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Bargaining Power, Concentration Ratio and Cash Holding: Empirical Evidence from A-Share Listed Firms

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ABSTRACT

Suppliers and customers are important stakeholders of firms, and their bargaining power affects the decision-making of firms. influence of its bargaining power on the level of cash holdings of firms. Through the analysis of the data of manufacturing, information transmission and science and technology industries research of A-share listed firms from 2009 to 2019, it is found that the higher the bargaining power of suppliers, the lower the cash holding level of firms; The higher the Customer bargaining power, the higher the firms' cash holding level. It is further found that the concentration ratio affects this correlation, the higher the concentration ratio, the weaker the relationship between the bargaining power and the level of cash holdings. This paper makes a certain reference value for the firms' management of cash.

Keywords: *Bargaining Power; Cash Holding; Concentration Ratio*

1. INTRODUCTION

As the lifeblood of the national economy, the real industry is related to the economy and people's livelihood. In recent years, China's economy has been transformed. However, in the process, it has repeatedly encountered technical 'bottlenecks', supply cutoffs from important suppliers, or customer loss caused by fierce market competition. Every step of firms' decision, involving cash holding, is crucial.

Cash is the most liquid asset. There are generally three motivations for firms to hold cash: prevention motivation, financing motivation and agency motivation. Firms holding cash can not only satisfy production activities, but also carry out internal financing when facing financing constraints or seize the opportunity to obtain income when they have investment opportunities.

The quality of the firm is important, but to survive and develop in the entire chain, no one can make it alone. They must rely on their upstream and downstream. In Porter's Five Forces Model, it is pointed out that the bargaining power of suppliers and customers can affect corporate strategic decisions and performance, and ultimately determine competition in the industry. Suppliers and customers are the key to firms development and impact the strategy and finance of the firms (Zhang Lu, 2015). [1] The former corresponds to investment and the latter corresponds to cash inflow and the going concern. The bargaining power of both sides also has caused risks to firms operations, including technical risks and financial risks. Cash is the most direct measure to solve financial risks. How to make cash holding decisions to deal with risks without losing too much opportunity cost is a topic that requires further consideration.

A large amount of funds poured into the real industry. Today's market competition is very fierce. Strategic choices are the key to firms' development, and cash management strategy is one of them. Industry concentration reflects the degree of competition in an industry in which firms will manages its suppliers and customers to gain market share to ensure the stable operation of the firms.

At present, the research on the management of suppliers and customers has been relatively mature (Li Weian et al., 2016; Sun Leihong et al., 2006). [2][3] Most studies focus on the influence of suppliers and customers concentration and corporate performance, while research on cash holding decision-making from bargaining power is relatively lacking. Industry concentration reflects the scale distribution of an industry, and competition among the industry will affect the decision-making of firms. To grab resources and profits, firms will adjust their strategies according to industry concentration ratio. The high-tech industry is the most actively developed industry in the manufacturing industry, due to the success of high technology industry for economic development and practice significance of (Zhao Yulin et al., 2008). [4] This paper selects the manufacturing industry, the information transmission industry, and the technology industry in the past ten years. Such industries are seriously affected by the upstream and downstream, and they are also industries that the state vigorously promotes development and can produce core technologies. Combining concentration ratio as a moderating variable, we will discuss the relationship of its upstream and downstream bargaining power and the level of cash holdings.

2.THEORIES AND LITERATURE REVIEWS

2.1.The theory of cash holdings

The concept of bargaining power was proposed as early as the 1950s. The Trade-off Theory is derived from three motivations of cash holdings. The Trade-off Theory holds that the firms' cash holdings are income and costs coexisting. Firms pursuing to maximize value will determine its optimal level by analyzing the marginal costs and marginal benefits of cash holdings.

