

Customer Relationship and Corporate Financial Asset Allocation: Evidence from China

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Abstract: Currently, the government regards preventing the risk of the real economy “de-realizing and virtualizing” as the main part of the economic work, in order to prevent the market risk brought by the excessive financialization of enterprises. This paper selects the A-share listed companies in China from 2008 to 2021 as the research sample data, and explores the impact mechanism of customer concentration on the financial asset allocation of enterprises, and the samples have passed the robustness and endogeneity tests to ensure the reliability of the benchmark regression results. The study finds that customer concentration has a significant inhibitory effect on the financial asset allocation of enterprises, and the results are more significant under the conditions of high earnings management, high financing constraints and low inventory turnover. Further, the study results show that customer concentration has a more significant inhibitory effect on the short-term allocation of financial resources by enterprises. This paper not only provides a theoretical basis for the study of the relationship between customer relations and corporate financial asset allocation, but also helps to clarify the dilemma of how the real economy and the virtual economy coexist and develop, and provides policy implications for preventing the market system reform of “de-realizing and virtualizing”.

Keywords: Customer relationship; Corporate financial asset allocation.

1. Introduction

At the central financial work conference in 2023, three tasks of financial work were clarified, namely: serving the real economy, preventing and controlling financial risks, and deepening the reform of the financial system. Among them, serving the real economy is in line with the 20th National Congress of the Communist Party of China’s proposal to prevent financial work from de-realizing and virtualizing, and to fill in the gaps in the financial supervision system and the financial security system. In recent years, the trend of financialization of enterprises is obvious, and according to the report of the State Council on the financial work situation in October this year, promoting the moderate financialization development of real enterprises, improving the construction of various financial infrastructure, all reflect the state’s attention and policy inclination to financial work. Regarding the financial asset allocation of enterprises, how to restrain the risks brought by financialization to enterprises is a hot topic in the academic circles at present, and at the same time, it also provides valuable practical experience for deepening the market system reform and optimizing the asset structure of enterprises.

Existing research on the motivation of enterprises to allocate financial assets mainly falls into two categories, one is the “reservoir” motive (Shi, 2021) that aims to adjust the enterprise’s asset structure, and the other is to replace the enterprise’s real assets with financial assets for the purpose of pursuing financial benefits (De Franco et. al, 2011). As for the relationship between enterprise capability and financial asset allocation, some scholars believe that moderate financialization development has played a promoting role in the transformation and upgrading of real enterprises (Jouanjean et. al, 2015). The impact of customer relations on enterprise financialization focuses on customer concentration as an influencing factor, and the resource-based theory

emphasizes the dilemma of weak enterprises to cultivate core competitiveness. In order to obtain scarce resources and maintain market competitiveness, enterprises must actively participate in external networks and use external resources to enhance their competitive advantage. Some scholars have concluded through research that when customer concentration reaches a certain threshold, enterprises tend to increase the allocation of financial assets with risk-avoidance functions for self-protection and risk-avoidance (Wongsinhirun et. al, 2023). In addition, customer concentration also has a significant positive effect on the stability of enterprise customer relationship network (Thrassou and vrontis, 2009) and the level of financial investment (Greiner and Wang, 2010). However, mainstream research rarely directly links customer relations and enterprise financial asset allocation, and the research content in this area is far from meeting the research needs. This is also the main research motivation of this paper.

This study mainly explores the impact of changes in customer relations on the financial asset allocation of enterprises, based on the sample data of Chinese listed companies for regression analysis. After conducting the benchmark regression on the exploratory variables, the stability and endogeneity tests are conducted, and after obtaining the test results, the three variables of earnings management, financing constraints and inventory turnover are added to the model with the obtained regression results for mechanism testing, and the significance level of their impact on the financial asset allocation of enterprises is obtained and divided into two categories: low and high, and the relationship between them and the financial asset allocation choice of enterprises is explored. Then, by further discussing the motives of long-term and short-term asset allocation, the conclusion is finally drawn. The main contributions of this paper are as follows: ① By analyzing the relationship between enterprise customer relations and enterprise financial

asset holding choices, the relationship between customer relations and enterprise financial asset allocation is further confirmed and the impact mechanism is revealed, which provides a new interpretation perspective for the unique “relational” transactions in the Chinese capital market and fills the gap in the existing research. ② It enriches the existing research on the influencing factors of enterprise financial asset allocation, and provides a reliable literature supplement for enterprise asset structure adjustment. The existing literature mainly focuses on the transformation and upgrading of enterprises and the internal structure adjustment of enterprises with regard to customer relations and supply chain development, and less mentions the external factors, which provides a theoretical direction for how to improve the construction of supply chain ecology and how to strengthen the enterprise social relationship network to achieve win-win cooperation more efficiently. ③ The research conclusion of this paper has some enlightenment significance for how the government can promote the market system reform and strengthen the market structure centered on the real economy, and deepen the structural reform of the financial supply side. The construction of customer relations by real enterprises also needs to be analyzed in combination with their own asset structure. Therefore, from a macro perspective, the government not only needs to strengthen the financial supervision policy, to facilitate effective cooperation between enterprises, but also to prevent the market risk brought by excessive financialization.

