

Original Paper

Research on the Relationship between Cash Holding and Business Credit in the View of Supply Chain

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Funded by: Research on the Relationship between Enterprise Cash Holding and Commercial Credit in the Supply Chain Perspective of the 2022 School level Scientific Research Project of Wenzhou Vocational and Technical College (WZY2022035) General Project of Zhejiang Provincial Department of Education in 2022 (Y202250640) Research on the Relationship between Cash Holding and Commercial Credit in Zhejiang Manufacturing Industry: A Supply Chain Perspective;

Abstract

This paper analyzes the relationship between corporate cash holdings and commercial credit from the perspective of supply chain, selects 1162 listed companies from 2017 to 2021 as sample objects, analyzes the impact of corporate commercial credit on cash holdings, and discusses the regulatory role of regional financial development level on this impact. The final result shows that there is a significant positive correlation between business payables, i.e. business credit obtained by enterprises, and cash holdings; There is a significant negative correlation between enterprise receivables, i.e. business credit provided by enterprises, and enterprise cash holdings.

Keywords

supply chain perspective, Enterprise cash holdings, Commercial credit

As an important part of an enterprise's balance sheet, commercial credit refers to the credit relationship established between enterprises through receivables and payables in normal commodity transactions and business activities. It plays an important role in strengthening the economic relationship between enterprises, accelerating the capital turnover cycle of enterprises and promoting reproduction. Regional financial level refers to the level of financial system distributed and operated in macro space. The current research finds that, on the one hand, most of the business credit obtained by enterprises is short-term financing, so in order to cope with future repayment, enterprises still need to hold some cash.

For example, in the business process of the enterprise, there will be delayed payment costs such as late delivery or giving up discounts, or search costs for new suppliers. Therefore, the cash holdings of enterprises and the amount payable in commercial credit are complementary, that is, the higher the commercial credit is obtained, the higher the level of accounts payable, which leads to the higher level of cash holdings of enterprises. On the other hand, although the business credit provided by the enterprise has not received cash in the current period, the enterprise will have cash return in the future.

1. Research Assumptions

Enterprise receivables are commercial credits provided by enterprises, and cash holdings are also affected by receivables at multiple levels. First, as a customer's short-term financing through the enterprise, the enterprise's receivables can ensure payment collection under the premise that the enterprise controls the customer information and supply of goods, and its existence form can form a cash return in anticipation; In addition, commercial credit can enable enterprises to obtain more accurate payment collection time, thereby improving the cash use efficiency of enterprises and reducing the transaction cost of cash holdings; Third, as collateral, in order to reduce the defensive motivation of cash holding, enterprises can use receivables to lend to banks. To sum up, enterprise receivables and cash holdings can be substituted. Based on the above analysis, the first hypothesis of this study is proposed:

Assumption: there is a positive correlation between enterprise payables and cash holdings; Negative correlation between enterprise receivables and cash holdings.

2. Research Design

2.1 Sample Selection and Data Source

In order to avoid the impact of large cash holdings of enterprises at the initial stage of listing, the sample of this paper is listed enterprises in 2017, with the research interval of 2017-2021, and the following screening is carried out in the remaining sample: financial and insurance listed enterprises are excluded because of their large cash holdings; Excluding ST shares and PT shares, because such enterprises have unstable financial status and cash holdings or incomplete transaction data; Eliminate enterprises with incomplete key data. After screening, 1162 listed companies and 5830 observations were finally obtained. The data used in this study are from the CAMAR listed company database of Guotai'an Company.

2.2 Variables

2.2.1 Cash Holdings

At present, there are three kinds of standards to measure cash holdings at home and abroad: (1) cash ratio represents holdings, that is, the ratio of cash and equivalents to total assets minus cash and equivalents; (2) Short term trading financial investment and monetary capital represent cash holdings, and the total assets of the enterprise are reduced; (3) Cash holdings are represented by the ratio of cash

and equivalents to total assets. This study chooses the third standard to express cash holdings, and the symbols are described by Cash.

2.2.2 Commercial credit

Notes payable, accounts receivable and advances received in the balance sheet of listed enterprises can be used as the scale of commercial credit by enterprises, while notes receivable, accounts receivable and advances can be used as the scale of commercial credit obtained by customers through enterprises. In the specific study, the total assets are used to deflate. Among them, the variable TC-S represents the ratio of total business credit provided by the enterprise to total assets, that is, enterprise receivables, and the variable TC-R represents the ratio of total business credit obtained by the enterprise to total assets, that is, enterprise payables.