Corporate cash holdings can be used as a risk management tool (Bates et al., 2009), [5] especially for firms with high external financing costs and huge growth potential to reduce underinvestment (Opler et al., 1999; Brown and Peterson, 2011). [6][7] Hertzel et al. (2008) found that firms holding cash can make them take full advantage of the growth opportunities of comprehensive investment and gain a competitive advantage in the product market (Hertzel M. et al., 2008). [8] Some scholars also believe that when a firms' hedging demand are high, the role of the firms' holding of cash is different from maintaining low leverage. It can be used as a risk management tool to profit for the firms (Acharya et al., 2007; Gamba and Triantis, 2008). [9][10]

From developed markets to emerging markets, firms hold more and more cash (Chen Deqiu et al., 2011). [11] However, excessive cash holdings will cause firms to lose investment income and increase the risk of cash abuse by management, especially when the level of cash holdings is generally high and the level of corporate governance is weak (Zhu Jigao et al., 2009), [12] research risk is one direction.

2.2.Suppliers and cash holdings

Suppliers are located upstream of the firms, and their bargaining power can determine the cost of the firms.

The bargaining power of suppliers is generally reflected by the concentration of relationships, which affect the diversity, depth and breadth of knowledge acquired by the firms (Zheng Dengpan et al. 2016). [20] The analysis based on the Five Forces model pointed out that the fewer suppliers, the stronger the bargaining power of suppliers. If a firm purchases many raw materials from one or a few of suppliers, the changes in the price and quality of the supplier's products are more likely to have an important impact on the firms' production and operation, which means the firms' dependence on suppliers and transfer costs are higher. If suppliers due to certain factors, such as political ban, bankruptcy and establish alliances with competitors, disable continuing to provide raw materials and lead to interruption of cooperation, the firms lose raw material or the source of production, may also lose the customer. Especially policy prohibitions in recent years that have associated industries involving technology, communications, and semiconductors with threats to national security, which are more likely to trigger political games, even destroy the entire industrial chain.

When a supplier has strong bargaining power, out of self-interested considerations, it will reduce the quality of the product or increase the price, which will affect the profitability of the firms.

Therefore, in order to cope with the risks brought by the high bargaining power of suppliers, firms will increase the level of cash holdings to prevent the risk of supply interruption by suppliers.

As an important branch of the corporate relationship network, it is particularly important for the formation of the core competitiveness of the firms. As a specific relationship asset, it brings 'relationship rent' to firms through knowledge sharing, complementary resource endowments and 'effective governance' (Dter J H, et al., 1998). [13] In terms of finance, suppliers can help firms reduce inventory management costs and financing constraints, and comprehensively improve the efficiency of corporate surplus capital management (Wang Yuanzhu et al., 2014); [14] in aspect of non-financial, suppliers can help firms improve their reputation and ability to withstand risks and comprehensively improve corporate value (Kong X). [15] When the supplier concentration is higher, the firms enjoy more positive influence brought by the supplier, including the higher the firms' total inventory turnover rate (Zhao Zhengjia et al., 2018), [16] stronger bank borrowing capacity (Wang Di et al), [17] as well as lower the time spent and financial costs (Bozarth C Cet al., 2009). [18]

From the perspective of resource-based view, the ability to master resources constitutes the bargaining power of negotiators. High bargaining power of suppliers is conducive to form table cooperative dependence, which is not only conducive to the acquisition of external knowledge, but also conducive to the communication and interaction between suppliers or customers and firms (CZ A Rnitzkid et al., 2010). [19]

The more concentrated the suppliers are, the more power to bargain when facing the firms. This means that the stronger the firms' dependence on major suppliers, the firms performance greatly depends on whether it can maintain a good cooperative relationship with the upstream in the supply chain. When the supplier establishes the cooperative relationship with firms, it will measure their short-term performance capability and long-term financial fluctuations, assess the risk of investing in long-term dedicated assets (Hui K W et al., 2012). [21] The close binding between firms and suppliers enables firms to reduce transaction costs to a certain extent, such as the search cost of customers and suppliers, and the stable 'cooperation effect' between supply chains can reduce the cost stickiness of firms (Wang Xiongyuan et al., 2016). [22] When the supply is shrinking, competition will form among firms, increasing purchase prices or take advantage of long-term established channels to obtain resources. Establishing such channels may cause great costs. Suppliers may reduce their commercial credit limits and require firms to make payments in cash to cover the cost of working capital as soon as possible and make a new round of investment. From the perspective of firms, facing suppliers with high bargaining power, firms have an incentive to cater to them and pay early in cash.