2. Theoretical Framework and Hypothesis Development

2.1. The impact of customer concentration on enterprise financialization

Customer concentration reflects the voice and bargaining power of customers in the supply chain, and the academic community currently analyzes its impact mechanism from the fields of corporate finance and finance; existing research shows that the increase of customer concentration will have an inhibitory effect on the profitability of enterprises (Hui et. al, 2019), and will increase the possibility of stock price crash risk (Meng, 2018). Customer concentration is also considered by some scholars to produce IPO discount, which affects the vested interests of existing shareholders (Saboo et. al, 2017). In addition, customer concentration also reflects the relationship between customers and upstream and downstream enterprises. Based on the transaction cost economics theory, customer concentration can enable enterprises to obtain more innovative resources from the supply chain partners more conveniently (Pan et. al, 2020), and enhance the enterprise’s R&D investment and relational transaction investment (Dong et. al, 2021). It is worth noting that the differentiated level of customer concentration will have heterogeneous effects on enterprises. When customer concentration is low, enterprises tend to emphasize the “cooperative governance” relationship to reduce the operational risk brought by financial asset allocation. In this case, enterprises tend to pay more attention to diversified development, and avoid excessive dependence on a specific customer. However, with the increase of customer concentration, enterprises face new challenges, such as the relationship transaction cost of enterprises gradually exceeds the expected return. This will force enterprises to increase the

investment of specific assets, but this behavior may bring financial crisis and “lock-in” risk. Enterprises in this situation often need to face the risk of profit erosion, and have to increase the allocation of financial assets to enhance their risk resistance. High customer concentration gives customers more bargaining advantage, which may lead to higher operational risk for enterprises (Peng et. al, 2019). In order to prevent risk, enterprises must allocate financial assets with higher liquidity, so as to quickly respond to risk situations when needed. In addition, the highly concentrated customer bargaining power may also transfer risk to suppliers, which has a negative impact on the operation of enterprises. Enterprises in this situation will feel the pressure from powerful customers, and may have to accept requests that are detrimental to their own interests.

Based on the above analysis, this paper will propose the following hypothesis:

H1: Keeping other conditions unchanged, customer concentration has an inhibitory effect on enterprise financialization.

2.2. The adjustment effect of surplus management on enterprise financial asset allocation

The moderating effect of earnings management on the financial asset allocation of enterprises Moderate financialization has a profound impact on the financial and operational performance of enterprises. There is a subtle balance between financialization and earnings management. Moderate financialization can help enterprises reduce financial risk, enhance operational performance, and reduce the tendency of earnings management. However, when the degree of financialization is excessive, it often triggers the potential threat of financial risk, reduces the performance level of enterprises, and induces earnings management behavior (Gulzar, 2011). In addition, earnings management also has a significant impact on the excessive financialization of enterprises. When financialization is excessive, enterprises tend to show excessive risk and affect the uncertainty of information and decision-making. The impact is usually divided into short-term and long-term. In the short term, enterprises may be able to obtain high returns, but accompanied by greater uncertainty, which directly affects the stability and risk-bearing ability of enterprise operation. In the long term, enterprises may deviate from their traditional business model due to excessive reliance on capital operation, which may make enterprises less flexible in coping with market changes and risks, and weaken the level of enterprise financialization allocation. Based on the above analysis, this paper will propose the following hypothesis, that is: when the degree of earnings management is higher, the inhibitory effect of customer concentration on the level of enterprise financial asset allocation is more significant. The reason is as follows: when enterprises increase the degree of earnings management, customers have a cautious attitude towards the investment of enterprises due to information asymmetry, which increases the financial risk of enterprises.

H2: The higher the degree of earnings management, the more significant the inhibitory effect of customer concentration on the level of enterprise financial asset allocation.

2.3. The moderating effect of financing constraints on the financial asset allocation of enterprises

Financing constraints are often affected by external factors to increase the risk expectation under the premise of increasing customer concentration, which leads to the increase of external financing cost of enterprises (Zhou et. al, 2019). Financing constraints are often the joint effect of internal and external factors, and the internal ones are often manifested as internal profit retention, while some existing studies discuss the impact of financing constraints from external factors. Existing studies show that financing constraints have a significant inhibitory effect on the degree of financialization of enterprises, and more serious financing problems will increase the investment of enterprises in financial assets (Ni et. al, 2023). Some scholars also believe that based on the above analysis, this paper makes a hypothesis that financing constraints aggravate the inhibitory effect of customer concentration on the financial asset allocation of enterprises. Large customers use their bargaining power to obtain corresponding preferential conditions in the case of uneven power distribution within the enterprise, and the stability of the enterprise's cash flow will further enhance the asymmetry of this bargaining power, which reduces the willingness of the enterprise to allocate financial assets.

