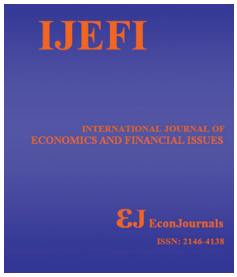

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Cash Holding, State Ownership and Firm Value: The Case of Vietnam

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ABSTRACT

Using a sample of 650 listed firms on the Vietnamese stock exchange over the period 2008-2015, we examine the effect of cash holding level on firm value. The results find out the cash holding has an impact on firm value in an inverted U-shaped form. Furthermore, this study investigates whether the state ownership influences firm value. We point out that there is a statistically insignificant positive relationship between state ownership and firm value unless the state ownership's advantages are utilized. The findings have implications of cash management in state-owned firms.

Keywords: Cash Holding, Firm Value, State Ownership, Vietnamese Corporations
JEL Classifications: G32, G31, G28

1. INTRODUCTION

Cash management has an impact on firm value is explained by Tradeoff Model (Myers, 1977), the Pecking Order Theory (Myers and Maljuf, 1984), Free Cash Flow Theory (Jensen, 1986), three motivations for holding cash by Keynes (1936) and Miller and Orr (1966). Managing cash and cash equivalent recently is an important decision for the managers because it is using for operating all activities in the corporations (Megginson et al., 2014). Managing cash has many challenges for all kind of businesses due to the fact that the free cash should be invested to earn more profit while the firms must ensure the appropriate liquidity to meet the demand in future.

There is empirical evidence of increased cash holding in firms as follows: 10% of cash holding (Bigelli et al., 2012); 18.5% in Japan (Pinkowitz et al., 2001); 17% in United State during 1971-1994 (Opler et al., 1999). Moreover, the average cash holding level in Vietnam is 9.8% which is also high in comparison with other current assets. This can cause the conflict increase between managers and shareholders when the companies keep more cash according to Free Cash Flow Theory (Jensen, 1986). Nevertheless, Myers and Majluf (1984) with Pecking off Theory indicates that flotation new equities for the firm is very costly because of the information asymmetries, thus the firms should hoard more cash. The recent studies have examined the relationship between cash holding level and firm value. Harford (1999) indicates that the corporations hold more cash have greater opportunities to compromise than others. Additionally, Martinez-Solano et al. (2013) represents that the cash holding has a strong effect on firm value by collecting publicly traded US firms belong to SIC Code from 3000 to 5999 during the period 2001-2007. Likewise, Lee and Powell (2012) showed that the reduction of excess cash holding contributes to increasing the firm value and the change of excess cash react differently in determining firm value. Moreover, Harford et al. (2008) and Derek and Marc (2014) examined that the insufficient or excess cash will affect the future stock returns and the firm valuation can be explained by the implications of current and level of cash holding on the future profitability. Similarly, Cheng and Thomas (2006) and Hafzalla et al. (2011) represented the buildup of cash flow have influences on the firm value. The study about the relationship between cash holding and firm value in Vietnam has not attracted the researchers. This paper tests this relationship in the context of reform of Vietnamese economy.

Besides, the main function of this is to decrease the state-owned in the corporations in order to increase the management efficiency of firms, thereby boosting the firm value. On the one hand the state-owned has a negative effect on firm value, but on the other hand it is a positive impact of state ownership on firm value. Because of these reasons above, the paper discusses whether the state ownership affects the cash holding and firm value.

The aim of paper confirms whether to have an impact on firm value in Vietnamese listed corporations. Importantly, the paper also examines the interaction between state ownership, cash holding and firm value. The contribution of the paper is that this is the first study on the interaction of four main factors, namely cash holding, leverage, dividend payment and profitability with the state ownership effect on the firm value. All elements are important in operating the firms to create more value for the corporations, thus the state owned firms should take all opportunities due to the connection with the government to improve firm value.