Based on different perspectives, the following hypotheses are proposed:

H1a: With other conditions unchanged, the stronger the bargaining power of suppliers, the higher the level of cash held by firms.

H1b: With other conditions unchanged, the stronger the bargaining power of suppliers is, the lower the level of cash held by firms.

2.3.Customers and cash holdings

The bargaining power of customers directly affects the power of customers on the return of corporate funds. As the downstream stakeholders of the firms, it is especially important for the firms to establish a stable cooperative relationship with it. A long-term and good cooperative relationship allows firms to reduce costs, promote technological innovation and transfer risks through joint investment and special assets in the relationship. When the firm operates or transforms its strategy, they should consider customers quotations and pay a attention to establishing relationships with major customers. It can not only encourage teamwork, but also be conducive to technological innovation and ensure quality. The situation of customers will serve as a good signal to alleviate firms worries about risks (Zhao Xiuyun et al., 2104). [23] Firms will obtain valuable information from their customers and potential co-investment firms to help them improve their daily management efficiency (Kalwani Narayandas, 1995); [24] firms can obtain more easily by cooperating with creditworthy customers and relying on customers with the good credit. Firms and big customers usually cooperate in the aspects of operation mode, information flow, logistics, capital flow, so as to improve the capital turnover efficiency of both parties, reduce production and logistics costs, the concentration of customers can bring considerable economic benefits to the firms (Patatoukas , 2012; Ak and Patatoukas, 2016), [25][26] thus, to establish a better relationship with customers, firms will try to meet the requirements of customer operations. Sales enter the account receivable instead of cash. The cash holdings will be lower level.

Statistics show that there is widespread customer concentration in Chinese listed firms (Meng Qingxi, et al., 2018), [27] and the bargaining power of customers increases accordingly. At present, the phenomenon of overcapacity in the industry is more serious. Supply is greater than demand is a factor that causes a fierce market. Firms will rely more on downstream customers to obtain revenue by loosening the firms' credit policy, speeding up the supply, holding more cash and other measures to signal to customers that the firms' financial status is good, makes a commitment and shows goodwill to them (Zhao Xiuyun et al., 2014). [23] Large customers, even if they are the main source of income, are also a big risk. There is a large amount of cash flow from one or several major customers, but if one of the important customers is lost, it will cause fluctuations in cash inflows. The research of Haushalter et al. proved that the bankruptcy of customers has a significant impact on the bankruptcy of their suppliers (Haushalter et al., 1999). [28] Moreover, the loss of customers will also be used as a signal to other customers, which may bring more cash flow risks.

In order to maintain the transaction, frims tend to invest in 'specialized investment' which binds the interests of both parties, thereby generating synergies and promoting business operations. The products produced by the firms will be tailored to the needs of customers. If the customer is lost, the product cannot be adapted to other customers, and it will lose their value. At this time, if the firms want to change the production line or modify the existing products, it may bear higher costs. According to the trade-off theory of cash holdings, cash can play a role in risk management, preventing the risk of losing customers and losing investment opportunities, firms will increase the level of cash holdings.

Based on the above analysis, we propose the following hypotheses:

H2a: With other conditions unchanged, the stronger the bargaining power of customers are, the higher the firms' cash holdings are.

