ISSN 2616-5902 Vol. 5, Issue 4: 103-112, DOI: 10.25236/AJBM.2023.050417

Common Institutional Ownership and Corporate Cash Holdings

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Abstract: *Based on the data of China's A-share listed companies from 2007 to 2020, this paper studies the impact of common institutional ownership on corporate cash holdings. The results show that common institutional ownership can significantly reduce the level of corporate cash holdings. Further analysis shows that the corporate internal governance mechanism will regulate the relationship between common institutional ownership and corporate cash holdings. In the enterprises without executive equity incentive, common institutional ownership will have a stronger inhibitory effect on corporate cash holdings.*

Keywords: *common institutional ownership; corporate cash holdings; executive equity incentive*

1. Introduction

In the early 1990s, the emergence of mutual funds marked the emergence of institutional investors in China. Since institutional investors' professional investment management and standardized investment behavior are conducive to market stability and market efficiency, Institutional investors have gradually become the main force in China's capital market. According to relevant statistics, by the end of 2020, domestic and foreign institutional investors held A shares of the market value of the proportion has reached 48%. As institutional investors become more active in China's capital market, the ownership models formed by their holdings are also more diverse. Among them, common institutional ownership means that institutional investors hold significant equity in two or more companies in the same industry at the same time (He and Huang, 2017). According to statistics from CSMAR, as of the end of 2020, about 12.90% of listed companies in China's A-share market had common institutional ownership, which means that just considering the company itself as an independent decision maker in the product market can no longer explain the daily strategic performance of enterprises fully. For example, Hillhouse Capital, as a common institutional investor of Tencent and JD.com, promoted the strategic cooperation between the two companies in 2014, and the two companies have achieved better development under the concept of openness and win-win. Unlike ordinary institutional investors, the investment objective of common institutional investors is not to maximize the value of a single investment project, but to maximize the value of the portfolio. Therefore, common institutional investors, as the key node of equity linkage among listed companies, have the motivation to promote product-market collaboration (Azar et al.,2018; Schmalz,2018). In addition, under the same conditions, joint institutional investors have more professional management experience and rich industry information resources, which makes them show greater synergy in corporate governance and can exert influence on the business activities and decision-making of enterprises (Ramalingegowda et al., 2021).

Cash holding is one of the important financial decisions of enterprises, which will have a direct impact on the capital allocation efficiency of enterprises' daily operation, investment and financing activities. As a key current asset, cash is regarded as the "blood" needed for the normal production and operation of an enterprise. After the financial crisis in 2008, the idea of "cash is king" has gradually taken root in the operation and management concept of enterprises, and the cash holdings of most enterprises are at a high level. Under the impact of COVID-19, the preventive role of cash has been fully demonstrated once again. Enterprises with large cash reserves in advance can better cope with the liquidity crunch. According to the statistics of CSMAR database, the average level of cash holdings of Chinese non-financial listed companies from 2008 to 2020 reached 20.40%, which means that more than one-fifth of the book assets of enterprises are cash and cash equivalents. Too much idle cash will generate higher opportunity cost and affect the level of enterprise profit. Therefore, it is of practical significance to discuss how to optimize the level of corporate cash holdings[1-3].

Existing studies have found that enterprises increase cash holdings due to transactional motivation

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(Miller and Orr, 1966), preventive motivation (Opler et al., 1999), agency motivation (Jensen, 1986) and tax motivation (Foley et al., 2007). In the context of China's economic system, the macroeconomic policy fluctuations brought by the adjustment of national industrial structure, the relatively low level of corporate governance, the relatively weak investor protection and other serious corporate agency problems, make the preventive motivation and agency motivation are the most important factors affecting the cash holding level of Chinese enterprises. Common institutional investors, as the nodes of economic correlation between different enterprises, are an important link for the flow of information and resources in the market, and they have the motivation and ability to play a supervisory and governance effect in corporate governance, so as to have an impact on the financing constraints and agency problems of enterprises. Financing constraints and agency problems will directly affect the precautionary motivation and agency motivation of cash holding.