H3: The higher the degree of financing constraints, the more significant the inhibitory effect of customer concentration on the level of enterprise financial asset allocation.

2.4. The moderating effect of inventory turnover on the financial asset allocation of enterprises

Inventory is an important factor affecting the liquidity of enterprise assets, and the change of customer relations causes a chain reaction on the inventory turnover of enterprises (Ak and Patatoukas, 2016). Inventory turnover is also affected by external environmental changes, and the inventory management behavior of enterprises is often significantly affected by the industry competition situation and the regional environment they are in. External environmental factors include industry competition situation, product market development level and government administration situation, etc., which have a profound impact on enterprise inventory management. Some scholars have found that there is a certain connection between inventory turnover and customer concentration, and the interest alliance between customers and enterprises is constantly enhanced in the cooperation, which promotes the formation of "intangible" benefits for enterprises and enhances the competitiveness of enterprises in the product market (Henry et. al, 2023). Based on the above analysis, the following hypothesis is proposed: when the inventory turnover decreases, the inhibitory effect of customer concentration on the financial asset allocation of enterprises is more significant. The increase of inventory turnover means that enterprises have a better level of asset disposal, which has a positive impact on the allocation of financial assets, which makes enterprises not weaken the willingness to allocate financial assets with the change of customer relations.

H4: The lower the inventory turnover, the more significant the inhibitory effect of customer concentration on the level of

enterprise financial asset allocation.

3. Methodological Design

3.1. Sample Selection and Data Source

This paper selects the A-share listed companies in China from 2008 to 2021 as the initial research sample, and the financial asset data and financial data of the listed companies involved are from CSMAR database, and the following data are excluded: (1) exclude companies that are ST or ST*; (2) exclude companies with industry code J (financial industry); (3) exclude companies with severe data missing, and use manual collection to verify some missing data; (4) exclude companies with extreme values, and perform two-sided 1% tail-cutting on all continuous variables in this paper, and finally obtain 7356 research samples. Data statistical analysis and econometric test are mainly completed by stata17.

3.2. Variable Definition

3.2.1. Dependent variable

Enterprise financial asset allocation ($wFinass$) refers to the proportion of financial assets held by enterprises in their capital structure, involving the financial assets held by enterprises in their balance sheet, such as cash, deposits, investment securities, receivables, short-term investments, etc. This paper uses the ratio of enterprise financial assets to total assets to measure. If this ratio is high, it means that enterprises rely more on financial assets to support their operation and investment activities. On the contrary, it means that enterprises tend to have more physical assets in their total assets.

3.2.2. Explanatory variable

Customer concentration ($CC3$) refers to the number of customers that enterprises depend on and the contribution of these customers to the sales or business of enterprises. The proportion of sales of the top five customers to the total annual sales is used as the main measurement indicator. High customer concentration may mean that enterprises have a higher degree of dependence on a few customers. Although relying on a few major customers may bring higher sales to enterprises, it also increases the business risk.

3.2.3. Moderating variable

Earnings management ($AbjxzGD$) refers to the manipulation of earnings in the financial statements by enterprises using different accounting policies, methods or other means, in order to achieve specific financial goals or management intentions. This paper uses the extended Jones model to measure the degree of earnings management.

Financial constraints (Financial Constraints) are used to evaluate the degree of restriction of enterprises in financing, reflecting the difficulty of enterprises in obtaining external financing, and when enterprises are subject to financial constraints, it may limit the flexibility of their financial asset allocation. This variable can help to understand the impact of customer concentration on the financial asset allocation of enterprises with different degrees of financial constraints.

Inventory turnover reflects the inventory management and sales ability of enterprises, and uses the ratio of the direct cost of the goods sold or services provided in a certain period to the average of the total inventory at the beginning and end of the period to measure.

3.2.4. Control variable

This paper includes the board size ($wBdsize$), independent

director size (wIndsize), two positions in one (Same), the first largest shareholder holding ratio (Cgpro), the four major accounting firms (Big4), per capita GDP growth rate (wGdpgr) and other enterprise-related accounting indicators into the control variables.

3.2.5. Model Construction

$$wFinass_{i,t} = \alpha + \beta CC3_{i,t} + Control_{i,t} + Industry_i + Year_t + \varepsilon_{i,t} \quad (1)$$

In this model, the dependent variable is the corporate financial asset allocation, and the explanatory variable is the customer concentration. Additionally, this study sets industry and year dummy variables in the regression analysis to control for industry fixed effects (Industry) and time fixed effects (Year).

