Journal of New Economics and Finance
ISSN: 2789-5890(print)

Shuangqing Academic Publishing House
Contents lists available at www.qingpress.com
Journal homepage: qingpress.com/en-us/journals/10

Do CFO Statuses Influence Corporate Liquidity Decisions? -Evidence From China

Liu Ziquan

School of Civil Engineering, Central South University, 410017, China

liuziquancs306@csu.edu.cn

Abstract: Based on the unique cultural environment in China and from the unique perspective of the CFO (Chief Financial Officer) in corporate senior management, we systematically examine and analyze the impact of CFO status on corporate liquidity decisions. Using the data of A-share listed companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange from 2014 to 2019 and empirical analysis, we find that the CFO status is a key to corporate governance, especially liquidity decisions. Our results show that CFO status influences the cash holding level while positively influencing the financial leverage. Our study helps improve corporate governance structure and the decision-making process.

Keywords: Liquidity decisions, Corporate governance, Cash holding, Financial leverage

1.INTRODUCTION

CFO is a crucial role in the senior management team of modern enterprises. CFO's most essential function is financial management, which is extended for CFOs to shoulder strategic decision-making, supervision, and other responsibilities. In a company's financial decision, liquidity is crucial to company operation. Making correct liquidity decisions can avoid various adverse effects brought by liquidity risks and ensure the further development of enterprises. During the operation process of the company, liquidity decisions are usually directly related to the CFO (Aier et al., 2005; Ge et al.,2011; Wang et al., 2012), so it is of great significance to study the behavioral characteristics of CFO to make correct financial decisions. At present, the research on the influence of CFO on corporate decision-making is mainly based on the Upper Echelons Theory (Hambrick&Manson,1984), mainly from the perspective of CFO's characteristics, such as personalities (Herrmann & Nadkarni, 2014), gender (Fu & Zhang, 2019; Luo et al., 2020; Xu et al., 2019）, the overconfidence of CFO (Hsieha et al.,2018) and so on.

However, CFOs often receive many restrictions in the decision-making process, which relates to their status in the company, which is a recessive factor. Generally, CFOs ranking higher among top executives tend to be more involved in decision-making and less subject to intervention. China has an attractive setting for studying the relationship between CFOs' status and decision-making power. Since Confucianism influences traditional Chinese culture, the idea of being superior and inferior has been deeply rooted in people's minds. It can be assumed that under the unique cultural environment of China, the ranking of official documents represents the status of the CFO, and the higher the ranking,

Article history: Received August 2, 2022 Accepted August 11, 2022 Available online August 19, 2022
To cite this paper: Ziquan Liu (2022). Do CFO Statuses Influence Corporate Liquidity Decisions?-Evidence From China. Journal of New Economics and Finance, 2022, Vol2, Issue1, Pages 11-24.
Doi: https://doi.org/10.55375/jnef.2022.1.2

the higher the status of the CFO. We take liquidity decisions into research the relationship between CFO status and corporate decision-making as a starting point, and the whole study would have a high theoretical value.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Related Literature

In the ever-changing economic environment, CFO has more and more influence on a company's operation, financial, and strategic decisions (Aier et al., 2005; Chava and Purnanandam, 2010; Ge et al., 2011). As far as now, the study is mainly related to three strands of literature.

The first strand of literature is that much research concerns how CFO's characteristics affect the company, which has implications for our study. According to Upper Echelons Theory (Hambrick&Manson,1984), the characteristics of managers influence their strategic choices and then influence the behavior of enterprises. Many scholars have been studying the influence of CFOs' genders on the company and thus holding the idea that female CFOs are more capable of reversing risks and preventing corporate fraud (Adams and Ferreira, 2009; Gul et al., 2011; Liao et al.,2019; Luo et al.,2019). CFO's background is another important factor in corporate behavior (Brochet& Welch, 2011; Nguyen et al., 2018; Valentine and Rittenburg, 2004). Dauth and Schmid (2017) provide evidence suggesting that the CFO's high internationalization does help improve a firm's accounting quality. Fu & Zhang (2019) examine the effects of a CFO's cultural background on stock price crash risk and find that firms with CFOs with a stronger uncertainty avoidance index experience lower future stock price crash risk. This line of literature provides strong evidence suggesting that CFOs remarkably influence firms' accounting operations.

The second strand of literature is about corporate liquidity. Francis et al. (1996) find that firm age is positively correlated with liquidity, while the firm size is negatively correlated with liquidity. The internal environment of the corporate can also affect the liquidity, as Bobillo et al. (2009) provide evidence suggesting that cash flow has a greater impact on the investment decisions of those companies that are more likely to face financial constraints. Moreover, investors' personal preference also plays an essential role in the liquidity of a corporate. Albulescu et al. (2018) find that the cash ratio positively affects investments, while leverage has a limited impact. Agliardi et al. (2016) propose that when the ambiguity aversion tendency of investors is large enough, cash holdings will remain for a longer time. Taken as a whole, this strand of the literature suggests that the liquidity of enterprises is related to all aspects of enterprises.

