Trang Van Thi Do; Thuy Duong Phan

Article

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Debt maturity structure and investment decisions: Evidence of listed companies on Vietnam's stock market

Trang Van Thi Do[1] and Duong Thuy Phan[2]*

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*Corresponding author: Duong Thuy Phan Faculty of Transport Economics, University of Transport Technology, Hanoi, Vietnam
E-mail: duongpt@utt.edu.vn

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Additional information is available at the end of the article

Abstract: The article analyzes the impact of debt maturity structure and other factors on investment decisions of enterprises listed on the Vietnam's stock market from 2010 to 2019. Data used in this study are acquired from the financial statements of 558 enterprises listed on both the Ho Chi Minh and Hanoi stock exchanges in the period 2010–2019, from the FiinPro database. S-GMM regression method is utilised to analyze the influence of debt maturity structure and other factors on investment decisions of listed companies. The analysis results shows that the debt maturity structure has a positive impact on the investment decision of the enterprises. Besides, the profitability of total assets and the fixed assets turnover also have a positive impact on the investment decision of the enterprise, while liquidity and cash flow have a negative impact on investment decisions. Based on empirical results, the study proposes some recommendations to help the managers of listed companies to build a reasonable debt maturity structure in the direction of using more long-term debts to increase investment efficiency. At the same time, the study recommends some policy implications for the Government in managing macroeconomic policies in order to create favourable conditions for businesses to access many long-term capital sources.

Subjects: Economics; Finance; Business, Management and Accounting

ABOUT THE AUTHOR

Our research has concentrated on the corporate finance issue with the data sample of listed firms in Vietnam. We have conducted three research projects and one reference book that related to this issue. The research projects have focused on the determinants of earnings management, the effect of capital structure on firm value, and determinants of financial risk. The book has been published with the title is Earnings management: Theoretical and Practical in 2021. This year, our team continues a research project that pays attention to the debt maturity structure, the impact of debt maturity structure on investment decisions and financing decisions, and the effect of cash flows on economic decisions of firms. This paper is an important part of our research project in Vietnam. The main objective of this project is suggesting some recommendations for financial managers, policy-makers and investors to make economic decisions.

PUBLIC INTEREST STATEMENT

The article analyzes the impact of debt maturity structure and other factors on investment decisions of enterprises listed on the Vietnam's stock market from 2010 to 2019. The analysis results show that the debt maturity structure, the profitability of total assets and the fixed assets turnover have a positive impact on the investment decision of the enterprise, whereas liquidity and cash flow have a negative impact on investment decisions. Based on empirical results, the study proposes some recommendations to help the managers of listed companies to build a reasonable debt maturity structure in the direction of using more long-term debts to increase investment efficiency. Moreover, the study recommends some implications for policy-makers in managing macroeconomic policies in order to create favourable economic conditions for firms to access many long-term capital sources.

Keywords: Debt maturity structure; investment decisions; Vietnam listed companies
Subjects: G30; G32; G11

1. Introduction

The investment decision of a firm depends on the owner's profit expectations, investment costs, and financing ability (Harcourt et al., 1967). When a company decides to finance its operations and growth opportunities with debt, it must decide on the maturity of the debt, the type of debt, and the source of the debt, as each of these decisions can affect company value. Different maturities have different advantages and disadvantages. Modigliani and Miller (1958) argue that in a perfect capital market, the firm's investment and financing decisions are independent of each other. Corporate financing decisions here include the term structure of the debt. However, in reality, the market is not really perfect because of the existence of market frictions and market imperfections, thus recent research studied the interactions between financing and investment decisions of firms (Dang, 2011). Aivazian et al. (2005) argue that because the market is not really perfect, the conflict of interest between shareholders, creditors and managers of the enterprise related to the level of debt and debt maturity structure can lead to overinvestment and underinvestment. A good example is that in low-growth firms with large free cash flows, leverage can be used as a discipline device because it discourages managers from investing excessively in risky projects. Crouzet (2016) also demonstrates that firms' investment policies are strongly influenced by their ability to continuously adjust debt maturity structure. The available evidence on the link between debt maturity structure and corporate investment is mainly generated in developed markets such as the United States. Studies to examine debt maturity structure using evidence from developing markets are limited (Khaw and Lee, 2016).