Table 1. Variable Definition.

Variable type	Variable name		Variable definition
Explained Variable (dependent variable)	Corporate financial asset allocation	wFinass	Financial assets / total assets
Explanatory Variable (independent variable)	Customer concentration	CC3	Top five customer sales / total annual sales
Moderating Variable	Surplus management	AbjxzGD	Extended Jones model calculations
	Financing constraints FC	FC	Measured by financial constraints
	inventory turnover rate	itr	Cost of sales / average inventory
Controlled Variable	Enterprise size a-Total assets	wSizea	ln(total assets)
	asset-liability ratio	wLev	Total liabilities / total assets
	Fixed-asset intensity	wCapint	Fixed assets / total assets
	return on assets	wRoaa	Net income / total assets
	increase rate of business revenue	wGrowrat	(Operating income of this year-operating income of last year) / operating income of last year
	cash flow	wCf	Cash flow from operating activities
	Board size	wBdsize	ln (board number + 1)
	Scale of independent directors	wIndsize	Number of independent directors / Board of Directors
	Two jobs in one	Same	If the chairman of the board and the general manager are in one, take 1, otherwise take 0
	The largest shareholder shareholding ratio	Cgpro	If the chairman of the board and the general manager are in one, take 1, otherwise take 0
	The Big Four accounting firms	Big4	If the company responsible for the annual audit is the Big Four accounting firm, take 1, otherwise take 0
	Per-capita GDP growth rate	wGdpgr	(Per capita GDP of this year-per capita GDP of last year) / per capita GDP of last year

4. Empirical Results

4.1. Descriptive statistics

According to the descriptive statistics in Table 2, the median of the total amount of financial assets of enterprises is 0.0232, indicating that the concentration trend of financial assets of the selected sample enterprises accounts for about 2.3% of the total assets, which is at a lower level compared with developed countries. The minimum value is 0, the maximum value is 0.7866, and there is a large difference

between them, indicating that there are significant differences in the financial asset allocation of different enterprises, which need to be further strengthened. The minimum value of customer concentration is 0.009, the maximum value is 0.9609, and the median is 0.2353, indicating that all enterprises in the sample have customer relationship transactions, and there are huge differences in customer concentration among enterprises, and some enterprises have too high dependence on customers. The rest of the control variables are in line with the normal distribution and the values are within the expected range.

Table 2. Summary statistics of the main variables.

variable	count	mean	sd	min	p50	max
wFinass	7356	0.0666	0.0986	0.0000	0.0232	0.7866
CC3	7356	0.2945	0.2088	0.0090	0.2353	0.9609
CV	7356	0.0509	0.0537	0.0013	0.0339	0.3458
SD	7356	0.0381	0.0454	-0.2228	0.0276	1.0758
wSizea	7356	22.2372	1.1525	18.9186	22.1148	26.5887
wLev	7356	0.4217	0.1924	0.0526	0.4163	0.9734
wCapint	7356	0.2348	0.1591	0.0020	0.2036	0.7453
wRoaa	7356	0.0491	0.0409	0.0000	0.0385	0.2045
wGrowrat	7356	0.3527	1.1598	-0.8683	0.1254	11.6520
wCf	7356	0.0510	0.0683	-0.2150	0.0472	0.2668
wBdsize	7356	2.1509	0.1909	1.6094	2.1972	2.7081
wIndsize	7356	0.3706	0.0529	0.1818	0.3333	0.5714
Same	7356	0.2458	0.4306	0.0000	0.0000	1.0000
Cgpro	7356	0.3514	0.1511	0.0362	0.3337	0.8909
Big4	7356	0.0522	0.2224	0.0000	0.0000	1.0000
wGdpgr	7356	0.0890	0.0414	-0.0736	0.0861	0.2518

4.2. Baseline Results

Table 3 reports the empirical regression results of the impact of customer concentration on the financial asset allocation of enterprises. The regression results of the control variables show that, among the sample listed companies, enterprise size (wSizea) and cash flow (wCf) are significantly positively correlated with enterprise financial asset allocation, indicating that enterprises with larger size tend to have higher cash flow, and large enterprises usually have more resources and market share, which have a positive effect on their financial asset allocation. Asset-liability ratio (wLev), fixed asset intensity (wCapint) and operating income growth rate

(wGrowrat) are significantly negatively correlated with enterprise financial asset allocation, and enterprises restrict their capital liquidity due to high debt ratio, excessive fixed asset investment or slow revenue growth, which affect their financial asset allocation level. The above control variables have passed the 1% significance test, and the results are in line with expectations. The parameter estimation value of customer concentration is -0.0247 and is significant at the 1% level. This result indicates that the financial asset allocation of enterprises shows a significant downward trend with the increase of customer concentration, which has a certain inhibitory effect, and basically supports H1.

