of firms for lowering the cost. The design of the protection mechanism should also take into account the different types of creditors. The differential system and measures are beneficial to the protection of creditors and have positive effects for listed firms to improve their corporate governance efficiency. Moreover, considering the difficulties of financing and the increasing significance of supply chain financing, the role of suppliers in the strategic development of Chinese firms is necessary to promote vigorously, especially of the small and medium-sized firms. In particular, for suppliers with high concentration, the diversification of their identity also provides implications for the diversification of share products in the Chinese capital market. In addition, the difference between state-owned and private firms should also be considered when formulating differentiated creditor protection measures, which is not only in line with the current mixed-ownership reform but can also effectively promote the development of private firms in China. On the other hand, this study also provides a new analytical perspective for investigating investment and financing interaction.

Acknowledgment

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