The results find out that there is an inverted U-shaped relationship between cash holding and firm value. This argues that there is an optimal level of cash holding which can maximize the firm level. And the value of companies decreases when the level of cash is above or under the optimal level. In addition, the cash holding level and firm value also interact with state ownership shows that the state-owned corporations can be benefits from support of the government to boost the firm value.

The rest of the paper is arranged by reviewing the related literature review, defining the model specifications to address the relevant empirical studies, analyzing the empirical results and deriving implications based on the findings.

2. REVIEW OF RELEVANT EMPIRICAL STUDIES

Keynes (1936) states that the demand of holding enough cash is decided by the transaction, precautionary and speculative motive. Furthermore, Myers and Majluf (1984) with pecking order theory indicates that issuing new equities for the firm is very costly because of the information asymmetries. Therefore, the enterprises finance their investments primarily with internal funds than having the difficulty in finding external funds from the debt or issuing new shares. Moreover, trade off theory (Myers, 1977) states that the optimal cash holding brings more profit due to the fact that the firms can take an advantages of investment opportunities for the corporations. Equally, cash holding has a strong effect on firm value and the firm value reduces when the level of cash exceed the optimal level (Martinez-Solano et al., 2013). However, the Free Cash Flow Theory (Jensen, 1986) reveals that the conflicts increase between managers and shareholders when the companies keep more cash. The previous studies support that the reduction of excess cash holding contribute to increasing the firm value and the change of excess cash react differently in determining firm value (Lee and Powell, 2012; Kusnadi and Wei, 2011; Harford et al., 2008; Derek and Marc, 2014). The firm value is measured by the Tobin's Q (Martinez-Solano et al., 2013; Dahya et al., 2008). In summary, the paper sought to discover the optimal level of cash holding needed to maximize firm value by consciously examining the relationship between cash holding and firm value.

In addition, some earlier studies point out there has an impact of ownership structure on firm value. On one hand, the higher proportion of state ownership has more pressure by politicians such as lower sales price, more unnecessary employee and not flexible in the decision in operating the firms which cause the drawbacks of state ownership (Thomsen and Pedersen, 2000; Shleifer, 1998). Besides, there are many papers find outs the negative influence of state ownership on firm performance (Megginson et al., 1994; Capobianco and Christiansen, 2011). On the other hand, Yu (2013) shows that positive connection between state ownership and firm performance due to assistance from political connections and government support. There are many studies from China that provide the evidences to confirm the positive relationship between state ownership and firm performance (Sun et al., 2002; Le and Buck, 2011; Le and Chizema, 2011). Furthermore, the state ownership also has an impact on the cash holding level as well other factors such as leverage policy, profitability and dividend policy and others (Megginson et al., 2014). Consequently, this study discovers whether to have an interaction between state ownership, cash level and firm value.

3. METHODOLOGY

According to Martinez-Solano et al. (2013), the optimal level of cash holding largely depends on cash and its square with other control variables to affect firm value. In this model, the Tobin's Q is used as a substitution for firm value. Tobin's Q is the quotient of a firm's market value to assets cost or total book value which is adapted by many authors in corporate finance as a measure of firm value (Cooper and Ejarque, 2003; Bai et al., 2004; Bolton et al., 2011; Erickson and White, 2012, among others). The control variables are leverage, growth and profitability effect the firm value (Martinez-Solano et al., 2013; Kusnadi and Wei, 2011). The model used is presented in Equation 1 below.

$$Tobin's Q\left(V_{it}\right)=\beta_0+\beta_1\left(Cash_{it}\right)+\beta_2\left(Cash_{it}^2\right)+\beta_3\left(Prof_{it}\right)+\beta_4\left(Growth_{it}\right)+\beta_5\left(Lev_{it}\right)+\lambda_{it}+\varepsilon_{it} \quad (1)$$

Where i is the accumulation of firms; t is time; V_{it} is the Tobin's Q representing the firm value that is equal market value divided by book value; $Prof_{it}$ is profitability is net profit plus depreciation divided by total assets; Lev_{it} is total debt divided by total assets; $Growth_{it}$ is natural logarithm of growth of total assets; λ_{it} are dummy variables and equal for all firms used; ε_{it} is the error term; β_0 to β_i are coefficients of the explanatory variables.