Vietnam is in the process of economic transformation and development. The financial market is not fully developed and there are still many limitations. Hence, the problem of debt maturity structure of listed companies in Vietnam becomes more complicated. Because of the imperfection in the debt market, the maturity structure of debt will have a certain impact on the investment decision of enterprises. The capital investment decision is considered the most important decision in the financial decisions of a business because it creates value for the business. A correct investment decision will contribute to the value of the business, thereby increasing the asset value for the owner. In contrast, a wrong investment decision will cause loss of business value leading to damage to the owners' properties.

Le et al. (2017) research and examine the impact of debt maturity structure on investment decisions of enterprises. To be specific, the research sampled 155 manufacturing and processing enterprises listed on the stock market. During the period from 2010 to 2016, the research results show that the debt maturity structure has a positive effect on investment decisions for all firms in the sample and firms with low growth opportunities. In Vietnam, research on the influence of debt maturity structure on corporate investment is still limited in number. This is a potential research gap to assess the impact of debt maturity structure on investment decisions of listed companies in the context of Vietnam's economy.

In this article, the authors directly assess the debt maturity structure and investment decisions of companies listed on the Vietnam Stock Exchange in the period from 2009 to 2019. The research results will contribute to further empirical evidence on the impact of debt maturity structure on investment decisions. The results will assist the managers of companies listed on the Vietnam Stock Exchange in making financing decisions in general and managing debt term structures in particular accordingly and thereby contributing to improve investment efficiency.

2. Literature review

Debt maturity is the relationship between short-term debt maturity and long-term debt maturity. However, according to Antoniou et al. (2006), there is no standard definition to classify short-term debt and long-term debt. Scherr and Hulburt (2001) suggest that if a debt has a maturity of one year, it is considered long-term. Some researchers like Barclay and Smith (1995) consider long-term debt to be debt with a maturity of 3 years or 5 years as Schiantarelli and Sembenelli (1997). Research results show that debt maturity structure has an impact on investment decisions of enterprises. According to Rashedi and Zadeh (2015), debt maturity structure has a positive influence on investment decisions. Specifically, an increase in long-term debt will increase the investment rate. However, according to Barclay and Smith (1995), Guedes and Opler (1996), Myers (1977), Barclay et al. (2003), Aivazian et al. (2005), Scherr and Hulburt (2001), the debt maturity structure has a negative effect on the investment decisions of the firm.

Agency theory by Jensen and Meckling (1976) explains why a firm facing higher interest costs does not try to finance from other sources such as debt market. Problems arise when there is a conflict of interest among managers, creditors and shareholders for different purposes. The cost of a transaction combined with debt and equity issues can increase the cost of external financing. Debt is the only external funding channel available to the company. Financial debt allows creditors to earn interest payments and principal at the maturity. If payments are not made on time, then liquid assets of the firm will be sold to raise funds. There are assets in an investment project; therefore, it is difficult to recover capital from liquidation. In this case, to protect the interests of creditors, they will create disadvantageous debt covenants for debtors to pay higher interest rates and limit the size of loans. Barnea et al. (1980) argue that choosing a short-term or long-term debt for investment projects, enterprises need to maintain using a reasonable debt maturity and will minimize conflicts between shareholders and bondholders. Terra (2011) argues that small businesses often use more short-term debt for investments, so they have to bear higher agency costs due to underinvestment. Therefore, it increases conflicts between managers and shareholders.

Small businesses differ from large firms in taxability, ownership, flexibility, industry, economies of scale, access to financial markets and degree of information asymmetry (Scherr & Hulburt, 2001). The agency cost theory suggests that in small firms there will be limited access to markets for long-term loans and according to Weinberg (1994) there is considerable evidence that for at least some firms, cash flow helps determine investment. Weinberg (1994) suggests two explanations for the effects of cash flow and investment. First, when cash flows suddenly increase, financial constraints arising from asymmetric information are loosened and it is possible that the investment demand of small and growing businesses also increases. Second, young companies are often engaged in the learning process and with a large internal financial potential will increase investment. In addition, the empirical analysis results of Gala and Julio (2016) provide evidence that small firms invest significantly more than large firms or firm size has a negative impact on investment decisions of investors. In particular, small firms have significantly higher investment rates than large firms, even after controlling for standard experience proxies for the firm's actual investment opportunities and financial position, including Tobin's Q and cash flow.

