

## **Litigation Risk and Commercial Credit<sup>1</sup>**

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**ABSTRACT:** This paper takes the Shanghai and Shenzhen A-share listed companies from 2005 to 2015 as a sample to study the impact of litigation risk on the company's commercial credit. The study found that: (1) Compared with listed companies that do not have litigation risks (or higher litigation risks), the commercial credit of listed companies with litigation risks (or higher litigation risks) has been significantly affected, and the obtained commercial credits significantly reduced, and the higher the frequency of litigation is, the greater the amount of litigation is, the greater the negative impact; (2) This effect is more pronounced in the case of off-site litigation, non-state-owned enterprises, poor legal protection and strong market competition. The conclusions of this paper are still significant after the endogenous and robustness tests. This paper reveals the influence mechanism of the uncertainty of the external environment on the commercial credit of enterprises, and has certain theoretical and practical significance for the related research of commercial credit.

### **1. INTRODUCTION**

Commercial credit means that when buying and selling goods, upstream manufacturers allow downstream manufacturers to pay for a delay after obtaining the goods. This is essentially a short-term loan financing provided by upstream manufacturers to downstream manufacturers. Especially in countries and regions with less developed financial development, commercial credit, as an important part of informal finance, can make up and replace bank credit and meet the liquidity needs of enterprises subject to financing. For a certain degree, commercial credit can make up the lack of financial development promotes economic development. There has been a study on the "law and finance" of China's emerging and transitional economy, and it has been found that the improvement of the legal system and environment will help Chinese enterprises obtain more commercial credit (Qian Xuesong and Fang Sheng, 2017).

However, in recent years, with the continuous improvement of the rule of law in China, the competitive environment in which enterprises are located has become increasingly fierce and complex, and more and more enterprises are facing legal litigation risks. The number of companies involved in litigation and the number of litigation have increased substantially, and the amount of litigation has also risen sharply. Some companies' amount of litigation have exceeded the company's previous year's net profit. Seriously, the amount of litigation involved is even higher than the previous year's operating income. The cost of litigation brings more and more costs to enterprises, which greatly affects the normal production and operation of enterprises (Mao Xinjie and Meng Jie, 2013). Therefore, the purpose of this paper is to examine the impact of legal litigation risk on commercial credit of listed companies.

This paper takes the 2005-2015 Shanghai and Shenzhen A-share non-financial listed company as a research sample and examines the impact of litigation risk on the commercial credit of listed companies. The study found that: (1) Compared with listed companies that do not have litigation risks, the commercial credit of listed companies with litigation risks (or higher litigation risks) has been significantly affected and the commercial credit obtained has been significantly reduced. The more frequent the the litigation is, the greater the amount of litigation is, the greater the negative

impact; (2) This effect is more pronounced in the case of off-site litigation, non-state-owned enterprises, poor legal protection and strong market competition.

This paper contributes to the existing literature in the following aspects: (1) This study finds that litigation risk has an adverse impact on commercial credit, thus expanding the related research on commercial credit; (2) This paper expands research on law and finance.

The rest of the structure of this paper is organized as follows: The second part is literature review; The third part is theoretical analysis and research hypothesis; The fourth part is research design; The fifth part is empirical research; The sixth part is the robustness test; The seventh part is further research; The eighth part is the research conclusion.