The third strand of literature relates to Chinese culture. As well as the influence of traditional culture and Confucianism, Chinese scholars have begun to focus on how the CFO's position among corporate executives affects the company. The entire management team would confer a special status on the managers. The difference in this special status can determine the power of managers to intervene in the company's affairs and their influence on the company's decision-making (Carpenter &Fredrickson,2001; Cho & Hambrick,2006; Hackbarth,2008). Chen and Liu (2016) propose that the ranking of the names of senior management teams in the annual reports of listed companies in China is closely related to the power of senior executives. CFOs with a higher ranking in the annual report is in a higher position in the company and have greater power. Chen and Yin (2018) find that the higher the CFOs' status, the greater the impact of their experience on the comparability of accounting information. Jiang et al. (2018) provide evidence that CFOs' status can significantly negatively affect the risk of stock price collapse. If CFO status declines, the risk of stock price collapse will increase. Overall, though there is not much literature about CFO status, the existing studies show that CFO status directly impacts a company's liquidity decision.

However, most studies only consider the impact on the company from a single explicit perspective, so they may not comprehensively summarize the relationship between CFO status and corporate governance. CFO status is a non-financial implicit factor, and there is not much literature on the influence of CFO status on corporate governance. On the other hand, the existing literature on liquidity decisions is mainly about the concept of liquidity itself, liquidity risk, or some factors affecting liquidity, not liquidity decision itself. In this paper, we directly study the relationship between

CFO status and liquidity decisions and present their relevance.

2.2 Hypothesis development

Liquidity decision-making is dynamic progress and mainly focuses on liquidity, solvency, and a series of indicators for decision management. Since the two most representative aspects of liquidity decision are the level of cash holding and financial leverage, we choose these two aspects as the indicators to consider liquidity decision.

Hypothesis 1. CFOs in higher positions tend to have less cash holding.

According to Upper Echelons Theory (Hambrick&Manson,1984), the characteristics of managers influence their strategic choices, so it can be assumed that CFO's reputation is closely related to their career and influence the company's strategic decision to a certain extent. Therefore, many scholars have put forward their views and agree that CFOs make more prudent and rational decisions regarding issues that affect their professional reputations. Jian and Lee (2011) find that the career development of the CFO will be negatively affected if the managers hold more cash for their interests and the CFO concurs with the scandal. The CFO in a higher position will pay more attention to their personal and professional reputation to increase positive influence and reduce risks. Aboody and Lev (2000) propose that the executive team balance current investments and future incomes. Due to the information asymmetry between the shareholders and the management in terms of investment, the management can conveniently arrange the investment in R&D according to its interests. Florackis and Sainani (2018) provide empirical evidence suggesting that firms with strong CFOs are well-positioned to hold less cash due to their relatively weak precautionary motive and superior ability to raise external financing during periods of financial stress. The cash holding level is an important factor affecting the enterprise's investment cash flow. When the cash holding ratio of the enterprise is too high, it means that the current assets of the enterprise have not been reasonably used, and the operating efficiency is relatively low. The cash assets do not make good profits. If the amount of such assets is too high, it is very likely to increase the opportunity cost of enterprises. We propose our first hypothesis to ensure that the company's cash holdings are controlled within a reasonable range and that the CFO's reputation is protected.

Hypothesis 2. CFOs in higher positions tend to have a higher leverage ratio.

In current studies, scholars tend to think managers adopt more aggressive debt measures when overconfident. Ben-David et al. (2008) prove that managers preferred short-term liabilities due to overconfidence. Hackbarth (2008) finds that the increase in the debt ratio is closely related to managers with the characteristics of overconfidence. A high debt ratio shortens the debt maturity structure. He et al. (2018) find that over-investment may occur if the company's management is overconfident. Overconfident managers will believe excessively in the company's profitability, ignore operational risks, and believe that the possibility of a financial crisis is slight, so the company is in high debt level. The capital structure is also greatly affected by managers' decisions. We believe that CFO with a lower position will not appear overconfident and will take more conservative debt measures. Therefore, the debt-to-equity ratio will be reduced to protect the equity of shareholders of the company. Then we come up with our second hypothesis.

3. EMPIRICAL DESIGN

3.1 Sample

The research samples selected in this paper are mainly A-share listed companies in Shanghai Stock Exchange and Shenzhen Stock Exchange from 2014 to 2019. The research data are mainly from CSMAR, The China Securities Regulatory Commission (CSRC) Enforcement Actions. The research database of CSMAR collects and compiles records of all the firms subject to enforcement actions by the CSRC and other regulatory authorities (most notably the Shanghai Stock Exchange and the Shenzhen Stock Exchange). Eastmoney.com and Straight flush Database (IFIND), two securities networks collecting accounting information and annual reports of listed companies, are also our data sources. The superior company's balance sheet, cash flow, and income statement are from the CSMAR database. The CFO ranking data are all from the annual reports of listed companies and are obtained through manual sorting.