Based on this entry point, this paper intends to use the A-share listed companies in Shanghai and Shenzhen from 2007 to 2020 as research samples to investigate the impact of common institutional ownership on corporate cash holdings. By analyzing this problem, this paper intends to expand the research on the influence of common institutional ownership on corporate governance, further understand the behavior of common institutional ownership and the influence of the correlation behind it, and also provide a new perspective for enterprises to optimize capital allocation.

2. Theoretical Analysis and Research Hypothesis

First of all, common institutional ownership can reduce the information asymmetry between enterprises and external investors, ease the external financing constraints, and thus reduce the demand for internal reserve funds of enterprises. According to the precautionary motivation theory of cash holding, if enterprises predict the high transaction cost of external financing in the future, they will tend to retain cash in advance and rely on internal funds to meet future financing needs as far as possible, so as to prevent and alleviate financing insufficiency (Opler et al., 1999). Adverse selection and moral hazard caused by information asymmetry are important obstacles for enterprises to seek financing. When corporate information asymmetry decreases and financing convenience improves, cash holdings should be reduced (Myers and Majluf, 1984).

On the one hand, the increased information disclosure of a co-owned company held by common institutional investors can improve the information environment of other co-owned companies in the industry by reducing the uncertainty of demand, supply and cost conditions. The existence of the internalization of the externality of information disclosure. Common institutional investors will urge the companies they hold to disclose more information (Park et al., 2019). Similarly, the existence of the internalization of negative externalities of earnings management, that is, the accounting misstatement of a co-owned company may send misleading signals about investment opportunities to other co-owned companies in the industry, thus distorting the investment decisions of peers and prompting common institutional investors to lower the earnings management level (Ramalingegowda et al., 2021), and to improve the comparability of accounting information. Therefore, common institutional ownership can improve the quality of corporate accounting information, alleviate information asymmetry, reduce corporate external financing costs, and thus reduce corporate cash holdings. On the other hand, as the associated node of information and resource circulation between enterprises, common institutional investors can promote information knowledge sharing and resource coordination allocation between enterprises in the same industry by communicating with and proposing suggestions to the management (Gao et al., 2019), thus improving the level of collaboration between enterprises. Thus, the market performance of enterprises' products can be improved (He and Huang, 2017), more external funds can be attracted, enterprises' dependence on internal cash flow can be weakened, and cash holdings can be reduced[4-8].

Secondly, common institutional ownership can play a supervisory and governance effect, restrain the opportunistic behavior of management, and thus reduce the cash held by enterprises for agency motives. According to the agent-motive theory of cash holding, agency conflicts lead managers to hold more cash out of self-interested motives to satisfy their purposes of "empire building" or in-service consumption (Jensen, 1986). Common institutional investors have both the motivation and the ability to play an active supervisory role to reduce the possibility that management reserves excess cash for personal gain.

On the one hand, due to the internalization of corporate governance externalities, that is, when the marginal cost of improving corporate governance is the same, common institutional investors will get higher marginal benefits, because they can not only benefit from the improvement of corporate governance under supervision, but also benefit from the subsequent improvement of corporate

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governance of the same industry in their portfolio (He et al., 2019). Therefore, compared with ordinary institutional investors, common institutional investors have stronger motivation to supervise the companies in their portfolios and are more willing to participate in corporate governance. On the other hand, common institutional investors have participated in the operation of several enterprises in the same industry for a long time, and have accumulated rich management experience and information advantages in the market practice. The similar characteristics among enterprises in the same industry reduce the information searching and processing costs of common institutional investors, thus forming the information scale economy effect, which can help them better analyze the enterprises in the same industry. Thus, more effective supervision and constraints on managers can be implemented (Ramalingegowda et al., 2021; Edmans et al., 2019). The specific performance is to vote against the improper governance suggestions put forward by the management (He et al., 2019), replace the senior managers with poor performance level (Kang et al., 2018), etc., so as to reduce the space for managers and other insiders to hold large amounts of cash for personal gain, relieve the agency motivation of the company's cash holdings, and reduce the level of cash holdings[9-12].