## **2. LITERATURE REVIEW**

As an important source of funds for enterprises, the influencing factors of commercial credit mainly include the following aspects: (1) Motivation to reduce transaction costs. In the process of buying and selling commodities, downstream manufacturers make full use of commercial credit to ensure the source of funds, reduce the cash reserves brought by the motives of preventive transactions, and improve the efficiency of capital utilization; Upstream manufacturers can also accurately predict the time of return of loans, and rationally plan and arrange cash holding levels, which will help them improve the efficiency of fund management (Schwartz, 1974; Ferris, 1981); (2) Motivation for quality guarantee. In the process of buying and selling, in order to avoid the problem of customer adverse selection due to information asymmetry, upstream manufacturers provide customers with disguised product quality guarantees by providing commercial credit to customers (Smith, 1987; Long et al., 1993; Deloof & Jegers, 1996); (3) Promotion and competition motivation. When the market competition is fierce, in order to win in the competition, enterprises will use commercial credit as a means of competition, and by providing preferential commercial credit to customers, the purpose of expanding market sales and increasing profits will be achieved. And when market demand is weak, upstream manufacturers promote the market sales of the company's products by providing commercial credit (Schwartz, 1974; Emery, 1984; Fisman & Raturi, 2004; Yu Minggui, Pan Hongbo, 2010); (4) Tax avoidance motivation. Enterprises can transfer taxable funds to the party with the lower marginal tax rate, reduce the taxable amount and amount, and achieve the purpose of reasonable tax avoidance (Brick, 1984); (5) Motivation of price discrimination. Due to legal restrictions, companies cannot set different sales prices for different customers. Therefore, companies use commercial credit to bypass legal restrictions and provide additional or longer term commercial credits when selling products and services, which can make indirect price discrimination to obtain excess profits, stimulate marginal customer purchases, achieve expansion of production, and increase corporate profits (Brennan et al., 1988; Mian & Jr, 1992); (6) Social trust level. The difference in trust between regions has an important impact on commercial credit. The lower the regional trust, the more enterprises in the region use higher-cost commercial credits such as prepayments and notes payable. On the contrary, the higher the regional trust, the higher the region's Enterprises use more low-cost commercial credits such as accounts payable (Allen et al., 2005; Liu Fengwei et al, 2009); (7) Financial development level. In areas with good financial development, enterprises (especially private enterprises) use commercial credit more as a means of product market competition (Fisman & Raturi, 2004b; Mcmillan & Woodruff, 1998; Jiang Wei & Zeng Yeqin, 2013; Yu Minggui & Pan Hongbo, 2010; Hu Ze.etc, 2014); (8) Geographical aggregation. Geographical aggregation has a significant impact on the business credit of enterprises. Geographical aggregation significantly increases the use of commercial credit among enterprises. The more neighboring enterprises, the more commercial credits are used (Ottati, 1994; Fabiani et al., 2000; Paolo & Paola, 2001; Wang Yongjin & Sheng Dan, 2013); (9) Executive status. The "red top businessman" status of the company's executives helps the company to obtain more commercial credit, and the higher the identity of the "red top businessman" is, the more commercial credits are obtained (Khawaja & Mian, 2005; Faccio et al., 2006; Luo Jingbo, 2016); (10) Legal environment. The reform and improvement of the legal system will help enterprises gain more commercial

credit (Porta et al., 1997; Haselmann et al., 2010; Bae & Goyal, 2009; Qian Xuesong & FangSheng, 2017).

The existing literature provides us with fruitful theoretical analysis and empirical evidence for our in-depth understanding of the formation mechanism and influencing factors of corporate commercial credit under the conditions of China's transitional economy. However, the existing literature ignores the impact of legal litigation risk on corporate commercial credit. The purpose of this paper is to explore and study the mechanism of the impact of legal litigation risk on corporate commercial credit.

### **3. THEORETICAL ANALYSIS AND HYPOTHESIS**

Commercial credit is a kind of lending activity between upstream manufacturers and downstream manufacturers when buying and selling commodities. The credit and term of commercial credit are the core issues that upstream manufacturers must consider when making commercial credit decisions. In general, upstream and downstream manufacturers, as important partners in the supply chain, often adopt strategic cooperation in order to reduce transaction costs, and long-term sustainable and healthy partnerships often depend on mutual trust. In the long-term trading and cooperation process, the trust between upstream and downstream manufacturers has been continuously consolidated, and the reputation capital of manufacturers and entrepreneurs has been formed. The operating conditions are better, the stronger the solvency, the higher the reputation of the downstream manufacturers will get more commercial credit from the upstream manufacturers, showing more accounts receivable and notes payable (Liu Fengwei.etc, 2009; Tangsong.etc, 2017). In addition, upstream manufacturers evaluate downstream companies' solvency and credit risk based on publicly or non-publicly obtained downstream vendor information, and try to avoid credit risk caused by downstream manufacturers failing to repay accounts payable and bills payable on time (Chen Yunseng and Wang Yutao, 2010).

For a long time, as China is in a period of transitional economy, the economy and society are developing rapidly, and the formulation and revision of laws cannot keep pace with the economic and social development situation, leading to the incompleteness and revision of the legal system. In addition, local governments have different levels of intervention in the judicial system, resulting in uneven levels of law enforcement and efficiency. The lack of effective market behavior norms and norms in market entities has led to a weak legal awareness of some companies, and illegal activities have occurred from time to time. However, with the continuous improvement of China's socialist market economy and the deepening of the rule of law, Due to changes in the legal environment of the company or the loss of property or non-property caused by its own illegal activities, it is increasingly possible to bear the adverse legal consequences such as corresponding legal liabilities. Such as contract legal litigation risk, intellectual property legal litigation risk, labor contract legal litigation risk, tax legal litigation risk and bankruptcy legal litigation risk, etc. In China, the risk of legal litigation of enterprises is increasingly characterized by complexity, diversity, uncertainty, seriousness and internationalization.