Terra (2011) has examined the effect of firm size, cash flow and investment opportunity on investment decisions and found the significant positive result. Saquido (20032003) concludes that liquidity and firm size are not significantly related to investment; however, there is still an important relationship between investment and revenue growth and fixed capital ratio. Aivazian et al. (2005) claim that the link between leverage and investment is negative and that the effect is significantly stronger for low-growth firms than for high-growth firms. Research by Jiming et al. (2010) shows the relationship between debt and investment decisions, using multiple linear regression on data from 2006 to 2008 of 60 listed Chinese real estate firms.

Based on previous studies, the author suggests the following research hypotheses:

Hypothesis H1: The maturity structure of debt has a negative impact on the investment decisions of the enterprise.

Hypothesis H2: The efficiency of using fixed assets has a positive impact on the investment decisions of the enterprise.

Hypothesis H3: Financial leverage has a positive impact on the investment decisions of the enterprise.

Hypothesis H4: Return on total assets has a positive impact on investment decisions of enterprises.

Hypothesis H5: Liquidity has a positive impact on investment decisions of enterprises.

Hypothesis H6: Cash flow from operating activities has a positive impact on investment decisions of enterprises.

Hypothesis H7: The size of the firm has a negative effect on the investment decisions of the enterprise.

3. Research methodology

3.1. Research model

The research sample includes all listed companies that satisfy the condition of full financial statements for the period 2010–2019, so the research sample is highly representative. The data sample, which was collected from FinPro database, obtained 558 enterprises listed on both the Ho Chi Minh and Hanoi stock exchanges.

In this study, the research model is built on the basis of inheriting the research results from the original of Aivazian et al. (2005) and Le et al. (2017).

The research model is present as below:

$$\mathrm{INV}_{i,t}=\beta_0+\beta_1\mathrm{MAT}_{i,t-1}+\beta_2\mathrm{INV}_{i,t-1}+\beta_3\mathrm{SALE}_{i,t-1}+\beta_4\mathrm{LEV}_{i,t-1}+\beta_5\mathrm{ROA}_{i,t-1}+\beta_6\mathrm{LIQ}_{i,t-1}+\beta_7\mathrm{CFO}_{i,t}+\beta_8\mathrm{SZ}_{i,t-1+}\varepsilon_i$$

The dependent variable is the investment (INV).

The independent variable is the debt maturity structure (MAT).

Control variables include lagged INV, fixed asset turnover (SALE), financial leverage (LEV), return on total assets (ROA), liquidity (LIQ), cash flow from operating activities (CFO) and business size (SZ).

Regression model is used by the author to analyze the impact of debt maturity structure on investment decisions of listed companies. The variables of the model are presented in Table 1.

3.2. Research method

To analyze the impact of debt maturity structure on investment decisions of companies listed on Vietnam's stock market, the descriptive statistical analysis, correlation matrix analysis and regression

Table 1. Description of variables in the model		
Name of variables	**Code**	**Method of calculation**
Invesment decisions	INV	Capital expenditures minus depreciation and normalized by net fixed assets at the beginning of the year.
Debt maturity structure	MAT	Long-term debt/Total liabilities
Fixed asset turnover	SALE	Net Sales/Net Fixed Assets
Financial leverage	LEV	Total liabilities/Total assets
Return on total assets	ROA	Profit after tax/Total assets
Liquidity	LIQ	Current assets/current liabilities
Cashflow from operating activities	CFO	Cash flow from operating activities/Net fixed assets last year
Firm size	SZ	Natural logarithm of total assets

Source: Compiled by the authors

results are illustrated. The method of regression model estimation using panel data can be done by three methods, namely least squares, fixed effects model and random effects model. To select the appropriate model, the author performs tests on multicollinearity, Heteroskedasticity, autocorrelation and endogeneity. To overcome the Heteroskedasticity, autocorrelation and endogeneity, regression results are analyzed by GMM method.