H2b: With other conditions unchanged, the stro*nger the bargaining power of customers are, the lower the firms' cash holdings are.*

2.4.Moderating effects

Industry concentration measures the distribution of the size of firms in an industry. In the process of firm expansion, the scale effect will be generated. The sign of a mature industry is the oversupply of the industry, the product profit margin is on a downward trend, and the competition in the industry is fierce. Only those firms with economies of scale can survive. as a result of the use is relatively mature technology, the cost control in the firm competition has the decisive significance, so small and medium-sized firms usually cannot compete with large firms. This situation causes the industry's market and output to further concentrate on large firms, thereby further increasing the industry concentration ratio (Haushalter D. et al., 2001). [29]

On the one hand, concentration ratio can reflect the status of the top several firms in an industry,as well as the degree of competition in an industry. The higher the concentration ratio, the more concentrated the firms, and even the situation of monopoly or oligopoly will be formed. These large firms may use strategies to dominate the market or have exclusive technology, these factors make it difficult for other firms to surpass in a short period of time.

The influence of supplier concentration on corporate cash flow manipulation behavior depends on the corporate relationship maintenance motivation and opportunistic motivation, and the strength of relationship maintenance motivation and opportunistic motivation will be affected by the industry environment (Jing Yihan, Xing Mingqiang, 2021). [30]

The industry with high concentration degree lacks complete market competition, and weak competitive relationships have the possibility of high customer stickiness (Jia Jun, Wei Yaqing), [31] which may weaken the impact of suppliers and customers on cash holdings. Based on the above analysis, one of the factors affecting bargaining power is market competition which will enhance the bargaining power of suppliers and customers.

Therefore, the following hypotheses are proposed:

H3a: With other conditions unchanged, The higher the concentration ratio, the weaker the influence of suppliers' bargaining power on cash holdings.

H3b: With other conditions unchanged, The higher the concentration ratio, the weaker the influence of customers' bargaining power on cash holdings.

3. RESEARCH DESIGN

3.1.Data source

This paper selects A-share listed firms from 2009 to 2019 as the initial sample to study the influence of the bargaining power of suppliers and the bargaining power of customers on corporate cash holdings. To make the data more practical, the samples were processed as follows: (1) Select manufacturing industry, information transmission, software and information technology service industry, scientific research, and technology service industry; (2) Excluding ST samples with financial abnormalities; (3) Excluding financial firms' data samples. In order to avoid the influence of extreme values on the results of the study, all continuous variables were winsorized at the 1% and 99% levels. Finally, we get the unbalanced panel date with 19,034 observations from 2,639 firms. The bargaining power data of suppliers and customers and other financial data come from the CSMAR database.

3.2.Variable definition

3.2.1.Cash holdings

The explained variable in the model is cash holding. Considering that the bargaining power of suppliers and customers may have lag effects or endogenous issues, we learn from Fields et al. (Fields, Bo Xianhui, Wu Liansheng, 2009) to deal with cash holdings for a lag period (t+1).

3.2.2.Bargaining power of suppliers and customers

This paper measures the bargaining power of suppliers by the proportion of the purchase amount of the top five suppliers disclosed in the firms' financial report to the total purchase amount. The ratio of the top five customers' sales to the total annual sales measure customers' bargaining power.

3.2.3.Concentration ratio

The industry concentration is taken as the moderating variable to explore its influence on the main regression. Draw lessons from the practice of Li Wenqian et al. (LI Wenqian, JIA Xingping, LIAO Yonghai LIU Yi) and choose the Herfindahl A-type index to measure. [32] The larger index, the lower the dispersion of the main business income distribution in the industry, the higher the industry concentration, and the weaker the corresponding internal market competition in the industry.

3.2.4.Control variables

Based on previous research, this paper introduces other control variables that will affect cash holdings: the natural logarithm of firm size (LnSize); corporate debt-to-asset ratio (Lev); return on total assets (ROA); growth rate of operating income (Growth); working capital (Nwc); two-time concurrent situation (Dual).