Finally, common institutional ownership can give play to institutional synergies, promote product market collaboration, reduce the degree of competition in product markets, and thus reduce the cash holdings of companies to deal with future competitive threats (such as mutual litigation, price wars and subsidy wars). Enterprises will reserve cash to protect against possible future risk shocks, so that they can maintain stable development in the changing market environment. When market competition is fierce, abundant cash reserves can support specific competitive behaviors of the company, effectively prevent competitors from entering or force them to make concessions, so as to obtain more market shares and improve competitive advantages in the product market. For common institutional investors, encouraging the same industry enterprises in their portfolios to act collectively and reduce competition and conflict helps to maximize the value of their portfolios. Therefore, common institutional investors have an incentive to increase the market share and bargaining power of enterprises by facilitating collusion between enterprises (Azar et al., 2018). The reduced market competition caused by "collusion" may make portfolio companies do not need to reserve a large amount of cash to support their competitive behavior, thus reducing the level of corporate cash holdings. Based on the above analysis, this study proposes the following hypotheses:

H1: When other conditions remain the same, there is a significant negative correlation between common institutional ownership and corporate cash holdings.

3. Research Design

3.1 Sample Selection and Data Sources

Since the calculation of cash holdings of enterprises with dependent variables needs to use the "trading financial assets" item disclosed after the implementation of the new accounting standards in 2007, this study selects the A-share listed companies in Shanghai and Shenzhen of China from 2007 to 2020 as the initial sample. In order to ensure the validity of the samples, the primary samples were processed as follows: (1) The samples of listed companies in the financial industry were excluded; (2) Remove samples of companies with abnormal operations such as ST or *ST; (3) Eliminate company samples with missing key variables; (4) In order to avoid the influence of extreme values on the research results, Winsorize all continuous variables at the 1% level. The relevant financial data and company information used in the research are mainly from CSMAR database.

3.2 Model Setup and Variable Definition

In order to test the above hypothesis and the relationship between institutional co-ownership and corporate cash holdings, this study constructs the following regression model (1):

$$Cash_{i,t} = \beta_0 + \beta_1 Cross_{i,t} + \gamma Controls_{i,t} + \sum_j Industry_j + \sum_t Year_t + \varepsilon_{i,t} \quad (1)$$

$Cash_{i,t}$ is the cash holding level of the enterprise. It is represented by *Cash1* and *Cash2*. The larger the value, the higher the cash holding level of the listed company. $Cross_{i,t}$ is the common shareholding situation of listed companies, expressed by *CrossDum*, *NumCross*, *TotalCrossOwn*. $Controls_{i,t}$ is control variable, $Industry_j$ and $Year_t$ are industry and year fixed effects respectively, i and t are error terms, as shown in Table 1.

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Table 1: Variable definitions

Category	Variables	Measurement of variable
Dependent Variable	*Cash1*	(monetary funds + trading financial assets)/total assets
	Cash2	(monetary funds + trading financial assets)/(total assets - monetary funds - trading financial assets)
Independent Variable	*CrossDum*	on a quarterly basis, if the proportion of institutional investors holding shares in the company and other companies in the same industry is not less than 5%, it is 1, otherwise it is 0
	NumCross	the number of institutional investors who collectively own the company and add one to take logarithm
	TotalCrossOwn	the sum of the shares held by all jointly holding institutions in the company
Control Variables	*Size*	the natural log of total assets
	Lev	total liabilities/total assets
	ROA	net profit/total assets
	Top1	number of shares held by the largest shareholder/total number of shares
	Nwc	(working capital - cash and cash equivalents)/non-cash assets
	Cf	net cash flows from operating activities/non-cash assets
	Capex	cash paid for the purchase and construction of fixed assets, intangible assets and other long-term assets/ non-cash assets
	Div	dividends payable/total assets
	TobinQ	(market value of shareholders' equity + total debt)/total assets
	Bankdebt	(long-term borrowings + short-term borrowings)/total liabilities
	Year	dummy variable of year
	Ind	industry dummy variables shall be classified according to the classification standard of CSRC 2012