To estimate the coefficient β, the GMM method will use a set of L vectors of instrumental variables (also known as moment conditions in GMM estimation) and the number of instrumental variables must be greater than the number of variables in the model. The condition for a variable to be selected as an instrumental variable is that it is not correlated with the residuals. This means that the main idea of the GMM method is to replace the values of the instrumental variables with the mean of the variables of the sample and find a β Vector satisfying the above equation.

Antoniou et al. (2006) demonstrate that the GMM method is suitable for dynamic modeling. The authors recommend using the GMM method to eliminate endogeneity problems, and this method also gives robust estimates in the presence of Heteroskedasticity and autocorrelation. To ensure that the GMM estimates are appropriate, Sargan and/or Hansen used the second-order autocorrelation test (Roodman, 2009). The Sargan test considers the appropriateness of the instrumental variables in the model, in which the hypothesis H0 is that the instrumental variable is exogenous. Therefore, the test results need a p-value greater than 10%. In addition, the second-order autocorrelation test is also performed to ensure that the instrumental variables used from the second-order lag are appropriate because there is no second-order autocorrelation (Arellano & Bond, 1991).

The GMM method has two types of estimators, namely the Differential-Generalized Method of Moments (D-GMM) and the System-Generalized Method of Moments (S-GMM). To be specific, the D-GMM estimate of Arellano and Bond (1991) is suitable when the sample size is small. Whereas, the S-GMM of Arellano and Bover (1995), Blundell and Bond (1998) should be chosen a large sample. Therefore, the S-GMM estimate is taken into account.

4. Results and discussion

Descriptive statistics include the mean, median, and standard deviation as well as the minimum and maximum values of the variables included in the model.

The results of the descriptive statistical analysis presented in Table 2 show that there are differences in the investment ratio, debt maturity structure and other factors affecting the investment ratio of listed companies in the Vietnam stock market. The average INV variable of listed companies is 0.0449, the smallest INV is −2 and the largest is 2. This shows a large difference in investment decisions of listed companies. Debt maturity structure has an average of 0.1846 and fluctuates between 0.0111 and 0.9693, indicating that the level of use of long-term debt in Vietnam is quite low. However this ratio is suitable for countries with developing economies such as Thailand and Malaysia (Deesomsak et al., 2009). This proves that in the current undeveloped debt market in Vietnam, businesses do not have many sources of finance, but mainly use short-term loans from banks as the main funding sources.

In terms of control variables, the average fixed assets turnover is 33.2518, the smallest value is −0.3966 and the largest value is 9459,276. There are enterprises that have low fixed assets turnover, besides those with very high efficiency in using fixed assets. Financial leverage of listed companies is average value of 0.4994, but there is a big difference among listed companies. The liquidity of enterprises is quite good, at an average of 2.7051 but there is a huge difference among enterprises. The return on total assets, cash flow from operating activities and business size also have big differences among enterprises.

Table 3 shows the correlation coefficient between the dependent variable and the independent variables and between the independent variables. The correlation coefficients between the independent variables are not higher than 0.8; hence, there is no multicollinearity between the variables (Cohen, 1988). Variable MAT, lagged INV, SALE, LEV, ROA, SZ are positively correlated with INV; while LIQ, CFO are negatively correlated with INV. The results of the correlation analysis between the independent variables in the model prove that the possibility of multicollinearity between the independent variables in the model is low.

According to Table 4, the results of the multicollinearity test show that the variance inflation factor VIF is all < 10; hence, the model does not have multicollinearity. White test and Wooldridge test demonstrate that the model has Heteroskedasticity and autocorrelation (p-value <5%). Therefore, the Pool OLS model is not suitable. Hausman test shows p-value = 0.000 < 0.05; thus, rejects Ho. Therefore, the author uses fixed effects model (FEM) to analyze the impact of debt maturity structure on investment decisions of listed firms. After selecting the FEM model as a suitable model, the author tests the model's defects by Wald test. The results obtained prob>-chi2 = 0.0000 < 0.05 show that the FEM model has defects.

