Impact of Capital Structure and Cash Holdings on Firm Value: Case of Firms Listed on the Ho Chi Minh Stock Exchange

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ABSTRACT

This study analyses the impact of capital structure on cash holdings and the impact of capital structure and cash holdings on the value of firms listed on the Ho Chi Minh stock exchange (HOSE). With data from the financial statements of 105 firms listed on HOSE since 2009-2014 and using the generalized least square method, results show that cash holdings are positively related to the firm value; short-term debt is negatively related to firm value; the impact of long-term debt on the firm value is not statistically significant; short and long-term debt are negatively related to cash holdings.

Keywords: Capital Structure, Cash Holdings, Firm Value
JEL Classifications: G30, G31, G32

1. INTRODUCTION

In perspective of investors, the firm value is influenced by assessment and debt ratio and liquidity of that firm. For managers, to make decisions about one of two factors: Capital structure or cash holdings, it is necessary to understand the interaction between these factors, as well as the final impact of these two factors on firm value. Therefore, the cash holdings and capital structure, both the theory and practice, may be interrelated and together affect the firm value. Test of this relationship is an important practical requirement in financial management activities as well as a research gap in Vietnam.

The result of this study will contribute to suggest policy implications to help investors choose firms listed on Ho Chi Minh stock exchange (HOSE) that have share prices or dividends in the near future in accordance with expectations, help managers to control the financial leverage and cash holdings better.

2. LITERATURE REVIEW

2.1. Impact of Capital Structure on Firm Value
The capital structure is defined as the ratio of debt and the ratio of equity to total capital of firm (Bradley et al., 1984; Hovakimian

et al., 2001). Depending on the purpose of research, measurement of the ratios is based on the total equity according to the book value (the value recorded on the balance sheet), or according to the market value of the capital has been certified stock merchandise (Adrian and Shin, 2010).

Dimitrov and Jain (2008) found that increasing the debt in the capital structure will lead to decrease the value of shares, and the decline in value of shares will entail a reduction in the transaction for them. Ferreira and Vilela (2004) indicated that short-term debt and long-term debt have a different impact on the firm size and firm's liquidity. If a firm has a higher ratio of short-term debt, then the firm size, the liquidity of assets and share prices will decrease. If a firm has a higher ratio of long-term debt, it will have the opposite effect. Combined with the analysis of the impact of leverage on the stock price and liquidity, it could be suggested that the higher ratio of short-term debt will cause firm value to decline, instead, the higher ratio of long-term debt will have the opposite effect.

Based on the study of Ferreira and Vilela (2004), Tiago and Caldeira (2014) also divided the financial leverage into short and long-term debt in order to consider their impact on firm value. However, the research results differ from Ferreira and Vilela

(2004) and indicate that short-term debt (Std/Cap) and long-term debt (Ltd/Cap) are negatively impact the value of listed firm. This difference may be due to the different of financial data between markets.

2.2. Impact of Capital Structure on Cash Holdings

Cash holdings are known that the assets, has the highest liquidity in total assets (TA), can be used immediately to pay expenses (Morellec, 2001; Acharya et al., 2007). According to the Vietnam accounting standards and the rules for the recognition of financial statements, cash holdings is determined as the cash on hand account, cash in bank account, and the item cash and cash equivalents on balance sheet. However, empirical studies considered the amount of cash serving the needs of payment or cash in bank for payment. This is to satisfy unproductive while reviewing cash holdings items. Therefore, the cash holdings of a firm is determined by the ending balance of cash on hand and cash in bank account, the amount in the cash in bank account and the value of cash equivalents item to serve payment purposes and not intended to profitability.

D'Mello et al. (2008) argued that financial leverage and cash holdings are interrelated and each decision for each factor as a basis for decisions for the other factor. In this point, the determination of the amount of cash involved closely with determining financial leverage. This point was also developed by Acharya et al. (2007) and concluded that the level of financial leverage has the negative effect to the cash holdings.