Table 3. Baseline results.

	(1) wFinass
CC3	-0.0247*** (-4.4752)
wSizea	0.0072*** (5.8783)
wLev	-0.1360*** (-19.1219)
wCapint	-0.1756*** (-20.4648)
wRoaa	-0.0647** (-1.9973)
wGrowrat	-0.0026*** (-2.8734)
wCf	0.0825*** (4.5035)
wBdsize	-0.0169** (-2.5208)
wIndsize	-0.0029 (-0.1287)
Same	0.0053** (2.1493)
Cgpro	-0.0004 (-0.0488)
Big4	-0.0132*** (-2.6676)
wGdpgr	0.0274 (0.8302)
N	7356
adj. R2	0.219

t statistics in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.3. Robustness Tests

4.3.1. Change the explained variable measure method

Enterprise financialization refers to the degree of dependence of enterprises on financial instruments and financial markets in their operation and development process. There is a close connection between enterprise financial asset allocation and enterprise financialization. Generally speaking, the higher the degree of enterprise financialization, the larger the proportion of financial asset allocation. This paper uses whether the enterprise is financialized (wnofinass) as the proxy variable of enterprise financial asset allocation. The regression result of column (1) in Table 4 shows that after replacing the proxy variable, the coefficient estimation value of customer concentration is -1.8938 and is significant at the

1% level. The regression result is in line with the expectation and consistent with the previous conclusion.

4.3.2. Change explanatory variables

Herfindahl index (CC1) refers to the weighted sum of squares of the proportion of sales revenue of the top five customers to the total sales revenue of the enterprise, which is another indicator used to measure customer concentration. Replacing the explanatory variable CC3 with CC1, the robustness test is conducted. The regression result is shown in column (2), and the coefficient estimate of CC1 is -0.0436, which is significant at the 1% level. The research conclusion is basically valid.

4.3.3. PSM

Selecting the same control variables as in the previous text

as matching variables, using 1:1 nearest neighbor matching to match samples and exclude samples that are not successfully matched. Column (3) is the PSM test result, and the coefficient estimate of customer concentration is -0.0214, which is significant at the 1% level. The conclusion is still robust.

4.3.4. Eliminate the impact of extreme events

Considering the adverse impact of the financial crisis, the observations from 2008 to 2009 are excluded, 71 listed

company samples are excluded, and 7285 observations are retained and tested for robustness. The regression result is shown in column (4), and the coefficient estimate of customer concentration is -0.0246, which is significant at the 1% level, indicating that under the stable condition of the financial market, customer concentration still has a significant inhibitory effect on the financial asset allocation of enterprises. In the above four robustness tests, the regression results did not change substantially, indicating that the research results are robust.

Table 4. Robustness tests results

	(1)	(2)	(3)	(4)
	wnofinass	wFinass	PSM	wFinass
CC3	-1.8938*** (-5.9445)		-0.0214*** (-2.9465)	-0.0246*** (-4.4385)
CC1		-0.0436*** (-3.5807)		
wsizea	0.7136*** (8.4152)	0.0077*** (6.2934)	-0.0005 (-0.3518)	0.0073*** (5.8694)
wlev	-1.1213** (-2.4142)	-0.1359*** (-19.1036)	-0.0705*** (-7.3999)	-0.1372*** (-19.1256)
wcapint	-3.0011*** (-5.9701)	-0.1750*** (-20.3839)	-0.1269*** (-11.2127)	-0.1761*** (-20.3111)
wroaa	-2.6672 (-1.2354)	-0.0631* (-1.9473)	-0.0191 (-0.4309)	-0.0678** (-2.0744)
wgrowrat	-0.0968* (-1.8797)	-0.0026*** (-2.8886)	-0.0000 (-0.0245)	-0.0026*** (-2.8317)
wcf	1.1680 (1.0002)	0.0857*** (4.6804)	0.0571** (2.3431)	0.0847*** (4.5793)
wbdsz	-0.4734 (-1.2795)	-0.0168** (-2.5116)		-0.0179*** (-2.6385)
windsz	0.3465 (0.2254)	-0.0028 (-0.1232)		-0.0066 (-0.2848)
same	0.3527 (1.4073)	0.0054** (2.1987)		0.0054** (2.1619)
cgpro	-1.4730*** (-2.8645)	-0.0002 (-0.0279)		-0.0001 (-0.0147)
wgdpgr	-5.0699*** (-2.9464)	0.0280 (0.8483)		0.0284 (0.8518)
Big4	-0.2585 (-0.8821)	-0.0128*** (-2.5949)		-0.0127** (-2.5515)
CC2				
_cons	-9.6070*** (-4.5124)	0.0545 (1.2101)	0.1458** (2.1560)	0.0518* (1.6737)
N	2810	7356	3840	7285
adj. R2		0.218	0.147	0.219