Based on Table 4, the fit of the regression by GMM method was evaluated through F test, Sargan and Arellano-Bond (AR) statistics.

Sargan test = 0.157 > 0.1 so the hypothesis H0 is accepted: The model is correctly defined and the representative variables are reasonable. F-test statistic (p-value) = 0.000 < 0.1; thus, we reject the hypothesis H0: All coefficients estimated in the equation are zero, so the coefficients of the explanatory variable have statistical significance.

The test AR (1) = 0.000 < 0.1 should reject the hypothesis H0: There is no first-order serial correlation which means there is no first-order serial correlation in the residuals of the regression model.

The test AR (2) = 0.221 > 0.1 should accept the hypothesis H0: There is no second-order serial correlation in the residuals of the regression model.

Table 2. Descriptive statistics of variables					
Variable	**Number of observations**	**Mean**	**Standard deviation**	**Min value**	**Max value**
INV	5554	0.0449	0.4545	−2.00	2.00
MAT	5580	0.1846	0.2319	0.0111	0.9693
INV(−1)	5557	0.0629	0.4678	−2.00	2.00
SALE	5544	33.2519	194.732	0.3966	9459.276
LEV	5580	0.4994	0.2225	0.0019	0.9929
ROA	5579	0.0681	0.0859	−0.6246	0.8391
LIQ	5580	2.7051	6.6017	0.0578	229.7793
CFO	5540	5.4605	106.3566	−4681.668	4735.817
SZ	5580	27.1285	1.5104	21.3696	33.3944

Source: Calculation results of the authors

Table 3. Matrix of correlation coefficients between variables in the model									
	INV	**MAT**	**INV_{t-1}**	**SALE**	**LEV**	**ROA**	**LIQ**	**CFO**	**SZ**
INV	1.0000								
MAT	0.0616	1.0000							
INV_{t-1}	0.0770	0.1019	1.0000						
SALE	0.1358	−0.0623	−0.1305	1.0000					
LEV	0.0347	0.1869	0.0698	−0.0091	1.0000				
ROA	0.1265	−0.1237	0.0796	0.0053	−0.3795	1.0000			
LIQ	−0.0572	−0.0111	−0.0290	0.0175	−0.3511	0.0390	1.0000		
CFO	−0.0305	−0.0022	−0.0287	0.0720	−0.0059	0.0259	0.0244	1.0000	
SZ	0.0811	0.3404	0.0991	−0.0132	0.3216	−0.0810	−0.0858	−0.0100	1.0000

Source: Calculation results of the authors

The estimated results by GMM method show that the model does not have defects. Specifically, the residual autocorrelation test shows that there is first-order autocorrelation (p-value of AR (1) is less than 10% significance level) and no second-order autocorrelation (p-value of AR (2) is greater than the 10% significance level). Sargan's test has a p-value greater than 5% significance level, showing that the model and the representative variables used are suitable.

As can be seen from Table 4, GMM regression model is employed, financial leverage and firm size do not affect investment decisions of listed companies. The research results provide evidence that the debt maturity structure and other factors affect the investment decisions of enterprises listed on Vietnam's stock market. A significant level of 1%, debt maturity structure (MAT), fixed assets turnover (SALE), return on total assets (ROA) have a positive impact on investment decisions. In which, the return on total assets (ROA) has the greatest impact of 0.817, followed by the debt maturity structure (MAT) with 0.527 and the fixed assets turnover (SALE) with the lowest level of 0.0005. Liquidity has a negative impact on investment decisions of listed companies, but the impact is not large. At the significance level of 5%, the lagged investment rate has a positive impact on the investment decision and the cash flow from operating activities has the opposite effect on the investment decision. Nevertheless, both of these factors represent low impact on investment decisions.