In other hand, Ferreira and Vilela (2004) suggested that the relationship between the cash holdings and financial leverage can have two forms: First, because many firms want to reduce the risk of borrowing such as expenses to pay for recurring gains maturity of corporate bonds, they may have to keep more cash to meet the requirements of this payment. In other form, because leverage is an indicator to determine the status of the firm credit, financial autonomy capabilities or its ability to borrow, so a high level of leverage (the percentage of debt is higher than the percentage of equity in the capital structure) can be related to a lower cash holdings. This is explained that a firm that can easily borrow money from banks will use debt to meet the requirement to pay in the future rather than cash holdings. Firms are likely to keep more cash holdings because of some reasons as follows: When the firm faced with short-term debt with too high pay-back pressures, and when the firm want to reduce the risk for the costs of borrowing. Conversely, a higher long-term debt in the capital structure seems to show a good ability to borrow as well as the pressure is not as high paying short-term debts, this can cause a firm to keep less cash holdings.

2.3. Impact of Cash Holdings on Firm Value

Opler et al. (1999) argued managers want to achieve the target of maximizing shareholder value, they will set the cash holdings at point where marginal cost equal marginal benefit of cash holdings. The benefits of holding cash are to save costs of transactions when raising capital, to avoid having to liquidate assets to perform its payment obligations due, and finally, the financial initiative will ensure ability to take advantages of investment opportunities,

to avoid damage when not using external resources. The cost of holding cash arising from the liquidation is also known as the opportunity cost of cash holdings. Obviously, this is an approach from the viewpoint of static trade-off theory. On the other hand, the pecking order theory asserts that firms will not have the cash holdings at an optimal point. Instead, cash holdings is used as the value used to offset the difference between retained earnings and investment costs in the future. In principle, when retained earnings are not enough to finance a new investment demand, companies will use the cash holdings to address that shortfall, and only if firms do not have any choice they use debt (Ferreira and Vilela, 2004).

Acharya et al. (2007) suggested that firms, are financially constrained (i.e. firms face difficulties in accessing the capital market or pay higher costs to reach and use external funds) as well as the state of bad loans, will seek to avoid a shortage of funds for investment by holding more cash. Similarly, firms having the ability to get more investment opportunities in the future might hold more cash, because the cost of the lack of cash is going to ignore the investment opportunities (Han and Qiu, 2007). Therefore, to own the resources necessary to invest in projects that have positive NPV, firms will hold an exceptional amount of cash than normal demand. This increases the value of firms.

Considering the side of total firm assets, Ferreira and Vilela (2004) suggest that the impact of firm size on the management of cash, the larger firms hold less cash than the smaller firms do. This is explained by the costs that large firms have to spend to reach and use of external funds is much lower than others, so when to use these resources they can easily use external capital rather than holding cash. However, Mikkelson and Partch (2003) concluded that holding higher cash holdings could reduce the firm operation efficiently, with the implication that the higher cash holdings can make managers use assets by a less efficient way because there is too much cash is available to spend. Previous studies of firms in the United States show that firms hold cash to pay dividends to its shareholders regularly, one way reduces the cost of representation. On the other hand, this cause must go back the stock market to raise capital for new investment projects. This led to the relationship between cash holdings and the dividend payment was a negative correlation (Bigelli and Sánchez-Vidal, 2012).

3. RESEARCH METHOD AND RESEARCH DATA

3.1. Empirical Model

Based on theoretical foundations and empirical models of previous studies: Ferreira and Vilela (2004), Tiago and Caldeira (2014), Acharya et al. (2007), Mikkelson and Partch (2003) and Adrian and Shin (2010), this research proposes the research model as follows:

Model 1: The impact of capital structure on cash holdings:

$$C/TA_{it} = \alpha_i + \beta_1 stD/Cap_{it} + \beta_2 ltD/Cap_{it} + \beta_3 lnMVE_{it} + \beta_4 NetCapex/TA_{it} + \beta_5 FA/TA_{it} + \beta_6 SGA/NOR_{it} + \beta_7 NOR/TA_{it} + \beta_8 DivYld_{it} + \varepsilon_{it}$$

Model 2: The impact of capital structure, cash holdings on firm value:

$$MKB_{it} = \alpha_i + \beta_1 stD/Cap_{it} + \beta_2 ltD/Cap_{it} + \beta_3 C/TA_{it} + \beta_4 lnNOR_{it} + \beta_5 NetCapex/TA_{it} + \beta_6 ROIC_{it} + \varepsilon_{it}$$

Empirical Model is presented in Figure 1. So, this sentence should be 'Empirical Model is presented in Figure 1 and summary of the variables in the models are presented in Table 1.