To ensure the accuracy of data samples and reduce the impact of data anomalies, overall, we conduct screening

according to the following criteria:

TABLE 1 SCREENING CRITERIA

Number	Screening criteria	Reason
1	Only A-share listed companies are selected	To have the same comparability among companies
2	Listed companies such as ST and ST* are excluded	To ensure data consistency and comparability
3	Excluding financial (2012 CSRC industry standard) companies, including insurance companies.	To ensure that their financial data have no impact on the overall sample
4	Eliminate public companies missing CFO information	To ensure data integrity

3.2 Measurement of liquidity decisions

We choose the two most representative aspects of liquidity decision, cash holding level and financial leverage, to indicate its changes.

3.2.1 Cash Ratio

The existing literature uses many indicators to measure the level of cash holdings. Based on Boubakri et al. (2013) and Demir and Ersan (2017), the cash holding level is defined as the ratio of cash and cash equivalents to the total assets. However, the cash ratio does not consider sales expenses, inventory, receivables, or other factors but only considers the items with the most liquid liabilities. Therefore, this index is the most conservative among all indicators, and it can more directly reflect the ability of an enterprise to pay current liabilities.

We use the following equation to calculate Cash Ratio:

$$Cash\ Ratio = \frac{Currency+Securities}{Current\ Liabilities} \times 100\% \quad (1)$$

3.2.2 Capitalization Ratio

The capitalization ratio is the capital structure of the balance sheet and shows the extent to which financial leverage is utilized. There are many indicators to measure financial leverage (Robert,2012; Bicu-Lieb et al., 2019; Schoenmaker and Wierts,2015). In our research, the capitalization ratio is chosen because it can reflect the company's capital structure and long-term solvency and the degree of protection of the owner's equity and shareholders' rights and interests from another company's perspective.

We use the following equation to calculate the capitalization ratio:

$$Capitalization\ Ratio = \frac{Total\ Liabilities}{Shareholders'\ Equity} \times 100\% \quad (2)$$

3.3 Measurement of CFO Status

3.3.1 Top Management Team Size

Top management team size is determined by the total number of senior management teams disclosed in the annual report of listed companies, which is one of the characteristic variables to determine the CFO ranking.

3.3.2 Ranking

The ranking is determined according to the ranking of the CFO in the senior management team disclosed in the listed company's annual report.

3.3.3 Status

Status Combines the CFO ranking with the size of the top management team to quantify the CFO's position in the company. The CFO status variables selected in our research are calculated by referring to the concept proposed by Dequan Jiang (2018). The calculation of CFO status is as follows:

$$\text{CFO Status} = 1\text{-}\frac{\text{Ranking}}{\text{Top management team size}} \quad (3)$$

The closer its value is to 0, the lower the CFO's position in the company and the closer its value is to 1, the higher the CFO's position.

3.3.4 Salary

This variable can also reflect the CFO's status in the company. Therefore, in the robustness analysis, we analyze the ranking of CFO's compensation in the entire senior management team as a replacement variable to test whether our results are stable.

3.4 Control variables

Following prior research on cash holding level and financial leverage（Caglio et al.,2018; Doan & Iskandar-Datta, 2019; Jensen et al., 2010; Sherman et al., 1998）, we include the following control variables in regression models. Assets are important, so Firm size (Size) is computed in our study as the natural logarithm of total assets. Firm profitability is represented by ROA(ROA), measured as the return on total assets. We consider assets structure (Structure) as the control variable to estimate the ratio of fixed assets which suggests a firm's cash ability. Also, we use the asset-liability ratio (DABR), which reflects how much of the total assets are financed through loans/financing and is another measure of a company's ability to protect its creditors. The greater the ability of the firm to generate cash flows, the lower the precautionary demand for cash for such firms (Kim et al., 1998), so we consider free cash flow (CFR). Moreover, we need to consider block holders, which influence corporate governance to a certain extent.

3.5 Research Design

We use the following models to test our hypotheses:

$$\text{Cash Ratio}_{i,t} = \alpha_0 + \alpha_1\text{Status}_{i,t\text{-}1} + \alpha_2\text{Size}_{i,t\text{-}1} + \alpha_3\text{Cfr}_{i,t\text{-}1} + \alpha_4\text{Structure}_{i,t\text{-}1} + \alpha_5\text{ROA}_{i,t\text{-}1} + \alpha_6\text{DABR}_{i,t\text{-}1} + \alpha_7\text{BloH}_{i,t\text{-}1} + \varepsilon_1 \quad (4)$$

$$Capitalization\ Ratio_{i,t} = \beta_0 + \beta_1 Status_{i,t-1} + \beta_2 Size_{i,t-1} + \beta_3 Cfr_{i,t-1} + \beta_4 Structure_{i,t-1} + \beta_5 ROA_{i,t-1} + \beta_6 DABR_{i,t-1} + \beta_7 BloH_{i,t-1} + \varepsilon_2 \quad (5)$$

In the equation, constant terms are α_0 and β_0; $explanatory$ variables are CFO Status, control variables are asset-liability Ratio (DABR), company Size (SIZE), operating performance (ROA), free Cash flow (CFR), Block Holder of the largest shareholder (Block holder), and asset structure (Structure). CFO characteristic variables include CFO Ranking and TMT Size. $\alpha_{1\text{-}7}$, $\beta_{1\text{-}7}$ represent the model regression coefficient, ε represents the random error, I, t represents the t year of the i th variable. All the variables are defined in the previous section and summarized in Table A1.

