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Overinvestment and Free Cash Flow: Empirical Evidence from Vietnamese Enterprises

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Abstract

The paper reports an investigation into Vietnamese enterprises' optimal level of investment based on panel data to find out the relationship between overinvestment and free cash flow. The results show that Vietnamese enterprises have been largely overinvesting. Overinvestment is significantly negatively associated with the efficiency of the company. By following the statistical approach to measure overinvestment and free cash flow, the results show that there is a significantly positive association between overinvestment and free cash flow of enterprises. This completely corresponds to agency theory. Enterprises with free cash flow have strong incentives to engage in overinvestment.

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1 INTRODUCTION

Investment is one of managers' important investment decisions in the process of operating their businesses following the directions of increasing the market value of a company. Modiglian and Miller [16] assumed that, in perfect capital markets, a company's investment decisions would be independent of its financial decisions, and the market values of a company would not be determined by capital structure. However, market issues such as information asymmetries, agency hypotheses, etc., may give rise to investment issues: underinvestment (Mayer [18], Farooq et al. [9]) or overinvestment (Jensen [12], Lian et al. [14]). Underinvestment occurs when managers refuse projects with a positive net present value, because managers do not want to engage in new projects due to their risk aversion (Brealey et al. [3]). Overinvestment shows that a company would tend to upgrade company size, undertaking some projects with negative net present value that harm their shareholders because of their own interest (Jensen [12]). Overinvestment is when new investment levels outweigh investment potentials provided by growth opportunities (Richardson [19]). In other words, instead of executing projects with positive net present value, overinvestment enterprises perform projects with negative net present value. Empirical studies show that both overinvestment and under-investment are significantly negatively associated with the efficiency of the project (Biddle et al. [2], Liu and Bredin [15], Fu [10], Farooq et al. [9]).

Along with the process of economic development and integration, the number of Vietnamese businesses have been steadily increasing. According to the report of Vietnam chamber of commerce and industry (VCCI [20]), the number of newly registered enterprises has reached a total of over 100,000 enterprises in 2016. However, the performances of Vietnamese enterprises are not really effective over the period 2008-2015. The rate of loss projects, although reduced in the period 2007-2010, shows signs of recovery with an average of 40.9% in 2015. Another indicator reflects poor capital performance of enterprises: Profit capacity on assets sunk from 6.6% in 2012 to 3.2% in 2015. The statistics show a downward trend in the performance of Vietnamese enterprises. Efficiency of investment projects is considered the main cause of this poor performance. Results of empirical research show that both overinvestment and underinvestment result in companies' inefficient investment, and overinvestment results in more serious consequences than underinvestment. Although the issue of underinvestment and overinvestment of enterprises has been studied in many countries in the world, this issue has not been widely studied in Vietnam. According to Chi [5], Vietnamese enterprises were overinvestment during the period 2008-2013. This research did not detail the relationship between overinvestment and free cash flow. Some other studies focus on issues related to overinvestment. This paper aims to find out if Vietnamese enterprises are overinvesting or not and if there is a relationship between overinvestment and free cash

flow in Vietnam by employing Agency theory.

2 THEORETICAL ANALYSIS AND RESEARCH HYPOTHESES

2.1 Overinvestment and Underinvestment

Overinvestment concept emerged from the free cash flow theory of Jensen [12]. Free cash flow is the cash flow in excess of what is required to maintain current assets and fund for all new investments projects with positive net present values when discounted at the relevant cost of capital (Jensen [12]). Overinvestment is defined as the cost of investing to maintain the current assets, to fund all new investment projects with positive NPVs and for a number of unusual investment projects (including options on future investment) (Richardson [19]). Underinvestment indicates that a company could forego or postpone some investment opportunities that would have positive net present value. According to hypotheses advanced by Richardson [19], Degryse and De Jong [6], overinvestment is caused by interest conflicts in terms of the use of free cash flow between managers and shareholders whereas underinvestment is caused by information asymmetries in the capital market.

2.2 Overinvestment and Agency Problems

Theoretically, according to agency hypotheses, if the firm had excess cash beyond that needed to fund available positive NPV projects (including options on future investment), from the perspective of increasing shareholders' wealth, it would distribute free cash flow to shareholders in the form of extra dividends.

However, returning free cash flow to shareholders will reduce resources under control of managers which could be used to build empires to increase their personal utility. Thus, managers have incentives to hoard and abuse free cash flow, and invest the excess funds in some projects with negative NPV which are beneficial from managers' perspective but costly from shareholders' perspective. Through continuously investing in negative NPV projects, managers can both control more resources, acquire more persquisit consumption and upgrade their powers in the firm. Especially for those firms whose free cash flow is high (i.e., free cash flow is positive), but growth prospects are poor, the incentives for managers to undertake overinvestment are usually even more attractive. Therefore, free cash flow hypothesis holds that firms with large free cash flow are more likely to engage in overinvestment. These overinvestments, though enhancing managers' private benefits, destroy company value, and thus reduce shareholders' wealth. Richardson [19] finds that overinvestment is mainly concentrated in firms with highest levels of free cash flow.

2.3 Underinvestment and Information Asymmetries

Underinvestment is likely to arise when managers forego to undertake projects with a positive net present

value or high profitable projects. Managers who ignore highly profitable projects are called passive managers because they are either risk-minimizing, risk-reducing managers or managers incapable of finding, evaluating or financing valuable investment opportunities (Brealey et al. [3]). Managers choose passive managerial behaviors to avoid uncertainty or decision-making mistakes during the operation (Voicu [21]).