The Model 2 adds the state ownership factor in order to find out the interaction between the state ownership, cash, dividend payment, leverage and firm value. The control variables are leverage, dividend and Iven4. The variable Iven4 includes state ownership, cash, dividend payment, leverage and profitability. Vo and Van (2014) indicates the interaction between managerial ownership, leverage and dividend policy in the Vietnamese stock exchange.

Additionally, the state ownership has an effect on the cash holding level (Megginson et al., 2014) and the profitability impacts on the state owned firms (Carlin and Pham, 2008).

Model 1 can rewrite as follow, namely Model 2:

$$Tobin'sQ(V_{it}) = \beta_0 + \beta_1(Cash_{it}) + \beta_2(Cash_{it}^2) + \beta_3(Div_{it}) + \beta_4(Iven4_{it}) + \beta_5(Lev_{it}) + k_i\lambda_{it} + \varepsilon_{it} \quad (2)$$

Where, i is the accumulation of firms; t is time; k_i is the coefficients of the interaction terms of state ownership, cash, dividend payment, leverage. $Iven4_{it}$ is equal state ownership with cash, dividend, profitability and leverage; Div_{it} is dummy variable which equal 1 if the firm pays dividend in a fiscal year and zero otherwise.

The generalized method of moments (GMM) (Arellano and Bover, 1995; Blundell and Bond, 1998) and two step GMM (Windmeijer, 2005) are used for the models to correct for bias caused by endogeneity.

4. DATA

This paper extracted data from financial statements from the databases of the two largest stock exchange companies in Vietnam, Ho Chi Minh City Stock Exchange and Hanoi City Stock Exchange. In the context of Vietnamese economy has volatility and instability from the financial crisis 2008, thus the firms intend to hoard more cash to increase the liquidity and flexible finance. That is the reason for us to research Vietnam stock exchange for the period 2008-2015. We collect the data of 650 listed firms (excluding financial institutions) on the Vietnamese stock exchange.

5. EMPIRICAL RESULTS

Table 1 represents the summary statistics for all variables used in the paper. As can be seen from the Table 1, the average cash holding is 9.78% out of total asset which is higher than some markets. Likewise, this rate is higher in comparison with others such as Teruel and Solano (2008) indicate that the average cash holding is 6.57% in Spain; Martinez-Solano et al. (2010) in United State, 7.9%; Gill and Shah (2012) in Canada, 3.87%; Lawrencia et al. (2012) in Nigeria.

Table 2 presents the result of the effect of cash holding level on firm value after managing for unobserved heterogeneity. The Table 2 shows the relationship exists between cash holding and firm value based on using a quadratic equation of cash. Furthermore, the

Table 1: Descriptive statistic

Variables	Obs	Mean±SD	Minimum	Maximum
Tobinq	3973	0.7317262±0.5526319	0.1384	3.7266
Cash	3973	0.0969149±0.1062562	0.0007	0.5053
Cash^2	3973	0.0206185±0.0429594	0	0.2489
Lev	3973	1.679028±1.722219	0.002	9.4741
Growth	3973	0.1101038±0.2271135	−0.4239	1.0626
Prof	3973	0.0877111±0.0843527	−0.1432	0.3731
CF	3973	0.1100166±0.1968234	−0.8461	0.9255
Iven4	3973	0.2325861±0.5947303	−2.522939	8.544105
Div	3973	0.7357161±0.4410067	0	1

Tobinq: Market value/book value, Cash: (Cash+cash equivalent)/total asset, Cash^2: Cash square, Lev: Total debt/total assets, Growth: Ln (Total assets/Total assets t-1), Prof: (Net profit+depreciation)/Total assets, Div: 1 if the firm pays dividend, zero otherwise. Iven4: Cash*state*leverage*dividend*profitability (state is ownership is measured by percentage of specific ownership in a firm), CF: Earnings after tax+depreciation/gross sales