4. EMPIRICAL RESULTS

4.1 Descriptive statistics

To verify the hypotheses, we conducted a descriptive statistical analysis of all variables involved in the model, as shown in Table 2. The maximum value, the minimum value, and the average value of the Cash Ratio are 150.2, 0, and 1.055. It is found that most companies have guaranteed good Cash flow. The maximum value of the Capitalization Ratio is 120.0730, the minimum value is -8.5032, and the average value is 0.27. Liabilities only occupy a small part of the owner's equity. The fluctuation range is large, indicating that the selected samples are comprehensive and the

selected data are relatively representative. We adopt the CFO Status calculation formula proposed by Dequan Jiang (2015). The minimum value of the variable CFO Status is 0, and the maximum value is 0.94, while the average value of this variable is 0.31, indicating that the Status of CFO is generally low in the selected samples.

TABLE 2 DESCRIPTIVE STATISTICS

Symbols	Obs	Mean	Std. Dev.	Min	Max
Cash Ratio	69185	1.0555	2.4707	0.0000	150.1572
Capitalization Ratio	69185	0.2730	12.8069	-8.5032	120.0730
Status	69185	0.3058	0.3264	0.0000	0.9444
DABR	69185	0.4104	0.2149	0.0044	5.6089
Size	69185	22.1447	1.3356	14.1126	28.6247
ROA	69185	0.1917	1.4133	-9.0833	89.1402
Cfr	69185	0.0206	0.0691	-1.2748	0.8759
BlockHolder	69185	34.4017	20.6146	0.0000	93.5904
Structure	69185	0.2058	0.1598	0.0000	0.9480
TMT Size	69185	15.8775	3.5123	0.0000	41.0000
Ranking	69185	3.6746	5.4123	0.0000	41.0000

4.2 Correlation analysis

After descriptive statistical analysis, Pearson correlation analysis was conducted for each variable in this study, and the results are shown in Table 3. According to Pearson correlation analysis, the cash ratio is negatively related to the capitalization ratio. There is a significant negative correlation between CFO Status and cash ratio and a significant positive correlation between CFO Status and capitalization ratio. However, the relationship between CFO status, cash ratio, and capitalization ratio still need to be analyzed through regression.

TABLE 3 PEARSON CORRELATION ANALYSIS

	Cash Ratio	Capitalization Ratio	Status	Size	Cfr	Structure	DABR	ROA	Block Holder
Cash Ratio	1.0000								
Capitalization Ratio	-0.0057***	1.0000							
Status	-0.0012**	0.0013**	1.0000						
Size	-0.1716***	O.0165***	-0.0315***	1.0000					
Cfr	-0.0350***	0.0026*	0.0046	0.0319***	1.0000				
Structure	-0.1258***	0.0225***	0.1100	0.0931***	0.2397***	1.0000			
DABR	-0.3468***	0.0350***	-0.0183***	0.5012***	-0.1055***	0.0702***	1.0000		
ROA	-0.0203	0.0013*	-0.0287***	0.3108***	0.0837***	0.0365***	0.0564***	1.0000	
Block Holder	-0.0478*	-0.0217*	-0.0505*	-0.0229	0.0117	-0.0251	-0.0423	0.0301	1.0000

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

4.3 Main findings

The logistic regression model estimates used to test Hypothesis 1 are reported in Table 4, and the year and industry are fixed in the regression model. CFO status has a negative correlation with the cash ratio. The coefficient on status is -0.1480 with a t-statistic of -2.1, significant at the 5% level. At the same time, we also analyze the relationship

between each control variable and the cash ratio, and we find that the control variables are primarily consistent with the literature. Most control variables affect the cash ratio significantly negatively, including the size of the company (Size), free cash flow (CFR), the ratio of fixed assets (Structure), and the asset-liability ratio (DABR). The larger companies will reduce the cash ratio to ensure the reasonable use of current assets and reduce the company's opportunity cost. Also, a high asset-liability ratio indicates that the company has more long-term liabilities, reducing assets' liquidity. In general, companies with more assets tend to control their cash holding levels properly, and the more shareholders intervene, the more difficult the liquidity decision is to be realized reasonably.