Table 4. Regression results

Variable	VIF	Dependent variable INV			
		POLS	FEM	REM	GMM
MAT(−1)	1.16	0.106***	0.198***	0.106***	0.527***
INV(−1)	1.05	0.0657***	−0.0131	0.0657***	0.042**
SALE(−1)	1.03	0.000354***	0.000502***	0.000354***	0.0005***
LEV(−1)	1.50	0.0943***	0.0699	0.0943***	0.032
ROA(−1)	1.21	0.777***	0.980***	0.777***	0.817***
LIQ(−1)	1.16	−0.00292***	−0.000563	−0.00292***	−0.0049***
CFO	1.01	−0.000172***	−0.000184***	−0.000172***	−0.0003**
SZ(−1)	1.24	0.0146***	−0.0586***	0.0146***	−0.0103
Cons		−0.478***	1.487***	−0.478***	0.170
N		5530	5530	5530	5530
Significance		F (8, 5521) = 42.47	F(8,4964) = 44.51	Wald chi2(8) = 339.78	Wald chi2(8) = 786.40
White test		Chi2 (44) = 535.88 Prob > Chi2 = 0.0000			
Wooldridge test		F(1, 556) = 457.069 Prob > F = 0.0000			
Hausman test			chi2(8) = 617.87 Prob>chi2 = 0.0000		
Wald test			chi2 (558) = 4.8e+29 Prob>chi2 = 0.0000		
AR(1) AR(2)					0.000 0.221
Sargan test					0.157

*p < 0,1 ** p < 0,05 *** p < 0,01

Source: Calculation results of the authors

In terms of MAT variable (corresponding to the debt term structure of the enterprise), if the debt term structure increases by 1 unit, the INV increases by 52.7%. This comes from the fact that businesses that use a lot of long-term loans have stable sources of funding to make investments. The enterprise's long-term capital is a stable source of capital that helps businesses invest in long-term projects. This result is consistent with the research of Le et al. (2017) with all processing and manufacturing enterprises and businesses with low growth rates, but contrary to the findings of Aivazian et al. (2005). This illustrates that Vietnam's financial market has not yet developed, thus Vietnamese firms use mainly short-term debt.

Regarding ROA variable (corresponding to the return on total assets of the enterprise), if the return on total assets increases by 1 unit, the investment ratio increases by 81.7%. The financial ROA indicates the level of efficiency in the management and use of assets of the business. Therefore, when ROA increases, it means that the profit after tax on the total assets of the business increased. This indicates that the company uses assets more and more efficiently and optimizes available resources. Moreover, businesses with high earnings after tax, the residual profit increases, creating a stable source of capital to help the businesses invest. This result is in contrast to the results of Le et al. (2017). To be specific, in the full-sample regression results, for businesses with low growth opportunities and high growth opportunities, the ROA has no impact on the investment decisions of enterprises in the processing and manufacturing sectors (Le et al., 2017).

In respect of variable INV(−1) (corresponding to the lagged variable of the dependent variable), the lag of INV increases by 1 unit, the INV increases by 4.2%. Although the impact is not large, this shows that if the investment rate in the previous year is high, the investment rate in the following years will also increase. This result is in contrast to the research results of Le et al. (2017), in the full-sample regression results, for firms with low growth opportunities and high growth opportunities, the lag of the investment rate does not affect the investment decisions of enterprises in the processing and manufacturing sectors (Le et al., 2017).

Concerning SALE variable (corresponding to the fixed assets turnover), if the SALE variable increased by 1 unit, the INV increased by 0.5%. Although the impact is small, when the efficiency of using fixed assets increases, the investment efficiency increases. This result is in agreement with the research results of Le et al. (2017) across the sample, businesses with low growth opportunities and businesses with high growth opportunities.

In terms of the LEV variable (corresponding to the firm's financial leverage), the LEV variable has a positive impact on the investment decision but is not statistically significant. This depicts that the level of financial leverage does not play an important role in the investment decisions of listed companies. Because the characteristics of each business are different and the level of debt use is different, this factor does not have a great impact on the investment decisions of listed companies in Vietnam. This result is consistent with the research results of Le et al. (2017) but is in contrast with the results of Aivazian et al. (2005). Aivazian et al. (2005) shows that coefficients for leverage are negative and significant at the level of 1% for both types of firms, low growth opportunities and high growth opportunities. The results are consistent with those of Lang et al. (1996) and Aivazian et al. (2005) and suggest that, holding debt maturity constant, a high level of leverage would reduce investment incentives for both types of firms.