Table 2: Cash holding and firm value

Dependent variable: Tobinq	Model 1	Model 2	Model 3
Cash	28.26407*** (8.313319)	16.06493** (8.089504)	33.88693* (19.24513)
Cash^2	−59.5209* (34.65604)	−51.90668** (25.15927)	−80.49347 (82.75671)
Prof	−14.76374** (5.296427)		−12.3923 (11.21802)
Growth	2.294532** (1.099821)		2.341389* (1.38559)
Lev	−1.126536 (0.9015898)	−0.9997174* (0.5681848)	−1.622188 (1.606282)
Div		−1.18884** (0.4076612)	
Iven4		1.065451* (0.5529326)	
CF			−2.140735 (7.117937)
Hausan	8.42	6.43	7.52
P value	0.209	0.376	0.185
AR (1) (z-score)	−3.60	−3.31	−1.55
P value	0.000	0.001	0.122
AR (2) (z-score)	−0.93	−1.53	−0.69
P value	0.351	0.127	0.491
N	3335	3335	3335

Tobinq: Market value/book value, Cash: (Cash+cash equivalent)/total asset; Cash^2: Cash square, Lev: Total debt/total assets; Growth: Ln (Total assets/Total assets t-1); Prof: (Net profit+depreciation)/Total assets; Div 1 if the firm pays dividend, zero otherwise. Iven4: Cash*state*leverage*dividend*profitability (state is ownership is measured by percentage of specific ownership in a firm); CF: Earnings after tax+depreciation/gross sales; AR(#): Autocorrelation tests in 1 and 2 order, P value in italics. Standard errors are in parentheses. *P<0.1, **P<0.05, ***P<0.01

regression coefficient of cash variable is positive while $Cash^2$ is negative. This suggests an invert U-shaped relationship between cash holding and firm value, implies that increasing amount of cash leads to the rising of corporate value. However, at the turning point the firm value will decrease if the cash holding continues growth. The cut-off point equals $\beta_1/-2*\beta_2$ which is similar formula to Martinez-Solano et al. (2013) in the US. Consequently, the cash to total assets ratio which maximizes the firm value is 23.7%. Thus, the firm can be maximizing at the optimal cash holding level which is consistent with Martinez-Solano et al. (2007).

The Model 2 conducts the estimation the correlation between the firm value and state ownership by adding interaction term between state, cash, leverage, dividend and profitability. It is consistent with previous study (Megginson et al., 2014), the results reflect the state ownership has positively effects on firm value. Moreover, the state ownership can improve the corporations value due to the strong political connection with government's helps (Yu, 2013). The study also discovers that state owned and cash; state with leverage; state and dividend policy; state with profitability are not significant related. Thus, the value of corporation can increase if it can obtain all the support policy from the state. This is consistent because Vietnamese government is still considered as a dominant in the economy, thus the firms can be supported from the government.

In addition, the robustness testing (Model 3) is applied to check the stability of the results. The result point out that there is no change of signs in all variables and it exists the optimal level of cash holding.

6. CONCLUSION AND IMPLICATIONS

The results specifying the cash holding has impact on firm value. And there is the optimal level of stockpiling cash which is 23.7% cash over total assets. However, the average cash holding level is around 9.8%, hence the businesses can increase their firm value by raising the level of cash. Correspondingly, the company will reduce the value if it keeps the cash above or under the optimal level. Therefore, the listed corporations in Vietnam should consider this finding as a vital reference to keep suitable the amount of cash which improves the firm value. This study further finds the state ownership influence firm value. And there is a statistically insignificant positive correlation between state ownership and firm value unless the state shareholders obtain all their advantages. This shows some suggestions for the policy on reducing the state ownership in Vietnamese firms. Maximizing firm value can be reached by the efficient state capital management.

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