4.4. Endogeneity test

There may be a two-way causal endogeneity problem between customer concentration and enterprise financial asset allocation. That is, it is not clear whether the low financial configuration of enterprises leads to excessive dependence on major customers; or whether the high customer concentration restricts the financial asset allocation of enterprises. To eliminate the possible endogeneity problem, this paper uses a two-stage instrumental variable to solve it. Following the practice of Dhaliwal et. al (2016), the lagged two-period customer concentration is chosen as the instrumental variable. The regression result shows that the coefficient of the instrumental variable is 0.836, and is significant at the 1%

level, indicating that the instrumental variable is valid.

Due to the non-mandatory disclosure of customer information by enterprises, the selection of this data may lead to the existence of sample selection bias. Therefore, this paper chooses to use the Heckman two-stage method to solve this problem, and the instrumental variable is the lagged two-period customer concentration. The regression results are shown in columns (3) and (4), and the customer concentration has a significant inhibitory effect on the enterprise financial asset allocation at the 1% level. The regression results are consistent with the previous ones, and further confirm the validity of H1.

Table 5. Endogeneity tests results

	(1) First	(2) Second	(3) First	(4) Second
VARIABLES	CC3	wfinass		
CC3		-0.018** (-1.960)		
ifCC3			0.0039 (0.0997)	
wsizea	-0.007*** (-3.058)		0.1329*** (8.0519)	0.0783*** (6.7995)
wlev	0.004 (0.324)	-0.121*** (-11.961)	-1.2366*** (-12.5178)	-0.8133*** (-7.5802)
wcapint	-0.005 (-0.356)	-0.163*** (-13.657)	-0.9504*** (-9.7296)	-0.7362*** (-8.7911)
wroaa	0.065 (1.152)	-0.086* (-1.953)	-0.0346 (-0.0849)	-0.0689 (-1.5643)
wgrowrat	-0.002 (-1.094)	-0.002* (-1.898)	-0.0419*** (-3.1916)	-0.0227*** (-5.5657)
wcf	-0.061* (-1.892)	0.096*** (3.816)		
wbdsiza	0.001 (0.048)	-0.024** (-2.558)	-0.1221 (-1.2911)	-0.0970*** (-6.6242)
windsiza	0.084** (2.116)	-0.008 (-0.262)	0.3821 (1.1637)	0.1349*** (2.8490)
same	-0.001 (-0.159)	0.004 (1.333)	0.0053 (0.1503)	0.0117*** (2.9831)
cgpro	-0.025* (-1.950)	-0.004 (-0.382)	-0.1215 (-1.1873)	-0.0637*** (-4.2686)
wgdpgr	-0.004 (-0.082)	0.082* (1.936)	1.2308*** (3.3906)	0.4435*** (3.8983)
Big4	0.009 (1.070)		-0.0888 (-1.2697)	-0.0710*** (-6.3636)
IV	0.836*** (84.394)			
imr				0.8681*** (6.2193)
Constant	0.181** (2.369)	0.017 (0.279)	-2.0168*** (-5.0674)	-1.5890*** (-5.5396)
Observations	3,505	3,505	7356	3834
R-squared	0.744	0.225		
adj. R-squared			0.268	0.183

z-statistics in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

4.5. Mechanism Analysis

4.5.1. Surplus management- -the information asymmetry

The above research shows that the customer concentration of enterprises has a significant inhibitory effect on their financial asset allocation, which is basically consistent with the conjecture of H1. Based on the previous research results, information asymmetry is added as a moderating variable, and the impact mechanism of customer concentration on the financial asset allocation of enterprises under the conditions of low and high information asymmetry is discussed respectively, and the Jones model is used to extend the results. The table 6 shows the moderating effect of information asymmetry on the customer concentration on the financial

asset allocation of enterprises. According to the regression results, when the degree of information asymmetry is high (column (1) of the table 6), the regression coefficients of variables CC3, wlev, and wcapint are -0.0276, -0.1260, and -0.1859, respectively, and all three variables pass the 1% significance level test. When the degree of information asymmetry is low (column (2) of the table 6), the absolute values of the regression coefficients are smaller than the regression results when the information asymmetry is high, under the condition of passing the 1% significance level test. The above results indicate that financing constraints have a significant inhibitory effect on the customer concentration on the financial asset allocation of enterprises.