4. Empirical Results and Analysis

4.1 Descriptive statistics

Table 2 shows the descriptive statistical results of variables in this paper. *Cash1* has a mean of 19.64, a standard deviation of 14.47, a minimum value of 1.35 and a maximum value of 70.26. The mean value of *Cash2* is 30.81, the standard deviation is 37.73, the minimum value is 1.369 and the maximum value is 236.2, all of which indicate that there are certain differences in cash holdings among listed companies. The mean *CrossDum* is 0.122, indicating that 12.2% of listed companies are co-owned by institutional investors. The mean value of *NumCross* is 0.076, the minimum value is 0.000, and the maximum value is 1.609 (that is, the enterprise has 4 common institutional investors). On the basis of *TotalCrossOwn*, the full sample mean is 2.939%.

Table 2: Descriptive statistics of variables

Variables	N	mean	p50	min	max	sd
Cash1	26879	19.64	15.49	1.350	70.26	14.47
Cash2	26879	30.81	18.34	1.369	236.2	37.73
CrossDum	26879	0.122	0	0	1	0.328
NumCross	26879	0.0760	0	0	1.609	0.217
TotalCrossOwn	26879	2.939	0	0	85.53	9.790
Size	26879	22.20	22.03	19.62	26.25	1.343
Lev	26879	44.84	44.46	5.356	94.73	21.23
ROA	26879	3.644	3.643	-27.69	19.54	6.339
Top1	26879	35.85	33.96	9.339	75.78	15.15
Nwc	26879	1.414	1.638	-80.00	62.41	26.58
Cf	26879	6.592	5.845	-22.34	43.52	10.36
Capex	26879	6.396	4.499	0.0220	29.83	6.205
Div	26879	0.0740	0	0	1.539	0.226
TobinQ	26879	2.507	1.886	0.845	11.57	1.881
Bankdebt	26879	29.12	28.16	0	81.20	22.85

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4.2 Baseline Regression Results

Table 3 reports the regression results of common institutional ownership and corporate cash holdings. Columns (1) - (3) are the regression results with Cash1 as the dependent variable. The estimated coefficient of *CrossDum* in column (1) is -0.529 and is significant at the 5% level, indicating that the existence of institutional co-ownership can reduce the cash holding level of listed companies by 0.529 units on average. In column (2), the estimated coefficient of *NumCross* is -0.940, which is significant at the 1% level, indicating that every 1 unit increase in the degree of linkage can reduce the cash holding level of listed companies by 0.94 units. In column (3) the estimate coefficient of TotalCrossOwn is -0.019, and is significant at the 1% level, which indicates that each 1% increase in the co-ownership ratio can reduce the cash holding level of the listed company by 0.019 units. Columns (4) - (6) are the regression results with Cash2 as the dependent variable. The estimated coefficient of *CrossDum* in column (4) is -1.089 and is significant at the 5% level, indicating that the existence of institutional co-ownership can reduce the cash holding level of listed companies by 1.089 units on average. In column (5), the estimated coefficient of *NumCross* is -1.937, which is significant at the 1% level, indicating that every 1 unit increase in the degree of linkage can reduce the cash holding level of listed companies by 1.937 units. In column (6) the estimate coefficient of *TotalCrossOwn* is -0.039, and is significant at the 5% level, which indicates that each 1% increase in the co-ownership ratio can reduce the cash holding level of the listed company by 0.039 units. In general, institutional joint ownership helps to reduce the level of cash holdings of listed companies.