3.2. Research Data
Research data is secondary data extracted from the financial statements of firms listed on HOSE in the period since 2009-2014. Data was collected from 105 firms to ensure full and correct information reported financial statements over the years from 2009 to 2014, and is a balanced and comprehensive one. Number of observations is 630. This data ensures statistical values for the regression model applied in the study.

4. RESULTS ANALYSIS

4.1. Descriptive Statistics
Table 2 shows cash holdings among firms have large difference, firm was the lowest cash holdings in only 1/1000 of the TA, while firm was the highest cash holding in 53% of TA. This feature may be explained by the nature of each firm in the business fields associated with the size of each firm. Moreover, it was possible in the difficult period of the economy, some firms do not profit from operations, and therefore do not have high levels of cash holdings.

Short-term debt was a high ratio out of total capital (the mean is 35%) and the difference between the minimum value and the maximum value is small. Long-term debt was low proportion in total capital (the mean is 9%). Observed capital structure in the financial statements over years show that firms that listed on HOSE tend to use less long-term debt, especially, there were firms to maintain long-term debt by 0 over the years. Firms may have difficulty in accessing long-term loans, or by high borrowing costs. On the other hand, the use of retained profits and short-term capital to make the reinvestment, business-revolving loan itself may also be a reason for creating the gap between short- term debt and long-term debt in the capital structure.

Market value/book value of the share achieved average value of 1.04. However, this does not mean that stocks of firms listed on HOSE reached high value and attract investors. The period 2009-2011, economic difficulties, which led to the market price index and stock price index declined significantly distinct. Into 2014, the market was slowly showing signs of recovery, but still had many stocks in the area warning or control. This could create significant differences in MKB, some firms reached a very high ratio MKB (at 4.12), but some firms have very low stock prices (MKB at 0.02).

4.2. Regression Results
Correlation coefficient matrix and factor variance inflation factor shows to no multi-collinearity in two models. This study has used the regression method with fixed effect method and random effect method to test two models. Then Hausman test is used to select the appropriate model (Table 3). Next, Wald test has used to test heteroscedasticity in the models. Finally, the method generalized least square (GLS) is used to get the best estimators.

Next, Wald test, is conducted to evaluate the goodness of model (Table 4).

From the test results in Table 4, GLS method is applied to estimate the regression value of two models in Tables 5 and 6.

Analyzing the regression results in two models is as follows.

Table 1: Summary of the variables in the models

Variables	Measurement	Previous studies	Expected sign
Variables in Model 1			
C/TA	Cash holdings to total assets	Ferreira and Vilela (2004)	
stD/Cap	Short-term debt to total assets	Tiago and Caldeira (2014)	+
ltD/Cap	Long-term debt to total assets	Tiago and Caldeira (2014)	-
lnMVE	Natural log (common share price×number of common shares)	Ferreira and Vilela (2004)	+
NetCapex/TA	Expenses for FA investment to total assets	Adrian and Shin (2010)	+
FA/TA	Fixed assets to total assets	Adrian and Shin (2010)	-
SGA/NOR	Selling, general and administrative expenses divided by net operating revenue	Acharya et al. (2007)	+
NOR/TA	Net operating revenue divided by total assets	Mikkelson and Partch (2003)	-
DivYld	Dividend yield by cash	Amihud (2002)	+
Variables in Model 2			
MKB	Market value of shares divided by book value of shares	Tiago and Caldeira (2014)	
stD/Cap	Short-term debt to total assets	Tiago and Caldeira (2014)	-
ltD/Cap	Long-term debt to total assets	Tiago and Caldeira (2014)	+
C/TA	Cash holdings to total assets	Tiago and Caldeira (2014)	+
lnNOR	The natural log of net operating revenue	Acharya et al. (2007)	+
NetCapex/TA	Expenses for FA investment to total assets	Adrian and Shin (2010)	+
ROIC	Net Profit from operating divided by (total equity minus short-termed debt)	Adrian and Shin (2010)	+