Generally speaking, If the company is caught in legal proceedings, whether it is a lawsuit related to product quality or a lawsuit involving funds, it will not only affect the credit risk assessment of banks to enterprises, but also affect the upstream manufacturers' assessment of the future solvency and credit risk of downstream manufacturers. In addition, it will have a negative impact on the reputation of downstream manufacturers, which will lead to a significant reduction in the amount of bank debt financing, a significant increase in financing costs, and a loss of corporate reputation capital. More seriously, once the lawsuit is lost, the company will bear the corresponding legal responsibility and economic compensation, the company's operating conditions will further deteriorate, and the uncertainty of the company's future cash flow expectations will continue to increase. Therefore, the litigation risk will inevitably directly affect the upstream manufacturers' commercial credit risk evaluation and credit to downstream manufacturers. In order to prevent the occurrence of commercial credit risks and ensure timely recovery of accounts receivable, upstream manufacturers will tend to adopt stricter commercial credit credit policies, reduce commercial credit

credits, and shorten credit deadlines. It will also indirectly affect the potential cooperation opportunities between downstream manufacturers and other upstream manufacturers. Under the joint influence and influence of the two, the commercial credit obtained by downstream manufacturers will inevitably be significantly reduced.

Based on the above analysis, this paper proposes the following assumptions:

Hypothesis: Compared with a listed company that does not have litigation risk, there is a litigation risk. The higher the litigation risk is, the less commercial credit the company receives.

## 4. RESEARCH DESIGN

### 4.1. Sample selection and Data source

This paper takes the Shanghai and Shenzhen A-share listed company from 2005 to 2015 as a research sample and processes the data according to the following principles: (1) Excluding financial and insurance listed companies; (2) Listed companies that exclude Small and Medium Enterprise Board and Growth Enterprise Market; (3) Excluding samples with missing financial data; (4) In order to avoid the influence of singular values, this paper also performs Winsorize processing on 1% of the continuous variables. Finally, 22,700 observation samples were obtained.

The financial data of this paper is from CSMAR, and the litigation data is from WIND database. The legal protection level index comes from the development of the market intermediary organizations in various regions of the country and the legal system environment scores in the "China Marketization Index - 2011 Regional Marketization Relative Process Report" prepared by Fan Gang et al.

### 4.2. Definition of variables

#### 4.2.1. *Business credit (TC) obtained by the corporate*

This paper uses the balance of accounts payable/total assets at the end of the year to measure the commercial credit obtained by the corporate.

#### 4.2.2. *Litigation risk (Lit)*

This paper uses the three variables of litigation (Liti), accused litigation (Liticount) and accused litigation (Litiamount) as a measure of corporate litigation risk.

#### 4.2.3. *Control variable*

For control variables, refer to existing literature (Petersen & Rajan, 1997), This paper controls company performance (ROA), cash holdings (Cash), financial leverage (LEV), asset size (Size) and company year (Age), first largest shareholding ratio (First), company growth (Growth).

According to the analysis in this paper, in model (1), we expect the coefficient of explanatory variable (commercial credit) and explanatory variable (litigation risk) to be negative, that is, the higher the risk of corporate litigation is, the less commercial credit is obtained.

### 4.3. Model design

Drawing on the existing literature, in order to test the hypothesis proposed in this paper, this paper constructs a regression model (1), as follows:

$$TC_{i,t} = \beta_0 + \beta_1 Litcount_{i,t-1} / Litiamount_{i,t-1} + \beta_8 Age_{i,t} + \beta_7 Size_{i,t} + \beta_6 Leverage_{i,t} + \beta_5 Cash_{i,t} + \beta_4 ROA_{i,t} + \beta_4 OCF + \beta_4 Fixed + \sum Industry + \sum Year + \varepsilon \quad (1)$$

Among them,  $\beta_0$  is the intercept term,  $\varepsilon$  is the residual term, and  $\beta_1 \dots \beta_{13}$  is the regression coefficient.