Table 5 shows the regression analysis results to test hypothesis 2. The regression coefficient on capitalization ratio is 0.541 with a t-statistic of 3.4, indicating that CFO status and capitalization ratio have a significant positive correlation. There is a positive correlation between company size (Size) and capitalization ratio. Large companies could conduct long-term debt financing so that the company can develop steadily. The free cash flow (CFR) is the same as the change in the capitalization ratio, indicating that the cash flow required by operating activities will positively affect the company's guaranteed degree of capital and liabilities. The higher the ratio of fixed assets and the asset-liability ratio is, the more fixed assets and long-term liabilities are, and the guarantee of capital liability will be reduced. The profit of an enterprise's total assets is higher than the cost of long-term debt, and the increase of long-term debt can make the enterprise gain financial leverage.

TABLE 4 REGRESSION RESULT OF CASH RATIO

Variables	Coefficient	T	P>t
cons	3.4945***	10.02	0.000
Status	-0.1480**	-2.10	0.036
Size	-0.0369**	-2.35	0.019
Cfr	-0.9907***	-3.22	0.001
Structure	-1.1941***	-8.67	0.000
DABR	-2.7091***	-26.15	0.000
ROA	-0.1649	-1.53	0.013
BloH	-0.0051***	-4.57	0.000
Year		Control	
Industry		Control	
Adj R^2		0.1908	
F		117.16*	
N		69185	

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

TABLE 5 REGRESSION RESULT OF CAPITALIZATION RATIO

Variables	Coefficient	T	P>t
cons	-3.0318***	-18.58	0.000
Status	0.541***	3.40	0.010
Size	0.1303***	17.70	0.000
Cfr	0.4465***	3.10	0.002
Structure	0.2766***	4.29	0.000
DABR	0.5567***	11.48	0.000
ROA	0.0364***	3.72	0.047
BloH	-0.0907	-0.19	0.055

Year	Control
Industry	Control
Adj R2	0.1510
F	114.7***
N	69185

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

4.4 Robustness checks

To provide better evidence, we carry out robustness checks. Since the empirical test of our study is directly affected by CFO status, we change the calculation method of CFO status to conduct regression analysis. We calculate the CFO status according to the concept proposed by Hanwen Chen (2016). The new CFO status calculation formula is as follows:

$$\text{Status}_{\text{alter1}} = \frac{[(\text{TMT size-Ranking})+1]}{\text{TMT size}} \quad (6)$$

TABLE 6 CASH RATIO ROBUSTNESS CHECK RESULTS 1

Variables	Coefficient	T	P>t
cons	3.5030***	10.05	0.000
$\text{Status}_{\text{alter1}}$	-0.1516**	-2.16	0.031
Size	-0.0368**	-2.34	0.019
Cfr	-0.9904***	-3.22	0.001
Structure	-1.1943***	-8.67	0.000
DABR	-2.7099***	-26.15	0.000
ROA	-0.1650	-1.53	0.125
BloH	-0.0051***	-4.58	0.000
Year		Control	
Industry		Control	
Adj R^2		0.1909	
F		117.21***	
N		69185	

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

TABLE 7 CAPITALIZATION ROBUSTNESS CHECK RESULTS 1

Variables	Coefficient	T	P>t
cons	-3.0350***	-18.61	0.000
$\text{Status}_{\text{alter2}}$	0.0549***	3.67	0.095
Size	0.1302***	17.70	0.000
Cfr	0.4467***	3.10	0.002
Structure	0.2765***	4.29	0.000
DABR	0.5570***	11.49	0.000
ROA	0.0364	0.72	0.047
BloH	-0.0949	-0.18	0.056
Year		Control	
Industry		Control	
Adj R^2		0.1510	
F		114.31***	

N	69185

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

In terms of salary distribution, the level of general power will affect the influence of the CFO to intervene in the company's affairs, and the salary will also be different. Therefore, the salary of the CFO also reflects the CFO's position in the company to a certain extent. Therefore, we use the proportion of CFO compensation in the company's top management team as the replacement variable of CFO status to conduct a new round of robustness tests. The new CFO status calculation formula is shown below. The higher the value, the higher the status of the CFO, and vice versa.

$$Status_{alter2} = \frac{CFO\ Salary}{Payment\ Sum} \quad (7)$$

TABLE 8 CASH RATIO ROBUSTNESS CHECK RESULTS 2

Variables	Coefficient	T	P>t
cons	3.5030***	11.35	0.000
Status	-0.1466**	-2.21	0.021
Size	-0.0298**	-3.56	0.013
Cfr	-0.9716***	-2.98	0.001
Structure	-1.1827***	-9.04	0.000
DABR	-2.7231***	-25.96	0.000
ROA	-0.1320	-1.23	0.105
BloH	-0.0052***	-4.24	0.000
Year		Control	
Industry		Control	
Adj R^2		0.1829	
F		116.43***	
N		69185	

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

TABLE 9 CAPITALIZATION ROBUSTNESS CHECK RESULTS 2

Variables	Coefficient	T	P>t
cons	-3.0350***	-17.21	0.000
Status	0.1324***	3.12	0.043
Size	0.1543***	16.09	0.000
Cfr	0.4678***	3.13	0.015
Structure	0.212***	4.56	0.000
DABR	0.6867***	11.31	0.000
ROA	0.0234	0.85	0.021
BloH	-0.132	-0.21	0.034
Year		Control	
Industry		Control	
Adj R^2		0.1632	
F		117.25***	
N		69185	

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

From the above tables, we can see that the regression results of all alternative variables are consistent with the tests above. CFO status is negatively related to cash ratio, while it is positively related to capitalization ratio. Our hypotheses are valid, and our results are robust.