ROIC: Return on invested capital, NOR: Net operating revenue, MVE: Market value of equity, FA: Fixed asset

Table 2: Descriptive statistics for the variables

Variable	Observation	Mean±SD	Min	Max
C/TA	630	0.12±0.11	0.001	0.53
stD/Cap	630	0.35±0.19	0.02	0.81
ltD/Cap	630	0.09±0.13	0	0.65
lnMVE	630	26.96±1.33	22.03	30.87
NetCapex/TA	630	0.05±0.06	0	0.43
FA/TA	630	0.03±0.19	0.006	0.93
SGA/NOR	630	0.10±0.07	0.005	0.39
NOR/TA	630	1.17±0.83	0.08	6.13
DivYld	630	0.09±0.07	0	0.50
lnNOR	630	13.80±1.22	10.88	17.30
ROIC	630	0.16±0.11	−0.16	0.63
MKB	630	1.09±0.64	0.02	4.12

ROIC: Return on invested capital, NOR: Net operating revenue, SGA: Selling, general and administrative expenses

Table 3: Hausman test

Models	Value inspection and concluded	
Model 1	P-value	0.00
	Method	FEM
Model 2	P-value	0.00
	Method	FEM

FEM: Fixed effect method

Table 4: Wald test

Models	Value inspection and concluded	
Model 1	P-value	0.00
	Hypothesis H_0: No heteroscedasticity	Rejected
Model 2	P-value	0.00
	Hypothesis H_0: No heteroscedasticity	Rejected

Table 5: Results of GLS regression for Model 1

Independent variables	Coefficients	P-value
stD/Cap	−0.15***	0.00
ltD/Cap	−0.09***	0.00
lnMVE	0.01***	0.00
NetCapex/TA	−0.02	0.55
FA/TA	−0.15***	0.00
SGA/NOR	0.02	0.65
NOR/TA	0.00	0.94
DivYld	0.09***	0.00
VIF	1.33	
R^2	50.65%	
F	282.59	

***Significant at 0.01 level. VIF: Variance inflation factor, GLS: Generalized least square, NOR: Net operating revenue, MVE: Market value of equity, SGA: Selling, general and administrative expenses, FA: Fixed asset

Table 6: Results of GLS regression for Model 2

Independent variables	Coefficients	P-value
stD/Cap	−0.53***	0.00
ltD/Cap	0.01	0.94
C/TA	0.88***	0.00
LnNOR	0.04	0.09
NetCapex/Ta	0.86***	0.00
ROIC	1.89***	0.00
VIF	1.34	
R^2	41.9%	
F	194.04	

***Significant at 0.01 level. VIF: Variance inflation factor, GLS: Generalized least square, ROIC: Return on invested capital, NOR: Net operating revenue

4.2.1. The impact of capital structure on cash holdings in Model 1
4.2.1.1. Short-term debt ratio (stD/Cap)
The impact of short-term debt on cash holdings is negatively affected. This is completely contrary to initial hypothesis about expected positive correlation between the short-term debt ratio on cash holdings. Compared with previous studies, this seems consistent with research by Tiago and Caldeira (2014), but in contrast to the findings of Ferreira and Vilela (2004). Maybe in developing markets, it seems that firms having high short-term debt ratio of capital structure have less of cash holdings. In Vietnam, a developing market, the estimated results may imply that firms may use more short-term debt to reduced demand for cash holdings.