3.2.5.Models

The following model is established to explore the direct impact of the bargaining power of suppliers (customers) on the firms' cash holdings:

$$Cash_{i,t+1} = \beta_0 + \beta_1 Supply_{i,t}(Customer_{i,t}) + Control + \sum YEAR + u_i$$

Note: 'Cash' is cash holdings, 'supply (custom)' is the bargaining power of suppliers (customers), and control is the control variable; the subscript i represents the firms and t represents the year; ∑Year is the annual fixed effect.

Secondly, in order to explore the moderating effect of industry concentration on bargaining power, Concentration ratio is introduced as a moderating variable, and establish the following model:

$$Cash_{i,t+1} = \beta_0 + \beta_1 Supply_{i,t}(Customer_{i,t}) + \beta_2 HHI + \beta_3 Supply_{i,t}(Customer_{i,t}) * HHI + Control + \sum YEAR + u_i$$

Table 1. Summary of variable definitions

Variable types	Variable name	Variable symbol	Variable definitions
Dependent variable	Cash holding	Cash	Cash/Total assets
Independent variable	Bargaining power of suppliers	Supply	Ratio of the purchase amount of the top five suppliers to the total purchase
	Bargaining power of customer	Customer	Ratio of top five customers' sales to total sales
Control variable	Firms Size	LnSize	The natural logarithm of the firms' total assets
	Asset-liability ratio	Lev	Total liability/Total asset
	Return on Total Assets	ROA	Net profit/average total assets
	Neat working capital	Nwc	(Current assets-current liabilities) / total assets
	Increase rate of business revenue	Growth	(Revenue - revenue for the same period last year) / (revenue for the same period last year)
	Concurrent appointment	Dual	The concurrent appointment of chairman and general manager: 1=same person; 2=different person
Moderator	Concentration ratio	HHI	Herfindahl index of concentration ratio

Note: HHI is the Herfindahl index of industry concentration, which is a moderating variable.

4. EMPIRICAL ANALYSIS

4.1.Descriptive statistics

The table shows the descriptive statistics of the variables. The average value of the cash holding level after the tailing treatment is 0.2, the standard deviation is 0.15, the minimum value is 0, and the maximum value is 0.99, indicating that the overall holding level is low. The tie level of the supplier's bargaining power is 27.85, and the standard deviation is 21.62, which fluctuates greatly. The minimum value is 0 and the maximum value is 88.72. The customer data is similar to that of the supplier, but the average value is slightly higher by 3%, indicating that compared to the supplier, the customer has a higher bargaining power for the firms. The average value of industry concentration is 0.12, the standard deviation is 0.12, the minimum value is 0.02, and the maximum value is 0.79. The range of change is small, indicating that it is difficult to change the pattern of an industry, and it is relatively stable at the industry level.

Table 2. Variable descriptive statistics

Variable symbol	Sample size	Mean	Standard deviation	Min	Max	Median
Cash	21763	0.200	0.150	0	0.990	0.160
Supply	18697	27.85	21.62	0	88.72	25.38
Custom	18697	30.85	20.41	2.220	92.18	25.44
HHI	21753	0.120	0.120	0.0200	0.790	0.0800
LnSize	21324	21.73	1.210	19.35	25.29	21.60
Dual	21566	1.680	0.470	1	2	2
Growth	21763	0.150	0.350	-0.500	2.170	0.0900
Nwc	21763	0.270	0.260	-0.410	0.830	0.270
Lev	21763	0.380	0.200	0.0500	0.930	0.370
ROA	21763	0.0500	0.0700	-0.240	0.240	0.0500

4.2.Correlation test

The table shows the test of the correlation coefficient between the variables. It can be seen that the cash holding level and the supplier's bargaining power are negatively correlated, which preliminarily proves that the H1b hypothesis is valid, and that it is positively correlated with the customer's bargaining power, which preliminarily proves H2a. It shows that the bargaining power of suppliers and buyers have opposite effects on the level of corporate cash holdings. As many influencing factors are not under control, the above results should be treated with caution. In addition, the correlation coefficients among other variables are not large, which indicates that multicollinearity may not be serious, and the research in this paper is reliable.