The probability Plit of the litigation risk is estimated by the model (1), and this variable is used as the explanatory variable of the model (2). The model (2) is as follows:

## 5. EMPIRICAL RESEARCH RESULTS AND ANALYSIS

### 5.1. Descriptive statistics

Table 1. Descriptive statistical analysis

stats	N	mean	sd	min	p50	max
TC	22700	0.0106	0.0340	-0.1070	0.0055	0.1340
Liti	22700	0.0134	0.1150	0.0000	0.0000	1.000
Liticount	22700	0.0122	0.1170	0.0000	0.0000	3.6890
Litiamount	22700	0.0039	0.0372	0.0517	0.0000	0.5790

Table 1 lists descriptive statistics for the main variables. As can be seen from the table, the maximum and minimum values of the commercial credit (TC) obtained by the company are -0.1070 and 0.0060, respectively, and the mean and median are 0.0106 and 0.0055, respectively, and the standard deviation is 0.0340. The maximum and minimum values of the number of litigations of listed companies are 3.6890 and 0, respectively, and the mean and median are 0.0122 and 0 respectively. The maximum and minimum values of the litigation amount are 0.5790 and 0.0517, respectively, and the mean and median are 0.0039 and 0, respectively.

### 5.2. Regression analysis

Table 2. Test of hypothesis 1

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	TC	TC	TC	TC	TC	TC
Liti	-0.0113*** (0.0000)	-0.0101*** (0.0000)				
Liticount			-0.0105*** (0.0000)	-0.0096*** (0.0000)		
					-0.0339*** (0.0000)	-0.0303*** (0.0000)
control variables	-	-	-	-	-	-
Observations	22,739	22,739	22,739	22,739	22,739	22,739
Adjusted R-squared	0.036	0.085	0.036	0.085	0.036	0.085

Notes: \*\*\*, \*\*, and \* indicate the significance levels of 1%, 5%, and 10%, respectively, and the numbers in parentheses are the p-values of the two-tailed test.

Table 2 lists the hypothesis test results. Table 5 lists the hypothesis test results. It can be seen from the table that column (1) and column (2) are the regression results of whether the company faces the impact of litigation risk on the new commercial credit obtained in the absence of control and control of other variables. The empirical results show that both Liti (whether the corporate is litigated) and TC (the company's new commercial credit) are significantly negative at 1%. This shows that compared with the company that has no litigation risk, the new business credit obtained by the company with litigation risk is significantly reduced; On this basis, the paper further analyzes the impact of the size of litigation risk on the company's access to commercial credit. Column (3), column (4), column (5), and column (6) are the regression results of the number of litigations and the amount of litigation on the new commercial credits obtained in the absence of control and control of other variables. The empirical results show that Litcount (the number of litigations) and Litemount (the amount of litigation) and TC (the new commercial credit obtained by the company) are significantly negative at the 1% level, which shows that as the risk of litigation

continues to increase, the company's new business credit is significantly reduced. The above results are consistent with the assumptions in this paper, and the hypothesis is verified.

### **5.3. Robustness test**

In order to ensure the stability of the research results, this paper further re-measures the commercial credit by dividing the sum of accounts payable, notes payable and advance receipts at the end of the year by the operating cost of the year, and again using the model (1) for testing. The test found that the proxy variables of litigation risk (Liti, Liticount and Litiamount) were negatively correlated with the new commercial credit (TC) obtained by the company, which further verified the hypothesis of this paper, indicating that the research conclusions of this paper are more stable.

## **6. ANALYSIS CONCLUSION**

This paper takes Chinese Shanghai and Shenzhen A-share non-financial listed companies as samples to empirically test the impact of litigation risk on commercial credit of listed companies. The study found that: (1) Compared with listed companies that do not have pending litigation, the commercial credit of listed companies with pending litigation is significantly reduced, and the more litigation is, the greater the amount of litigation is, the more significant the negative impact; (2) Compared with listed companies in local litigation, the commercial credit of listed companies in remote litigation is reduced more, and the greater the litigation risk, the more significant the negative impact; (3) Compared with state-owned enterprises, the negative impact of litigation risk on non-state-owned enterprises' commercial credit is more significant; (4) Compared with the listed companies with weak legal protection level, the negative impact of litigation risk on the commercial credit of listed companies in areas with strong legal protection level is more significant; (5) Compared with listed companies with weaker market competition, the negative impact of litigation risk on commercial credit of listed companies with stronger market competition is more significant.

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