Table 3: Common institutional ownership and corporate cash holdings

Variables	*Cash1* (1)	*Cash1* (2)	*Cash1* (3)	*Cash2* (4)	*Cash2* (5)	*Cash2* (6)
CrossDum	-0.529**			-1.089**		
	(0.208)			(0.536)		
NumCross		-0.940***			-1.937***	
		(0.298)			(0.716)	
TotalCrossOwn			-0.019***			-0.039**
			(0.007)			(0.016)
Size	-0.282***	-0.301	-0.274***	-0.284	-0.288***	-0.315
	(0.075)	(0.204)	(0.075)	(0.204)	(0.074)	(0.201)
Lev	-0.270***	-0.699***	-0.270***	-0.699***	-0.270***	-0.699***
	(0.006)	(0.018)	(0.006)	(0.018)	(0.006)	(0.018)
ROA	0.109***	-0.021	0.109***	-0.022	0.109***	-0.023
	(0.015)	(0.041)	(0.015)	(0.041)	(0.015)	(0.041)
Top1	0.037***	0.086***	0.037***	0.086***	0.038***	0.089***
	(0.005)	(0.013)	(0.005)	(0.013)	(0.005)	(0.013)
Nwc	-0.136***	-0.340***	-0.136***	-0.340***	-0.136***	-0.340***
	(0.005)	(0.016)	(0.005)	(0.016)	(0.005)	(0.016)
Cf	0.226***	0.709***	0.226***	0.709***	0.226***	0.708***
	(0.011)	(0.036)	(0.011)	(0.036)	(0.011)	(0.036)
Capex	0.112***	0.248***	0.112***	0.248***	0.112***	0.247***
	(0.014)	(0.042)	(0.014)	(0.042)	(0.014)	(0.042)
Div	-1.832***	-6.126***	-1.835***	-6.132***	-1.826***	-6.113***
	(0.279)	(0.648)	(0.279)	(0.648)	(0.279)	(0.648)
TobinQ	0.530***	1.987***	0.530***	1.988***	0.527***	1.980***
	(0.061)	(0.194)	(0.061)	(0.193)	(0.060)	(0.193)
Bankdebt	-0.118***	-0.246***	-0.118***	-0.246***	-0.118***	-0.246***
	(0.004)	(0.010)	(0.004)	(0.010)	(0.004)	(0.010)
_cons	33.795***	56.206***	33.612***	55.828***	33.859***	56.390***
	(1.691)	(4.581)	(1.691)	(4.575)	(1.679)	(4.545)
Ind	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	26879	26879	26879	26879	26879	26879
r2	0.410	0.368	0.410	0.368	0.410	0.368

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively; Standard error in parentheses.

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4.3 Endogeneity Tests

Enterprises jointly held by institutions may be selectively held by institutional investors according to their cash holdings, that is, there is sample selection bias. Therefore, in this paper, Heckman two-stage method and propensity score matching method were used for endogeneity test. There may be an endogenous problem of mutual causality between common institutional ownership and corporate cash holdings. Enterprises with low cash holdings may receive more attention from institutional investors, resulting in more common ownership[13-15].

4.3.1 Heckman two-stage test

In order to solve the estimation bias caused by sample selection bias, we adopt Heckman two-stage test. In the first stage, we constructed the influencing factor model of *CrossDum*. Specifically, *Size*, *Lev*, *ROA*, *Growth*, *Fixed*, *Cash* and *Top1* with a lag of one stage were selected as control variables to conduct Probit regression on CrossDum and obtain IMR The second stage adds IMR to model (1) to correct for potential selection bias effects. The results are shown in Table 4. The regression coefficient of IMR is significantly negative, indicating that there is a distribution bias in the sample of common institutional ownership. The regression coefficient of *CrossDum* is significantly negative at the level of 10% and 1%, indicating that the main conclusions of this paper are still valid.

Table 4: Endogeneity test: Heckman regression

Variables	*Cash1*	*Cash2*
	(1)	(2)
CrossDum	-0.433*	-1.306***
	(-1.89)	(-5.69)
IMR	9.173***	-2.555**
	(8.51)	(-2.37)
Controls	YES	YES
Ind	YES	YES
Year	YES	YES
N	22639	22639
r2	0.1955	0.2475

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively; t value in parentheses.