2.3 Model construction

In order to verify the two assumptions, the following regression model is constructed based on the above variables for analysis. The model is as follows:

$$Cash_{mm} = \beta_0 + \beta_1 TCS_{mm} + \beta_2 TCR_{mm} + \beta_3 Debt_{mm} + \beta_4 NWC1_{mm} + \beta_5 Scale_{mm} + \beta_6 CapEx_{mm} + \beta_7 CashFlow_{mm} + \beta_8 Rights_{mm} + \beta_9 Top_{mm} + \varepsilon$$

Model 1

$$Cash_{mm} = \beta_0 + \beta_1 TCS_{mm} + \beta_2 TCR_{mm} + \beta_3 FDI_{mm} + \beta_4 TCS_{mm} * FDI + \beta_5 Debt_{mm} + \beta_6 NWC1_{mm} + \beta_7 Scale_{mm} + \beta_8 CapEx_{mm} + \beta_9 CashFlow_{mm} + \beta_{10} Rights_{mm} + \beta_{11} Top_{mm} + \varepsilon$$

Model 2

3. Empirical Analysis

3.1 Descriptive Statistics

Descriptive statistical analysis of variables in this study is shown in Table 1. From Table 1, we can see that the average level of cash holdings of the selected sample companies in the study is 15.4%, and the median level is 12.6%. Enterprise payables, that is, the proportion of business credit provided by the enterprise in total assets is 11.2%, which means that the enterprise is the net acquirer of business credit in general; The accounts receivable of enterprises, that is, the proportion of business credit accepted by enterprises in total assets is 12.7%.

Table 1. Descriptive Statistics of Main Variables

Variable name	Variable symbol	Maximu m	minimu m value	mean value	median	standard deviation
Cash holdings	Cash	0.936	-0.151	0.154	0.126	0.117

Enterprise receivables	TCS	0.678	0.000	0.112	0.082	0.108
Enterprise payables	TCR	0.659	0.000	0.127	0.097	0.109
Asset liability ratio	Debt	0.999	0.008	0.512	0.523	0.189
Net working capital flow rate	NWC1	0.902	-1.743	0.105	0.097	0.238
Enterprise scale	Scale	27.761	17.458	21.793	21.655	1.238
Capital expenditure	CapEx	0.556	-0.658	0.053	0.037	0.065
Cash flow level	CashFlow	49.757	-348.548	-0.019	0.074	4.681
Nature of property right	Rights	1.000	0.000	0.641	1.000	0.483
Concentration on Top stocks		0.867	0.008	0.359	0.331	0.152

3.2 Correlation Analysis

After descriptive statistics, this study conducts Pearson correlation on each variable to preliminarily verify the hypothesis theory proposed in the article. The specific results are shown in Table 2. It can be seen from Table 2 that the correlation coefficients between variables are basically lower than 0.5, indicating that there is no multicollinearity. In addition, it can be seen from the table that corporate payables and cash holdings are significantly positively correlated at the level of 1%, which shows that with the increase of corporate payables, corporate cash holdings are significantly increased; At the same time, the enterprise receivables and cash holdings in the table show a significant negative correlation at the level of 1%, which means that the enterprise cash holdings decrease significantly with the increase of enterprise receivables, thus simply verifying the hypothesis based on the relevant level. From the perspective of control variables, capital expenditure and property right are significantly positively correlated with cash holdings, while asset liability ratio, net working capital flow rate, enterprise size and shareholding concentration are significantly negatively correlated with cash holdings. This means that the larger the capital expenditure is, the larger the cash holdings of state-owned enterprises are, while the enterprise size, asset liability ratio and other factors negatively affect the cash holdings of enterprises.

Table 2. Correlation Analysis of Main Variables

Variable	NWC1	TSC	TCR	Scale	Debt	Cash	Top	Rights	CapEx	CashFlow	FDI
NWC1	1.00										
TCS	0.18	1.00									
TCR	-0.12*	0.52	1.00								
Scale	-0.13*	-0.11	0.08**	1.00							

Debt	-0.51	0.02	0.37	0.34	1.00						
Cash	-0.50**	-0.02***	0.2***	-0.11***	-0.33*	1.00					
Top	-0.01	0.00	0.01*	0.31	0.06	-0.04	1.00				
Rights	-0.15**	-0.05*	0.06	0.27*	0.14*	0.04**	0.25*	1.00			
CapEx	-0.19	-0.11	-0.08**	0.23**	0.01	0.09*	0.07	0.09**	1.00		
CashFlow	-0.04*	0.03**	0.02**	0.03	-0.03**	0.02	0.03**	0.03	0.04***	1.00	
FDI	-0.05	-0.22*	0.10	-0.10	-0.06	0.08**	-0.11	0.02*	0.06	0.02*	1.00

Note: ***, ** and * represent significant correlation at 1%, 5% and 10% levels, the same below.