5. Discussion and conclusion

Based on Upper Echelons Theory and other prior research on CFO and liquidity decisions, we aim to discuss how the different CFO statuses influence firms' liquidity decisions and develop our hypotheses. We use listed companies in Shanghai and Shenzhen Stock Exchange as research objects and conduct empirical analyses of their financial data from 2014 to 2019 to test our hypotheses.

Our results show that CFO status significantly influences the liquidity decision. We find that CFO status can significantly negatively affect the cash ratio, and CFO status can significantly positively affect the cash ratio. Therefore, we conclude that the improvement of CFO status can effectively: 1. control the company's cash ratio;2. prevent the excessive amount of such assets; 3. decrease the opportunity cost of the company, and 4. improve the utilization rate of the company's financial leverage ratio and the efficiency of the company's financial activities.

The study contributes to the research on CFO status and liquidity decisions by exploring their relation directly. It expands the research scope of the Upper Echelons Theory from the personal characteristics of CFOs to their status in companies. This research also enriches the literature about liquidity decisions because most existing literature is about liquidity risk or market liquidity, not liquidity decision-making. We can use the results of our research to improve corporate governance strategy, develop more effective decision-making mechanisms in companies, and improve the efficiency of financial activities. In this way, our research is of great practical significance.

Due to limited personal cognition, lack of experience, or other objective factors, this research is limited to a certain extent. According to the upper echelon theory, managers' background, overconfidence, and heterogeneity affect corporate governance and business performance. Still, we ignore the possible influence of these factors on the company, so it is necessary to study further to eliminate the influence of these factors on liquidity decisions. Secondly, the data in this article has been manipulated and may not represent all companies. Therefore, supplementary analysis is needed for the data. It is hoped that more measurement indicators from different perspectives can be considered in future studies to study and analyze this problem comprehensively.

Declaration of Competing Interest

None

Appendix

TABLE A1 VARIABLE DEFINITION.

Variables	Definition
Cash Ratio	The ratio of cash and cash equivalents to the total assets.

Capitalization Ratio	Total liabilities divided by shareholders' equity
Status	A dummy variable that takes the value of 1 if the CFO has a high position in the company and 0 otherwise.
DABR	Total liabilities divided by total assets
Size	The natural log of the company's total assets
ROA	Net profit divided by total asset
Cfr	Cash flow from operating activities divided by total asset
BlockHolder	The total shareholding ratio of shareholders holding more than 5%
Structure	The proportion of fixed assets in total assets
TMT Size	The total number of senior management teams disclosed in the annual report
Ranking	The ranking of the CFO in the senior management team disclosed in the annual report

REFERENCES

[1] Aboody, David & Lev, Baruch. (2000). Information Asymmetry, R&D, and Insider Gains. *Journal of Finance*. 55. 2747-2766. 10.1111/0022-1082.00305.

[2] Adams, R. and Ferreira, D. (2009) Women in the Boardroom and Their Impact on Governance and Performance. *Journal of Financial Economics*, 94, 291-309.http://dx.doi.org/10.1016/j.jfineco.2008.10.007

[3] Agliardi, Elettra & Agliardi, Rossella & Spanjers, Willy. (2016). Corporate financing decisions under ambiguity: Pecking order and liquidity policy implications. *Journal of Business Research*. 69. 10.1016/j.jbusres.2016.05.016.

[4] Aier, Jagadison & Comprix, Joseph & Gunlock, Matthew & Lee, Deanna. (2005). The Financial Expertise of CFOs and Accounting Restatements. *Accounting Horizons*. 19. 123-135. 10.2308/acch.2005.19.3.123.

[5] Albulescu, Claudiu & Miclea, Șerban & Suciu, Simina & Tamasila, Matei. (2017). Firm-level investment in the extractive industry from CEE countries: the role of macroeconomic uncertainty and internal conditions. *Eurasian Business Review*. 8. 10.1007/s40821-017-0079-3.

[6] Ben-David, Itzhak & Graham, John & Harvey, Campbell. (2008). *Managerial Overconfidence and Corporate Policies* [Published version: "Managerial Miscalibration", QJE 2013].

[7] Bicu-Lieb, Andreea & Chen, Louisa & Elliott, David. (2019). The leverage ratio and liquidity in the gilt and gilt repo markets. *Journal of Financial Markets*. 48. 100510. 10.1016/j.finmar.2019.100510.