Table 6. Surplus management results

	(1) High	(2) Low
CC3	-0.0276*** (-3.5043)	-0.0185** (-2.4695)
wsizea	0.0066*** (3.6788)	0.0076*** (4.4707)
wlev	-0.1260*** (-12.2625)	-0.1478*** (-12.9762)
wcapint	-0.1859*** (-14.6308)	-0.1668*** (-13.2695)
wroaa	-0.0609 (-1.4310)	-0.1118 (-1.5647)
wgrowrat	-0.0023* (-1.8142)	-0.0040*** (-2.7230)
wcf	0.0733*** (3.5667)	0.1191** (2.3648)
wbdsiz	-0.0041 (-0.4116)	-0.0268*** (-2.8971)
windsiz	-0.0054 (-0.1625)	0.0016 (0.0548)
same	0.0068* (1.8600)	0.0043 (1.1473)
cgpro	-0.0165 (-1.5151)	0.0135 (1.2576)
wgdpgr	0.0388 (0.7870)	0.0234 (0.5901)
Big4	-0.0096 (-1.2949)	-0.0170*** (-3.6226)
_cons	0.0449 (0.5780)	0.0802* (1.7260)
N	3491	3721
adj. R2	0.211	0.235

t statistics in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.5.2. Financing constraints

Secondly, financing constraints are added as another moderating variable to the original benchmark regression model of customer concentration and enterprise financial asset allocation level, and the samples are divided into low financing constraints (column (1) of the table 7) sample group and high financing constraints (column (2) of the table 7) sample group. The table 7 shows the impact of customer concentration on the financial asset allocation of enterprises when financing constraints are added as a moderating variable. According to the regression results, when the financing constraints are low, the regression coefficients of variables CC3, wlev, wcapint, wgrowrat, wbdsiz and Big4 are -0.0224, -0.1394, -0.1886, -0.0039, -0.0262 and -0.0228, respectively, and all the above variables pass the 1% significance level test. When the degree of financing constraints increases, the absolute values of the regression coefficients of CC3 and other variables are lower than the regression coefficients of the sample group with low financing constraints. Based on the above analysis, it can be explained that when the degree of financing constraints increases, the inhibitory effect of

customer concentration on the financial asset allocation of enterprises is more significant.

4.5.3. Inventory turnover ratio

The table 8 shows the impact of customer concentration on the financial asset allocation of enterprises under the condition of increasing inventory turnover. Inventory turnover is an important indicator to measure the liquidity of enterprise funds. Adding inventory turnover as a moderating variable to the original regression model, the effect of inventory turnover on the transmission mechanism is tested for significance. According to the regression results, under the condition of low inventory turnover (column (2) of the table 8), the regression coefficients of variables CC3, wlev, wcapint, wgrowrat, Big4, etc. are all passed the 1% significance level test. When the inventory turnover increases, the absolute value of the regression coefficient of this sample group is smaller than that of the sample group with low inventory turnover. Based on the above analysis, it can be explained that when the inventory turnover of enterprises is low, the inhibitory effect of customer concentration on the financial asset allocation of enterprises is significant.

Table 7. Financing constraints results

	(1) Low	(2) High
CC3	-0.0224*** (-2.9804)	-0.0290*** (-3.5284)
wsizea	0.0114*** (6.0995)	0.0039** (2.2942)
wlev	-0.1394*** (-14.4187)	-0.1388*** (-13.0248)
wcapint	-0.1866*** (-15.7330)	-0.1513*** (-12.0672)
wroaa	-0.0068 (-0.1546)	-0.1148** (-2.4106)
wgrowrat	-0.0039*** (-3.4059)	-0.0007 (-0.4722)
wcf	0.0484* (1.9287)	0.1186*** (4.4955)
wbdsiz	-0.0262*** (-2.8238)	-0.0089 (-0.9167)
windsiz	-0.0229 (-0.7232)	0.0067 (0.2011)
same	0.0065* (1.8327)	0.0072** (2.1005)
cgpro	-0.0137 (-1.2992)	0.0285*** (2.7349)
wgdpgr	-0.0012 (-0.0260)	0.0702 (1.4612)
Big4	-0.0228*** (-3.2535)	-0.0024 (-0.3425)
_cons	0.0568 (0.9193)	0.0364 (0.5041)
N	4081	3275
adj. R2	0.235	0.234