Table 3. Correlation test

	Cash	Supply	Custom	Dual	Growth	Nwc	Lev	ROA
Cash	1							
Supply	-0.0215*	1						
Custom	0.0556*	0.2103*	1					
LnSize	-0.2987*	-0.1179*	-0.1880*					
Dual	-0.0974*	-0.0604*	-0.0311*	1				
Growth	-0.0245*	-0.00120	0.0496*	-0.00270	1			
Nwc	0.6049*	0.0713*	0.1004*	-0.1526*	-0.0352*	1		
Lev	-0.4114*	-0.1191*	-0.0483*	0.1475*	0.0500*	-0.7810*	1	
ROA	0.2913*	-0.0265*	-0.0618*	-0.0826*	0.2176*	0.4097*	-0.4037*	1

Note: *, ** and *** indicate significant at the level of 10%, 5% and 1%, respectively

4.3.Regression results

We use ordinary least squares (OLS) regression on the model to control the years in the regression, and also use the firms cluster standard deviation to solve the heteroscedasticity problem. The regression results of model (1) (2) show that the model passes the test (Prob>Chi2=0.000).

Table 4. bargaining power and cash holding level

Variable	Cash holding	
	(1)	(2)
Supply	- 0.000311 ***	
	(0.000)	
Custom		0.0002031 *
		(0.000)
LnSize	-0.024***	-0.026***
	(0.003)	(0.003)
Dual	-0.004	-0.004
	(0.003)	(0.003)
Growth	-0.005**	-0.005**
	(0.002)	(0.002)
Nwc	0.500***	0.500***
	(0.015)	(0.015)
Lev	0.213***	0.217***
	(0.017)	(0.017)
ROA	0.062***	0.065***
	(0.018)	(0.018)
_cons	0.507***	0.535***
	(0.064)	(0.058)
YEAR	YES	YES
N	18481	18481
R^2	0.394	0.392
adj. R^2	0.394	0.392

Note: *, ** and *** indicate significant at the level of 10%, 5% and 1%, respectively.

4.3.1.Bargaining power of suppliers and cash holding

It can be seen from the model (1) that the bargaining power of suppliers is negatively correlated with the level of cash holdings. The stronger the bargaining power, the lower the ratio of cash holdings. The coefficient is -0.000311, and it is significant at the 1% level, which supports Hypothesis H1b but does not support H1a. It shows that firms are more dependent on suppliers when facing suppliers with strong bargaining power. Suppliers may have exclusive technology or have most of the resources and they have greater say in transactions, firms will pay cash to satisfy them and seek a more stable supply chain.

4.3.2.Bargaining power of customer and cash holding

It can be seen from Model (2) that the bargaining power of customers is positively correlated with the level of cash holdings. The stronger the bargaining power is, the higher the cash holding ratio will be. The coefficient is 0.0002031, which is significant at the 10% level, which verifies the hypothesis H2a, H2b is not supported. Contrary to the conclusions of customers and suppliers, indicating that firms prefer to hold cash to prevent the risk of customer loss in the face of high bargaining power of customers. At this time, the level of significance on the customer side is lower than that of the supplier, which indicates the firms considers the issue of cooperation with customers and weighs more on the cash holding strategy and will not blindly recover the payment.

4.4.Hausman test

The model (1) and (2) are regressed with random effects, and the results of the main variables are: the supplier's bargaining power coefficient is -0.0003915 (P=0.00<0.01), and the customer's bargaining power coefficient is 0.0000726 (P=0.154>0.1). The results are more significant when the individual fixed effect is added. After the Hausman test, it was found that the fixed effect results were obviously due to random effects, with chi2(6) = 394.58, Prob>chi2 = 0.0000.