4.3.2 PSM-OLS

In order to control the influence of self-selection bias, we adopt propensity score matching (PSM) for test. First of all, we take the enterprises with common institutional ownership (CrossDum=1) as the experimental group and the others as the control group, and take the control variables in model (1) as matching variables to estimate the Logit model. We then used 1:1 nearest neighbor matching with replacement, resulting in 5872 firm-year observations. The results of the PSM test found that the average treatment effect (ATT) of Cash1 and Cash2 is -1.12 and -3.04, and both are significant at 1% level, indicating that common institutional ownership can reduce the level of cash holding for companies with similar characteristics by an average of 1.12 and 3.04. The results of the regression of the matched samples are shown in column (2) in Table5. The regression coefficient of *CrossDum* is significantly negative at the level of 5% and 1%, which shows that the main conclusions of this paper are still valid.

Table 5: Endogeneity test: PSM-OLS

Variables	*Cash1*	*Cash2*
	(1)	(2)
CrossDum	-0.685**	-2.670***
	(-2.3)	(-2.81)
ATT	-1.12***	-3.04***
	(-3.07)	(-2.67)
Controls	YES	YES
Ind	YES	YES
Year	YES	YES
N	5872	5872
r2	0.4397	0.3904

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively; t value in parentheses.

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4.4 Robustness Test

In the definition of independent variables mentioned above, the defined proportion of common institutional ownership is 5%. In order to alleviate the possibility that institutional investors may participate in the operation and management of the enterprises they hold due to the high shareholding ratio, and thus reduce the level of cash holdings, this paper refers to the method of Gao et al. (2019), changes the defined proportion to 3%, and carries out the regression again. The regression results are shown in Table 6, and the conclusions of this paper are still valid.

Table 6: Robustness test

Variables	*Cash1* (1)	*Cash1* (2)	*Cash1* (3)	*Cash2* (4)	*Cash2* (5)	*Cash2* (6)
CrossDum	-0.429**			-1.528***		
	(-0.174)			-0.472		
NumCross		-0.591**			-1.492***	
		(0.259)			(0.696)	
TotalCrossOwn			-0.016***			-0.034**
			(0.007)			(0.016)
Size	-0.333***	-0.366*	-0.334***	-0.412**	-0.288***	-0.315
	(0.075)	(0.209)	(0.076)	(0.210)	(0.074)	(0.201)
Lev	-0.280***	-0.733***	-0.280***	-0.732***	-0.270***	-0.699***
	(0.006)	(0.018)	(0.006)	(0.018)	(0.006)	(0.018)
ROA	0.102***	-0.058	0.102***	-0.059	0.109***	-0.023
	(0.014)	(0.042)	(0.014)	(0.042)	(0.015)	(0.041)
Top1	0.036***	0.081***	0.036***	0.082***	0.038***	0.089***
	(0.005)	(0.013)	(0.005)	(0.013)	(0.005)	(0.013)
Nwc	-0.135***	-0.339***	-0.135***	-0.339***	-0.136***	-0.340***
	(0.005)	(0.016)	(0.005)	(0.016)	(0.005)	(0.016)
Cf	0.231***	0.743***	0.231***	0.743***	0.226***	0.708***
	(0.010)	(0.037)	(0.010)	(0.037)	(0.011)	(0.036)
Capex	0.111***	0.244***	0.111***	0.245***	0.112***	0.247***
	(0.013)	(0.041)	(0.013)	(0.041)	(0.014)	(0.042)
Div	-1.954***	-6.499***	-1.953***	-6.490***	-1.826***	-6.113***
	(0.282)	(0.672)	(0.282)	(0.672)	(0.279)	(0.648)
TobinQ	0.530***	1.977***	0.530***	1.966***	0.527***	1.980***
	(0.058)	(0.191)	(0.058)	(0.191)	(0.060)	(0.193)
Bankdebt	-0.117***	-0.247***	-0.117***	-0.246***	-0.118***	-0.246***
	(0.004)	(0.010)	(0.004)	(0.010)	(0.004)	(0.010)
_cons	35.345***	59.450***	35.333***	60.306***	33.859***	56.390***
	(1.682)	(4.658)	(1.695)	(4.687)	(1.679)	(4.545)
Ind	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	28547	28547	28547	28547	26879	26879
r2	0.416	0.371	0.416	0.370	0.410	0.368

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively; Standard error in parentheses.