Regarding LIQ variable (corresponding to liquidity), if LIQ variable increases by 1 unit, INV decreases by 0.49% which shows small impact. This can be explained by the fact that for Vietnamese enterprises, the increase in short-term assets is mainly due to the increase in receivables and inventories, causing stagnation of capital of the enterprise; thus, reducing the investment level of the enterprise. This result is consistent with the research results of Le et al. (2017) on the entire sample of enterprises in the processing and manufacturing industry.

In respect of the CFO variable (corresponding to cash flow from operating activities), if CFO increases by 1 unit, INV decreases by 0.03%. This result is consistent with the research results of Le et al. (2017) on the entire sample of enterprises in the processing and manufacturing industry.

Concerning variable SZ (corresponding to business size), if SZ increases by 1 unit, INV decreases by 1.03% but there was no statistical significance. This shows that the size of the enterprise does not play an important role in the investment of listed companies because listed companies are quite large compared to other companies.

5. Conclusions and recommendations

This study aims to test the hypothesis of debt maturity structure and factors affecting the investment decisions of companies listed on the Vietnam's stock market. The study uses a panel data to assess the impact of debt maturity structure and other factors on investment decisions of listed companies. Besides, the endogeneity is identified and the S-GMM method is used to overcome this problem. The research results demonstrate that: (1) Debt maturity structure has a positive impact on investment decisions and the level of impact is 0.527 or if enterprises use a lot of long-term debt, the investment rate is high; (2) lag of INV is positively correlated with investment decisions of listed companies; (3) the fixed assets turnover has a positive relationship with investment decisions, but the level of impact is not significant; (4) the return on total assets is positively correlated with investment decisions at 1% level of significance; (5) the liquidity and cash flow from operating activities have represented the negative relationship with investment decisions; and (6) the financial leverage and firm size of do not show the evidence of correlation to investment decisions.

This result indicates the following implications:

Firstly, listed companies need to adjust the debt maturity structure in line with the tendency to use more long-term debt. Because when using a lot of long-term debt, companies have many stable sources of funding to make investment decisions. Enterprises need to optimize their capital sources in the direction of focusing on reducing short-term debt, using appropriated capital sources and increasing the use of financial instruments. In addition to raising funds from commercial banks or credit institutions, businesses can raise long-term capital through expanding funding channels by linking joint ventures with investment partners. Venture capital funds are also a favorite destination for many businesses that are having strong growth momentum in many countries around the world. Over-dependence on capital from banks leads to enterprises facing many limitations. One of the solutions to provide effective long-term capital that businesses should apply today is the form of financial leasing. Because financial leasing represents a form of financing with high safety, convenience and efficiency for the transaction parties. Raising capital by leasing has a very good advantage to finance projects to invest in technology lines or improve machinery. In addition, companies need to increase the efficiency of long-term debt investment. The government also needs to implement policies to develop financial markets. The financial markets create conditions for businesses to access many long-term capital sources.

Secondly, the listed companies need to improve their performance to increase the return on total assets. When the return on total assets goes up, it means that the earnings increase as well as the increase in the retained earnings. This is a stable source of finance to help the business invest in the current business activities, such as increasing the capacity of the company to produce existing products. Return on total assets is one of the financial indexes to evaluate the investment efficiency of enterprises, so the higher return on total assets means the more investment efficiency. Enterprises need to take measures to increase the profitability of total assets, which positively affects investment decisions of enterprises. When enterprises invest in projects, machinery and equipment utility increase competitiveness in the market and increase corporate value.

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Author details
Trang Van Thi Do[1]
Duong Thuy Phan[2]
E-mail: duongpt@utt.edu.vn
E-mail: duongpt@utt.edu.vn
[1] Postgrduate Faculty, Banking Academy, Hanoi, Vietnam.
[2] Faculty of Transport Economics, University of Transport Technology, Hanoi, Vietnam.

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