4.5.Further analysis

Table 5. Regression results of concentration ratio

	(3)	(4)
Supply	-0.007***	
	(0.002)	
Custom		0.005*
		(0.003)
HHI	0.004*	0.004
	(0.003)	(0.003)
Supply× HHI	-0.000	
	(0.001)	
Custom×HHI		-0.003*
		(0.001)
LnSize	-0.030***	-0.032***
	(0.004)	(0.004)
Dual	-0.002	-0.002
	(0.001)	(0.001)
Growth	-0.002**	-0.002**
	(0.001)	(0.001)
Nwc	0.130***	0.130***
	(0.004)	(0.004)
Lev	0.044***	0.045***
	(0.004)	(0.004)
ROA	0.004***	0.004***
	(0.001)	(0.001)
_cons	0.200***	0.200***
	(0.000)	(0.000)
YEAR	YES	YES
N	18471	18471
R^2	0.392	0.390
adj. R^2	0.391	0.390

Note: *, ** and *** indicate significant at the level of 10%, 5% and 1%, respectively.

The coefficient of bargaining power has changed significantly. The bargaining power coefficient of suppliers has changed to -0.007 and the bargaining power of customers has changed to 0.005, the significance level remains unchanged. The coefficient of concentration ratio multiply bargaining power of suppliers (Supply × HHI) is -0.0001, which is not significant. The coefficient of concentration ratio multiply bargaining power of customer (Customer × HHI) is -0.003, with 10% significance level. Both coefficients are negative, industry concentration weakens the relationship between them, which proves that Hypothesis H3b and H3a is not significant enough. The impact of this weakening is more pronounced on the customer perspective. When facing customers, the firms is the owner of resources. Although important customers with high bargaining power may be lost, the competition between customers makes it possible for the firms to obtain compensation for the benefits of other customers.

The result shows that the influence of industry concentration on bargaining power of customer is much greater than that of supplier's bargaining power. The reason may be that the supplier has the resources, and its bargaining power itself will limit the firms' cash holding level, and the firms needs to establish a good relationship with the supplier. Firms rely on suppliers and need to purchase production equipment or raw materials from suppliers to carry out production. When facing suppliers, even if there is supplier competition behavior, they do not have the same way as customers to make up for the return of funds. Therefore, the weakening degree of industry concentration is even weaker, resulting in insignificant results.

5. CONCLUSION

This paper constructs a model of corporate bargaining power on cash holding level and selects relevant data of listed firms from 2009 to 2019 to analyze the relationship between the bargaining power of suppliers and customers and the level of cash holdings. Different from previous studies, this paper considers industry concentration and the moderating effect of this relationship. The main research conclusions are as follows: First, the supplier's bargaining power is negatively correlated with the firms' cash holdings, and the result is significant; second, the supplier's bargaining power is positively correlated with the firms' cash holdings, and the result is relatively significant; Third, industry concentration may weaker above two relationships.

Today's statistics find that the concentration of corporate customers is increasing, means that the bargaining power of customers is rising. Although the concentration of customers has increased to a certain level, the sales channels of the firms' products or services have become more stable and reliable, once the relationship breaks, it will cause a major cash flow crisis for the firms. Firms need more cash to prevent the risks caused by customer concentration. Higher cash holdings are also an opportunity cost for firms. From the other perspective, since the supplier's power to speak will negatively affect the firms' cash, firms should focus on preventing risks brought by suppliers' high bargaining power, such as supply cuts or profit squeezing. Firms should proceed from their own interests and make good use of market competition to gain advantages. On the one hand, they must improve the level of their products, use their strength to maintain existing customers and attract more potential customers. On the other hand, it is to disperse the concentration of suppliers and establish a solid supply chain relationship to minimize the risks brought by suppliers, while also preventing suppliers from squeezing profits.

The discussion of the text stays on the impact of bargaining power on the level of corporate cash holdings but does not involve the flow of cash held. According to the trade-off theory of cash holdings and the theory of financing priority, cash will be used for investment and flow to different fields, depending on the investment strategy of the firms. Therefore, the influence of bargaining power on the firms' investment strategy can be further studied.

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