t statistics in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

Table 8. Financing constraints results

	(1) High	(2) Low
CC3	-0.0103 (-1.5803)	-0.0499*** (-5.4672)
wsizea	0.0057*** (3.9241)	0.0068*** (3.3730)
wlev	-0.1012*** (-11.0442)	-0.1412*** (-12.4625)
wcapint	-0.1369*** (-12.8803)	-0.1974*** (-14.7845)
wroaa	0.0094 (0.2580)	-0.0127 (-0.2175)
wgrowrat	-0.0031*** (-2.6885)	-0.0041*** (-2.9288)
wcf	0.0904*** (4.3806)	0.0688** (2.1927)
wbdsiz	-0.0282*** (-3.5853)	-0.0048 (-0.4461)
windsiz	-0.0405 (-1.5395)	0.0261 (0.6898)
same	0.0079*** (2.6873)	0.0025 (0.6449)
cgpro	-0.0052 (-0.6086)	0.0107 (0.8797)
wgdpgr	0.0380 (1.0094)	0.0397 (0.7261)
Big4	-0.0047 (-0.9059)	-0.0256*** (-2.7526)
_cons	0.0597 (1.0897)	0.0772 (1.0884)
N	3814	3542
adj. R2	0.195	0.262

t statistics in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

5. Further Research

5.1. Long and short term assets

Long-term and short-term assets have different benefits for the financial asset allocation choices of enterprises due to their characteristics. Some scholars believe that short-term assets are more used as reserve assets by enterprises, while long-term assets are used by enterprises as an important means of capital appreciation (Kozlowski, 2021). At present, due to the immature market mechanism and the reason that enterprises are based on meeting the needs of customers, they may make some speculative behaviors to ensure short-term benefits regardless of long-term benefits. Such shortsighted behavior is detrimental to the long-term stability and customer stability of enterprises. The table 9 shows the impact

of the allocation of long-term and short-term assets of enterprises on the overall financial asset allocation of enterprises, based on the transmission mechanism of customer concentration on the financial asset allocation of enterprises. Columns (1) and (2) of the table 9 show the impact of the transmission mechanism when enterprises tend to allocate more long-term assets. According to the regression results, the regression coefficients of variables CC3, wcapint, wroaa, etc. have passed the 1% significance level test. However, when the variables are changed to allocate short-term assets, the absolute value of the regression coefficient is greater than the regression coefficient of the previous sample group. Based on the above analysis, it can be explained that the inhibitory effect of customer concentration on the short-term financial asset allocation of enterprises is more significant.

Table 9. Long and short term assets results

	(1) L	(2) S
CC3	-0.0054** (-2.4174)	-0.0194*** (-4.2326)
wsizea	-0.0002 (-0.4362)	0.0114*** (10.8841)
wlev	0.0038 (1.2500)	-0.1387*** (-22.1654)
wcapint	-0.0398*** (-12.5419)	-0.1232*** (-18.8279)
wroaa	-0.0795*** (-5.5946)	-0.0241 (-0.8243)
wgrowrat	-0.0001 (-0.2939)	-0.0010 (-1.2296)
wcf	0.0264*** (3.2440)	0.0686*** (4.0910)
wbdsiz	-0.0097*** (-3.3007)	-0.0142** (-2.3528)
windsize	0.0093 (0.9171)	-0.0140 (-0.6705)
same	0.0017 (1.5054)	0.0048** (2.1229)
cgpro	-0.0025 (-0.7964)	-0.0081 (-1.2369)
Big4	-0.0027 (-1.2319)	-0.0149*** (-3.3286)
wgdpgr	0.0082 (0.7279)	-0.1033*** (-4.4377)
_cons	0.0505*** (4.1276)	-0.0641** (-2.5380)
N	7356	7356
adj. R2	0.032	0.141

t statistics in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

6. Conclusions

This paper takes the relationship between customer relations and enterprise financial asset allocation as the entry point, and discusses the impact of customer concentration on enterprise financial asset allocation in detail. Through robustness test and endogeneity test, it proves that the inhibitory effect of customer concentration on the financial asset allocation of enterprises is robust and reliable. In the

mechanism test part, three moderating variables, information asymmetry, financing constraints and inventory turnover, are added to study the moderating effect of these three variables on the main transmission mechanism of the study. The study shows that the increase of information asymmetry and financing constraints aggravates the inhibitory effect of customer concentration on the financial asset allocation of enterprises, while the lower inventory turnover has a significant inhibitory effect on the customer concentration on

the financial asset allocation of enterprises. Finally, through further analysis, the paper studies the role of long-term and short-term assets on the transmission mechanism, and finds that the inhibitory effect of customer concentration on the short-term financial asset allocation of enterprises is more significant. This paper also has some theoretical significance, filling the gap in the current theoretical research on the relationship between customer relations and enterprise financial asset allocation. At the same time, this paper also has some practical and policy implications: 1. To pay more attention to the phenomenon of real-to-virtual transformation of real enterprises, and firmly grasp the main role of the real economy as the economy; 2. To continuously promote the market system reform, transform the relationship orientation into market orientation, increase the supply-side structural reform of financial services, and maximize the role of financialization in improving the asset allocation efficiency of real enterprises; 3. To improve the market supervision mechanism and supply chain construction, strengthen the construction of digital economy, and better serve the cooperation needs of enterprises.

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