[8] Bobillo, Alfredo & Sanz, Juan & Tejerina Gaite, Fernando. (2009). Investment Decisions, Liquidity, and Institutional Activism: An International Study. *Journal of Business Ethics*. 87. 25-40. 10.1007/s10551-008-9798-9.

[9] Boubakri, Narjess & Cosset, Jean-Claude & Saffar, Walid. (2012). The Role of State and Foreign Owners in Corporate Risk-Taking: Evidence from Privatization. *Journal of Financial Economics*. 108. 10.2139/ssrn.1803215.

[10] Boubakri, Narjess & El Ghoul, Sadok & Saffar, Walid. (2013). Cash holdings of politically connected firms. *Journal of Multinational Financial Management*. 23. 338–355. 10.1016/j.mulfin.2013.06.002.

[11] Brochet, Francois & Welch, Kyle. (2011). Top Executive Background and Financial Reporting Choice: The Case of Goodwill Impairment. *SSRN Electronic Journal*. 10.2139/ssrn.1765928.

[12] Caglio, Ariela & Dossi, Andrea & Stede, Wim. (2018). CFO role and CFO compensation: An empirical analysis of their implications. *Journal of Accounting and Public Policy*. 37. 10.1016/j.jaccpubpol.2018.07.002.

[13] Carpenter, MA & Fredrickson, J.. (2001). Top Management Teams, Global Strategic Posture, and the Moderating Role of Uncertainty. *Academy of Management Journal*. 44. 533-545. 10.2307/3069368.

[14] Chava, S. and Purnanandam, A. (2010) CEOs versus CFOs: Incentive and Corporate Policies. *Journal of Financial Economics*, 97, 263-278. http://dx.doi.org/10.1016/j.jfineco.2010.03.018

[15] Chittenden, Francis & Hall, Graham & Hutchinson, Patrick. (1996). Small Firm Growth, Access to Capital Markets and Financial Structure. *Small Business Economics*. 8. 59-67. 10.1007/BF00391976.

[16] Cho, Theresa & Hambrick, Donald. (2006). Attention as the Mediator Between Top Management Team Characteristics and Strategic Change: The Case of Airline Deregulation. *Organization Science - ORGAN SCI*. 17. 453-469. 10.1287/orsc.1060.0192.

[17] Dauth, Tobias & Pronobis, Paul & Schmid, Stefan. (2016). Exploring the link between internationalization of top management and accounting quality: The CFO's international experience matters. *International Business Review*. 26. 10.1016/j.ibusrev.2016.05.007.

[18] Demir, Ender & Ersan, Oguz. (2017). Economic policy uncertainty and cash holdings: Evidence from BRIC countries. *Emerging Markets Review*. 33. 10.1016/j.ememar.2017.08.001.

[19] Demir, Ender & Ersan, Oguz. (2017). Economic policy uncertainty and cash holdings: Evidence from BRIC countries. *Emerging Markets Review*. 33. 10.1016/j.ememar.2017.08.001.

[20] Doan, Trang & Iskandar-Datta, Mai. (2019). Are female top executives more risk-averse or more ethical? Evidence from corporate cash holdings policy. *Journal of Empirical Finance*. 55. 10.1016/j.jempfin.2019.11.005.

[21] Fortunato, Adelino & Oliveira, Blandina. (2006). Firm Growth and Liquidity Constraints: A Dynamic Analysis. *Small Business Economics*. 27. 139-156. 10.1007/s11187-006-0006-y.

[22] Fu, Xi & Zhang, Zhifang. (2019). CFO cultural background and stock price crash risk. *Journal of International Financial Markets, Institutions and Money*. 62. 10.1016/j.intfin.2019.05.001.

[23] Garc á-G ómez, Conrado-Diego & Demir, Ender & Esteban, Jos é. (2019). The impact of geopolitical risks on cash holdings of hospitality companies: Evidence from emerging countries. *Journal of Hospitality and Tourism Management*. 39. 166-174. 10.1016/j.jhtm.2019.04.004.

[24] Ge, W., Matsumoto, D., & Zhang, J. (2011). Do CFOs have style? An empirical investigation of the effect of individual CFOs on accounting practices. *Contemporary Accounting Research*, 28(4),1141–1179. https://doi.org/10.1111/j.1911-3846.2011.01097.x

[25] Gul, Ferdinand & Srinidhi, Bin & Ng, Anthony. (2011). Does Board Gender Diversity Improve the Informativeness of Stock Prices?. *Journal of Accounting and Economics*.51.314-338. 10.1016/j.jacceco.2011.01.005.

[26] Gupta, Anurag & Singh, Ajai & Zebedee, Allan. (2006). Liquidity in the Pricing of Syndicated Loans. *SSRN Electronic Journal*. 10.2139/ssrn.891452.

[27] Gupta, Anurag & Singh, Ajai & Zebedee, Allan. (2006). Liquidity in the Pricing of Syndicated Loans. *SSRN Electronic Journal*. 10.2139/ssrn.891452.