4.2.1.2. Long-termed debt ratio (ltD/Cap)
The impact of long-term debt on cash holdings is negatively affected. Compared with previous studies, this is consistent with the results of Tiago and Caldeira (2014) and of Ferreira and Vilela (2004). An important point to note is that the separation of short-term debt ratio and long-term debt ratio is found almost exclusively in some numbers of such studies or Ferreira Tiago, most previous studies have used the rate of total debt (i.e., debt includes short-term and long-term one) in the capital to as capital structure measure. And this can create an argument when combined expertise values of short-term debt ratio and long-term debt ratio to debt ratio is possible (including short-term debt and long-term debt) is negatively correlated with the cash holdings.

Combining this with these regression results in the negatively effect of the ratio of short-term debt on cash holdings above could imply that the relationship between capital structure and cash holdings of the firms in Vietnam is similar as in other markets. That means that when firms have a better ability to borrow will reduce the amount of cash needed to hold. Similarly, if the firms have the ability to generate a large amount of cash to meet the needs of production activities business will reduce the use of financial leverage.

4.2.2. The impact of capital structure, cash holdings on firm value in Model 2
4.2.2.1. Short-term debt ratio (stD/Cap)
The impact of short-term debt on firm value is negatively. This is entirely consistent with the initial hypothesis about the expected negative correlation between the short-term ratio and firm value. This result is consistent with the results of Tiago and Caldeira (2014) or the study of Ferreira and Vilela (2004). As presented, the theoretical basis for the different conclusions about the impact of capital structure on the firm value could be affected negatively. However, the empirical model will test the values reflect the impact of capital structure or debt ratio each corresponding to the characteristics of a specific financial data. For Vietnam market, the research results may imply similar interpretation of Tiago and Caldeira (2014). Maybe for investors, a firm must use short-term debt levels meant greater ability to use less working capital, facing pressure to pay high for a short time, creating higher operational risk and can reduce the amount of money that firm exist to make the dividend payment. These can reduce the market value of the firm.

4.2.2.2. Long-term debt ratio (ltD/Cap)

The impact of long-term debts ratio on firm value is positive correlation. This is entirely consistent with the initial hypothesis about the expected negative correlation between long-term debt ratio and firm value. However, this coefficient is not statistically significant, so it cannot conclude on the impact of long-term debt ratio to firm value in Model 2. This is contrary to the theory and the experimental results of Tiago and Caldeira (2014) or the study of Ferreira and Vilela (2004), where these studies are confirmed to show statistical significance of positive relation between the long-term debt and firm value. On the other hand, looking at the descriptive statistics may explain part of this phenomenon. Observation data show firms listed on HOSE less likely to use long-term debt, even many firms maintain long-term debt by 0 over the years. This represents long-term debt seems less important role in the capital structure and thus its impact on other financial decisions seem to be negligible.

4.2.2.3. Cash holdings (C/TA)

The impact of the cash holdings on firm value is positive that is consistent with the initial hypothesis about the expected positive correlation between the cash holdings and firm value. This result is consistent with the results of Almeida and Campello (2007), Bigelli and Sánchez-Vidal (2012), Ferreira and Vilela (2004) and Han and Qiu (2007). This can be explained that stocks have a higher value when it is likely to be paid in cash dividends in the near future. In addition, this ability is reflected by the cash holdings; or a firm with a lot of cash holdings will demonstrate the ability to generate cash flow from business operations as well as good ability to meet the payment of debts and expenses better. The similarity in findings with theoretical and experimental studies before creating implies that investors on HOSE are also very concerned about the amount of cash holdings of the firms. The larger cash holdings will create peace of mind for investors about the liquidity of firms, as well as thinking that firms have better financial strength as well as greater certainty about their eligibility dividend by cash in the near future. These factors may contribute to increasing the stock price that listed on HOSE and thereby increase the value of firms.

Other factors in models are explained as follows.