5. Further Analysis

According to the "free cash flow hypothesis" (Jensen, 1986), managers are more inclined to hold cash rather than pay dividends to shareholders. Under the free cash flow hypothesis paradigm, increasing the proportion of executive shareholding can improve the consistency of its interests with shareholders, thus reducing agency costs. Therefore, executive equity incentive is an important mechanism to alleviate the conflict of interests between shareholders and executives. If the executive equity incentive plan can achieve the incentive effect, the executive and shareholders will have a synergistic effect after the implementation, and the executive income will be more closely related to the company value, which can weaken the motivation of the executive's in-service consumption, capital occupation and other behaviors harmful to the company's value, which will reduce the cash level held by the enterprise for agency motivation. In addition, senior executives, as insiders, hold the company's equity through equity

ISSN 2616-5902 Vol. 5, Issue 4: 103-112, DOI: 10.25236/AJBM.2023.050417

incentives and other forms, which can release signals of sound corporate governance mechanism to the capital market, thus reducing information asymmetry, obtaining more bank loans, easing financing constraints (Whited, 1992), and thus reducing the cash held by enterprises for precautionary motives. Therefore, in the companies implementing executive equity incentive, better internal governance mechanism weakens the negative correlation between common institutional ownership and corporate cash holdings. However, companies without equity incentives may have higher agency costs and serious financing constraints, and corporate cash holdings have stronger agency and preventive incentives. In this case, common institutional investors play a greater role in restraining management opportunism and easing financing constraints. Therefore, this paper believes that, compared with the companies that have implemented the executive equity incentive, in the companies that have not implemented the executive equity incentive, common institutional ownership has a more significant inhibitory effect on the level of corporate cash holdings.

Table 7: Moderating effect test results

Variables	*Cash1* (1)	*Cash1* (2)	*Cash1* (3)	*Cash2* (4)	*Cash2* (5)	*Cash2* (6)
CrossDum	-0.752***			-1.563***		
	(-0.223)			(-0.568)		
CrossDum	1.350**			2.530*		
×*Incen*	(-0.537)			(-1.454)		
NumCross		-1.257***			-2.696***	
		(-0.319)			(-0.753)	
NumCross		1.971**			4.227**	
×*Incen*		(-0.774)			(-2.018)	
TotalCrossOwn			-0.026***			-0.053***
			(-0.007)			(-0.017)
TotalCrossOwn			0.049***			0.106***
×*Incen*			(-0.017)			(-0.039)
Incen	-0.883***	-0.722***	-0.701***	-3.368***	-3.059***	-3.013***
	(-0.199)	(-0.188)	(-0.188)	(-0.538)	(-0.507)	(-0.505)
Size	-0.266***	-0.256***	-0.272***	-0.223	-0.204	-0.241
	(-0.076)	(-0.076)	(-0.075)	(-0.204)	(-0.204)	(-0.202)
Lev	-0.270***	-0.270***	-0.270***	-0.696***	-0.696***	-0.696***
	(-0.006)	(-0.006)	(-0.006)	(-0.018)	(-0.018)	(-0.018)
ROA	0.113***	0.112***	0.112***	-0.007	-0.007	-0.008
	(-0.015)	(-0.015)	(-0.015)	(-0.041)	(-0.041)	(-0.041)
Top1	0.035***	0.035***	0.037***	0.080***	0.080***	0.083***
	(-0.005)	(-0.005)	(-0.005)	(-0.013)	(-0.013)	(-0.013)
Nwc	-0.135***	-0.135***	-0.135***	-0.337***	-0.337***	-0.337***
	(-0.005)	(-0.005)	(-0.005)	(-0.016)	(-0.016)	(-0.016)
Cf	0.227***	0.227***	0.227***	0.710***	0.710***	0.710***
	(-0.011)	(-0.011)	(-0.011)	(-0.036)	(-0.036)	(-0.036)
Capex	0.116***	0.115***	0.115***	0.261***	0.261***	0.260***
	(-0.014)	(-0.014)	(-0.014)	(-0.042)	(-0.042)	(-0.042)
Div	-1.859***	-1.864***	-1.852***	-6.226***	-6.240***	-6.215***
	(-0.278)	(-0.278)	(-0.278)	(-0.646)	(-0.646)	(-0.646)
TobinQ	0.530***	0.532***	0.531***	2.001***	2.005***	2.001***
	(-0.061)	(-0.061)	(-0.06)	(-0.194)	(-0.194)	(-0.193)
Bankdebt	-0.118***	-0.118***	-0.118***	-0.247***	-0.247***	-0.247***
	(-0.004)	(-0.004)	(-0.004)	(-0.01)	(-0.01)	(-0.01)
_cons	33.495***	33.176***	33.466***	54.662***	54.019***	54.725***
	(-1.694)	(-1.699)	(-1.685)	(-4.585)	(-4.59)	(-4.554)
Ind	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	26879	26879	26879	26879	26879	26879
r2	0.41	0.41	0.41	0.368	0.369	0.368