3.3 Regression Analysis

(1) Regression analysis between enterprise accounts payable and receivables and cash holdings. This study uses model 1 to regression analyze the relationship between enterprise payables and receivables and cash holdings. The specific results are shown in Table 3. As can be seen from Table 3, Model 1 uses two indicators of enterprise payables and receivables to characterize business credit. The regression coefficient of accounts payable is 0.664, which is significant at the level of 1%, consistent with the theoretical assumption. The more accounts payable, the more obligations the enterprise expects to perform, and thus needs to hold sufficient cash. That is, the enterprise only needs to prepare 0.664 yuan of cash, which is expected to reserve 1 yuan of payment obligations; In addition, the regression coefficient of enterprise receivables is -0.161, which is also significant at the 1% level, indicating that enterprise receivables and cash can be substituted for each other, and receivables can be used as collateral by enterprises for bank financing, thus strengthening the substitution relationship between receivables and cash. Therefore, Hypothesis 1 of this study has been verified, that is, enterprise receivables and cash holdings show a significant positive correlation, There is a significant negative correlation between enterprise receivables and cash holdings. In this model, the regression coefficient of enterprise payables in Table 3 is greater than the absolute value of the coefficient of receivables, which indicates that the impact of the two factors on cash holdings is asymmetric, that is, when the net amount of commercial credit is 0, the enterprise still needs to hold a certain amount of cash. Therefore, in the empirical analysis, enterprise receivables and payables are used to characterize business credit, and their impact on cash holdings is discussed respectively.

Table 4. Regression Analysis between Enterprise Payables and Receivables and Cash Holdings

Variable	R	P
NWC1	-0.259	0.000***
TCS	-0.161	0.000***
TCR	0.664	0.000***
Scale	-0.523	0.000***

Debt	-0.037	0.000***
Top	-0.024	0.031**
Rights	0.016	0.044
CapEx	0.105	0.000***
CashFlow	0.009	0.000***
N	5830	
Adjusted-R ²	0.361	

4. Conclusions and Suggestions

4.1 Conclusion

The empirical analysis of this paper finds that: there is a significant positive correlation between enterprise payables, i.e., business credit obtained by enterprises, and enterprise cash holdings. The empirical evidence shows that when enterprise payables are 1 yuan, its increased cash holdings are 0.664 yuan; Enterprise receivables, that is, the business credit provided by the enterprise, have a significant negative correlation with enterprise cash holdings. Empirical evidence shows that when the enterprise receivables are 1 yuan, its reduced cash holdings are 0.161 yuan.

4.2 Suggestions

4.2.1 Government Level

On the one hand, we should further promote the reform of the financial system, support the restructuring of rural credit cooperatives and urban commercial banks, vigorously expand direct financing channels, encourage the diversification of the financial system and the development of high-level financing services, so as to further improve the financing environment of enterprises; On the other hand, it is committed to creating a good trust environment, strengthening the role of credit intermediaries such as credit guarantee, evaluation and investigation, and severely cracking down on enterprises that do not abide by commercial credit, so as to give full play to the financing capacity of commercial credit, ease the financing pressure of enterprises, and promote the rapid development of enterprises.

4.2.2 Enterprise Level

Enterprises should further change their understanding, learn to use a variety of financial services to facilitate their development, and also improve their ability to manage credit risk. First, enterprises should take the initiative to use finance to serve themselves, such as making risk expectations through credit information services, comprehensively evaluating customers' repayment ability, so as to assist enterprises in making scientific and objective credit decisions; In addition, enterprises can also improve their own credit through guarantee services, or buy insurance to reduce credit losses, etc; Second, in order to prevent and avoid commercial credit risks, enterprises should strengthen the management of internal credit, establish and improve the internal credit risk system, and form scientific and standardized credit decision-making procedures and mechanisms.

Reference

Pan, A., Xu, L., Li, B., & Ling, R. Z. (2020). The impact of supply chain finance on firm cash holdings: Evidence from China. *Pacific-Basin Finance Journal*, 63.

Ghazi Abdul Majeed Algaibat. (2014). Impact of Financial Factors on the Size of the Credit Facilities Granted by the Jordanian Commercial Banks for the Period 1996-2012. *Historical Research Letter*.