4.2.3. Model 1: The impact of capital structure on cash holdings
4.2.3.1. Market value of equity (lnMVE)

The result shows that the impact of this variable on cash holdings is statistically significant, demonstrating the impact of the market value of equity significantly on cash holdings. This result is similar with the empirical study of Amihud (2002) or the theoretical points of Ferreira and Vilela (2004), Opler et al. (1999) when they claim that the market value of equity (lnMVE) shows the size of firms and smaller firms may hold less cash. This phenomenon could be explained that firms listed on HOSE hold cash depending on the ability to borrow money and specific business sector, and reflecting the amount of money ones surplus resulting from the securitized equity. On the other hand, for measuring these variables, the use of ratio cash holdings to TA is percentage index, so cannot show the scale as an absolute index. So could lead to effects of firm's size to cash holdings at a small coefficient.

4.2.3.2. Capital expenditures (Net apex/TA)

Although expectation to Net apex/TA is a positive sign, the result in Model 1 showed a negative correlation. This means that when a firm to invest more in fixed asset (FA) purchases that firm will have lower cash holdings. This conclusion contrasts with the view of Han and Qiu (2007) when they claim that the ratio of FA investment may affect the amount of cash holdings, since the more investment firms are the more likely to base better investment opportunities, and will therefore hold more cash. This result may imply that for firms listed on HOSE, identifying new investment for FA is not dependent on existing cash holdings. This can happen due to profit-based businesses gain to reinvest rather than the amount of money available, or is capable of borrowing and issue of shares to raise capital investment in FA. These factors may cause the firm to use other resources for investment in FA rather than relying on the cash holdings.

4.2.3.3. FA/TA

The result is in line with initial expectations sign, which is a negative correlation between FA and cash holdings. In the theory, because FA are part of the TA, if the ratio of FA to TA increased to the normal ratio of cash to TA fell to be logical. This result is similar to the empirical research of John (1993) that firms have large tangible assets will hold less cash. Likewise, for firms listed on HOSE, cash holdings and FA are the two components of TA value on the financial statements. Therefore, when the ratio of these components increase, may lead to the decline of the rate of the rest.

4.2.3.4. Selling, general and administrative expenses and net operating revenue (SGA/NOR)

The result shows that this relationship is not statistically significant.

4.2.3.5. Dividend yield (DivYld)

Dividend yield by cash demonstrates clearly its impact on the cash holdings of the firms. The result is consistent with the inference that the dividend yield will increase the amount of cash that firms holding (Bigelli and Sánchez-Vidal, 2012). This also demonstrates the firms plan to pay cash dividends more early next year will have a cash holdings greater this year. The study results may indicate that firms listed on HOSE and financial decisions similar to the present theory and previous studies. These firms plan to cash dividend to shareholders after the end of the fiscal year will decide in their funds usually a larger amount of cash to meet the demand for payment.

4.2.4. Model 2: The impact of capital structure, cash holdings on firm value
4.2.4.1. Net operating revenue (lnNOR)

Value logarithm of NOR (lnNOR) is expected to positively affect the firm value. The impact of NOR to firm value is a relatively statistically significant. This is consistent with the arguments of Frank and Goyal (2009) that the firm is in the growth period has the ability to generate corresponding revenue growth respectively and gradually entered the period stability and achieve large size. So there will be the market value is relatively high. At the Vietnam market, it could be inferred that investors paid much attention to the profits from the operating activities of firms. This factor

reflects the business of production capacity, the ability of the firm management as well as the ability to generate profits. This means that a firm listed on the HOSE has the ability to generate higher operating profits, the more investors interested in shares of the firm and thus the market value of the firm will increase.

4.2.4.2. Capital expenditures (NetCapex/Ta)

Studies of Almeida and Campello (2007), Bradley et al. (1984) or Dimitrov and Jain (2008) showed that the rate of reinvestment for FA had a positive impact on the firm value. The studies indicate that a higher ratio reinvestment for FA have the ability to generate more cash flow in the future and the ability to ensure stability in the operation by these assets. As well as investors noted that a firm with high reinvestment for FA that creating a good profit margin to cover these expenses and will increasingly make a profit higher in the future. The results of this study show that is a positive correlation between the rate of reinvestment for FA and the firm value, demonstrating the correlation between the rate of reinvestment for FA and value of firm listed on HOSE with strong statistical significance. This means that investors on HOSE think that firms invest more in FA are in the developing stage and the ability to generate higher profits in the future. As well as, to have the ability to invest more in FA, firms must have a strong financial capability or the ability to generate profits for reinvestment well.