Note: ***, ** and * are significant at the level of 1%, 5% and 10% respectively; Standard error in parentheses.

Table 7 shows the test results of executive equity incentive as a moderating variable. Columns (1) - (3) are the regression results with *Cash1* as the dependent variable. The estimated coefficient of

ISSN 2616-5902 Vol. 5, Issue 4: 103-112, DOI: 10.25236/AJBM.2023.050417

CrossDum×Incen in column (1) is 1.350 and is significant at the 5% level. In column (2), the estimated coefficient of *NumCross×Incen* is 1.971 and significant at the 5% level. The estimation coefficient of *TotalCrossOwn×Incen* in column (3) is 0.049, and is significant at the 1% level. Columns (4) - (6) are the regression results with *Cash2* as the dependent variable. The estimated coefficient of *CrossDum×Incen* in column (4) is 2.530 and is significant at the 10% level. In column (5), the estimated coefficient of *NumCross×Incen* is 4.227, which is significant at the 5% level. Column (6) *TotalCrossOwn×Incen* has an estimation coefficient of 0.106, and is significant at the 1% level. In general, the existence of executive equity incentive weakens the inhibition effect of common institutional ownership on corporate cash holdings.

6. Conclusions and Recommendations

This paper takes China's A-share listed companies in Shanghai and Shenzhen from 2007 to 2020 as samples, conducts an empirical test based on the impact of common institutional ownership on corporate cash holdings, and finds that: (1) When other conditions remain unchanged, there is a significant negative correlation between common institutional ownership and corporate cash holdings. (2) Compared with the companies that do not implement the executive equity incentive, in the companies that implement the executive equity incentive, the inhibition effect of common institutional ownership on the corporate cash holding level is weaker, that is, the common institutional ownership and the executive equity incentive have an alternative relationship in the corporate cash holding level.

Combined with the research conclusions of this paper, the following enlightenment can be obtained: First, enterprises should make full use of the information advantages and governance experience of common institutional ownership, as well as the role of promoting cooperation among enterprises, and take the initiative to introduce common institutional investors, so as to reduce the level of corporate cash holdings. Second, relevant regulatory authorities should fully understand the management experience and governance role of common institutional ownership in the capital market, and introduce relevant policies to guide and standardize. At the same time, relevant policies should also pay attention to the standardization of institutional co-ownership, such as stipulating the upper limit of the number of enterprises or shareholding ratio held by institutional investors in the same industry, so as to prevent the "malicious" formation of industry monopoly by the common institutional investors for the realization of private interests.

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