[28] Hackbarth, Dirk. (2007). Managerial Traits and Capital Structure Decisions. *Journal of Financial and Quantitative Analysis*. 43. 843-881. 10.2139/ssrn.362740.

[29] Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons. *Automatic Control & Computer Sciences*, 41, 39-43.

[30] He, Ying & Chen, Cindy & Yue, Hu. (2018). Managerial Overconfidence, Internal Financing, and Investment Efficiency: Evidence from China. *Research in International Business and Finance*. 47. 10.1016/j.ribaf.2018.09.010.

[31] Herrmann, Pol & Nadkarni, Sucheta. (2014). Managing strategic change: The duality of CEO personality. *Strategic Management Journal*. 35. 10.1002/smj.2156.

[32] Herrmann, Pol & Nadkarni, Sucheta. (2014). Managing strategic change: The duality of CEO personality. *Strategic Management Journal*. 35. 10.1002/smj.2156.

[33] Hsieh, Tien-Shih & Wang, Zhihong & Demirkan, Sebahattin. (2018). Overconfidence and tax avoidance: The role of CEO and CFO interaction. *Journal of Accounting and Public Policy*. 37. 241-253. 10.1016/j.jaccpubpol.2018.04.004.

[34] Jarrow, Robert. (2012). A Leverage Ratio Rule for Capital Adequacy. *Journal of Banking & Finance*. 37. 10.2139/ssrn.2084202.

[35] Jensen, Gerald & Lundstrum, Leonard & Miller, Robert. (2010). What do dividend reductions signal?. *Journal of Corporate Finance*. 16. 736-747. 10.1016/j.jcorpfin.2010.06.009.

[36] Jian, Ming & Lee, Kin. (2011). Does CEO Reputation Matter for Capital Investments?. *Journal of Corporate Finance*. 17. 929-946. 10.1016/j.jcorpfin.2011.04.004.

[37] Liao, Jing & Smith, David & Liu, Xutang. (2019). Female CFOs and accounting fraud: Evidence from China. *Pacific-Basin Finance Journal*. 53. 10.1016/j.pacfin.2019.01.003.

[38] Luo, Jin-hui & Peng, Chenchen & Zhang, Xin. (2020). The impact of CFO gender on corporate fraud: Evidence from China. *Pacific-Basin Finance Journal*. 63. 101404. 10.1016/j.pacfin.2020.101404.

[39] Nadkarni, Sucheta & Herrmann, Pol. (2010). CEO Personality, Strategic Flexibility, and Firm Performance: The Case of the Indian Business Process Outsourcing Industry.*Academy of Management Journal*. 53. 10.5465/AMJ.2010.54533196.

[40] Nguyen, Louis Duc Duy & Hagendorff, Jens & Eshraghi, Arman. (2018). Does a CEO's Cultural Heritage Affect Performance under Competitive Pressure?. *Review of Financial Studies*. 31. 97-141. 10.1093/rfs/hhx046.

[41] Peni, Emilia. (2014). CEO and Chairperson characteristics and firm performance. *Journal of Management & Governance*. 18. 10.1007/s10997-012-9224-7.

[42] Schoenmaker, Dirk & Wierts, Peter. (2015). Regulating the financial cycle: An integrated approach with a leverage ratio. *Economics Letters*. 136. 10.1016/j.econlet.2015.08.020.

[43] Sherman, Ann & Kim, Chang-Soo & Mauer, David. (2012). The Determinants of Corporate Liquidity: Theory and Evidence. *Journal of Financial and Quantitative Analysis*. 33. 335-359. 10.2307/2331099.

[44] Six, Bjoern & Normann, Marcel & Stock, Ruth & Schierek, Dirk. (2013). Strategic Leaders' Impact on Corporate Policies and Firm Performance: Insights from CEOs and CFOs of Large Listed Firms in Germany. *Schmalenbach Business Review*. 65. 10.1007/BF03396851.

[45] Valentine, Sean & Rittenburg, Terri. (2004). Spanish and American Business Professionals' Ethical Evaluations in Global Situations. *Journal of Business Ethics*. 51. 1-14. 10.1023/B: BUSI.0000032384. 74020.a8.

[46] Wang, W., Shin, Y.-C., Francis, B.B. Are CFOs' trades more informative than CEOs' trades?(2012). *Journal of Financial and Quantitative Analysis*, 47 (4), pp. 743-762. 10.1017/S0022109012000257

[47] Weidemann, Felix. (2018). A state-of-the-art review of corporate cash holding research. *Journal of Business Economics*. 88. 10.1007/s11573-017-0882-4.

[48] Xu, Xixiong & Li, Wanli & Li, Yaoqin & Liu, Xing. (2019). Female CFOs and corporate cash holdings: Precautionary motive or agency motive?. *International Review of Economics & Finance*. 63. 10.1016/j.iref.2019.05.006.