### 4.2.4.3. Return on invested capital (ROIC)

ROIC affects firm value. That is acceptable hypothesis about the positive the relationship between firm value and ROIC. This is consistent with initial expectations sign and similar with the results of previous studies. The argument to explain this correlation is due to the profit of firms can be cumulative, so firms can use retained earnings for the purpose of new investments in assets or business projects, and only use of debt after have used internal capital (Kayhan and Titman, 2007). This result also shows that investors on HOSE and financial executives also similar argument. Furthermore, same as argued by Jensen (1986) suggested that firms could generate cash flow from operating activities as much, they may use this cash flow to repay debt, and by holding the large cash flow, administrators do not need external capital. It is this reduced financial leverage and increase firm value by financial leverage negatively correlated with the firm value.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The study can conclude that in the model about the impact of capital structure to cash holdings, dividend yield by cash at the beginning of next year there is positively related to the cash holdings. Both variables of short-term debt and long-term debt is negatively related to the level of cash holdings. Although the initial hypothesis that the only long-term debt is negatively correlated to the cash holdings, but the results show that both short-term debt and long-term debt has a negative correlation with the cash

Figure 1: Proposed model
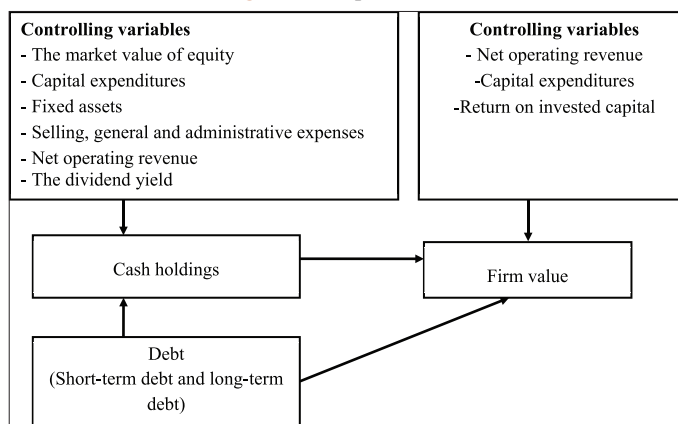
holdings. Besides, FA are the opposite effect to the cash holdings, which is also suitable for FA is part of TA and of course the increased of this assets class will reduce the proportion of other assets. The relationship between the rate of reinvestment for FA, the rate of SGA and NOR with cash holdings has no statistical significance. Failure to achieve the expected signs at statistical significance may imply that characteristics of the firms in the market when investing in FA, management expenses and sales, revenue not included in the priority factors to determine the level of cash holdings.

For model about the impact of capital structure, cash balance to firm value, only cash holdings has positive relation with firm value. NOR, capital expenditure and ROIC also have positive relation with firm value. Short-term debt has the opposite impact on firm value. Long-term debt is not statistically significant to firm value.

5.2. Recommendations

For financial managers, this study implies that expressed common characteristics of companies listed on HOSE is the tradeoff between the debt and cash holdings. Since both short-term and long-term debt are negatively impact on cash holdings. From there, managers can base on market characteristics to determine the capital structure and the reasonable cash holdings. Moreover, with the goal of maximizing firm value, short-term debt ratio seems to have a greater impact on decisions related to this goal. Therefore, managers can handle short-term debt more than capital structure.

For investors, to select stocks can achieve good value, investors can choose from firms have the ability to generate high profits to equity, the large cash holdings and large reinvestment for FA. These factors ensure that the ratio market price/book value of shares increased after publishing the financial statements. On the other hand, if investors are interested in receiving more dividend by cash, they may consider firms with large cash holdings. This creates a higher level of assurance for the cash dividend is entitled to early next year. Based on the results of this study, when a firm has been a large cash holdings at the end of the year, it can predict the behavior of dividend by cash happen early next year and increase the price of shares. This can help investors buy shares of firms at the end of the year to wait prices up.

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