The differences in governance efficiency of debt are associated with underinvestment by enterprises. Agency problems arise between creditors and shareholders when leverage is put into and debt maturity structure is also the cause for the managers to ignore investing in some high-return projects (Myers [18]). Since creditors are the first priority to receive returns when projects are effective, corporate managers may ignore some of high-return projects with positive NPV. Alternatively, some projects with positive NPV, from view point of shareholders, would have negative NPV and be therefore ignored by managers and would result in under-investment (Lyandres and Zhdanov [8]).

Information asymmetries should also hold a great responsibility for underinvestment by enterprises. With respect to debt sources, private debt, such as bank loans, will be more efficient in curbing and monitoring the managerial behavior than public debt. Therefore, creditors, outside investors who can't see high growth perspectives of projects, request high rates of return. That a company's publicly issued bond can transfer negative signals on the company's quality to capital markets, which thus reduces IPO prices as well as increases equity finance cost. Therefore, relative to information asymmetry, enterprises either with bank loans or with equity finance have higher capital raising cost from external capital sources compared to internal ones. As a result, the more businesses use external capital for investment, the lower the investment efficiency is. When internal capital source is not enough for investment, many companies have to reduce number of projects with positive NPV to ensure benefits for existing shareholders, which means that these companies face underinvestment.

Issuing new shares can transfer negative signals on the company's quality to capital markets, which thus reduce stock prices and hence increase the cost of equity finance. As a result, due to information asymmetries, enterprises who use debts or equity finance have higher capital costs from external capital sources compared with internal ones. The more businesses use external capital for investment, the lower the investment efficiency is. When internal capital source is not large enough for investment, many companies have to cut down on projects with positive NPV to ensure benefits for existing shareholders. This results in these companies' underinvestment.

2.4 Empirical Evidence of Overinvestment

With a financial data of 58,035 observation collected from financial reports of non-financial institutions in the

period 1988-2002, Richardson [19] built a model for assessing the level of investment of enterprises. Other studies, such as Lian and Chung [14], Morgado and Pindado [17], Farooq et al [9] look into both overinvestment and underinvestment. Ding et al. [7] investigated whether Chinese companies were overinvested or not. With sample data of 100,000 companies in the period 2000-2007, the authors identified the negative effects of overinvestment and showed that all types of enterprises can overinvest. Cai [4] examined companies listed on the Shanghai and Shenzhen stock exchanges in China in the period 2003-2010. The findings show that most of these enterprises were overinvesting. In addition, research by Richardson [19], Bergstresser [1], Ding et al. [7], and Cai [4] indicates that the relationship between overinvestment and free cash flow is positively correlated showing enterprises with high cash flow are more likely to overinvest.

3 RESIDUAL MODEL FOR INDICATING LEVEL OF INVESTMENT

3.1 Richardson's Residual Model

Richardson [19] proposed a model for predicting expected investment of a company. According to Richardson [19], total investment (I_{TOTAL}) of an enterprise includes expenditures to maintain current assets ($I_{MAINTENANCE}$) and new investment expenditures (I^*_{NEW}). The current cost of maintaining the asset is the fixed asset depreciation cost. New investments (I_{NEW}) include expenditures for expected NPV projects (I^*_{NEW}) and unexpected (I_{NEW}) capital expenditures. This unusual, unexpected investment could be a project with positive NPV and even negative NPV projects.

$$I_{TOTAL,t} = I_{MAINTENANCE,t} + I_{NEW,t}$$

$$I^*_{NEW,t} \qquad I^{\varepsilon}_{NEW,t}$$

The model for identifying new investment (I_{NEW}) is as follows:

$$\begin{aligned} I_{NEW,t} = {} & \alpha + \beta_1 (V/P)_{t-1} \\ & + \beta_2 Leverage_{t-1} + \beta_3 Cash_{t-1} \\ & + \beta_4 Age_{t-1} + \beta_5 Size_{t-1} \\ & + \beta_6 Stockreturn_{t-1} + \beta_7 I_{NEW,t-1} \\ & + \sum YearIndicator \\ & + \sum IndustryIndicator + \varepsilon_{i,t} \end{aligned} \tag{1}$$

$$\begin{aligned} \varepsilon_{i,t} = {} & I_{NEW,t} - (\alpha + \beta_1 (V/P)_{t-1} \\ & + \beta_2 Leverage_{t-1} + \beta_3 Cash_{t-1} \\ & + \beta_4 Age_{t-1} + \beta_5 Size_{t-1} \\ & + \beta_6 Stockreturn_{t-1} + \beta_7 I_{NEW,t-1} \end{aligned} \tag{2}$$

According to the model (1), new investment projects in year t are determined by the growth opportunities that enterprises had in the previous year (t-1). At the same time, the growth opportunities based on the ratio between the book value (V) on the market value (P), based on financial Leverage, the balance of cash and short term investment is divided into total assets (Cash), log of the number of years the firm has been listed on the stock exchanges (Age), size of to-

tal assets (Size), StockReturns, and new investment of the previous year.

Based on the residual drawn from model (2), the level of investment are indicated with three specific cases as follows:

- If the new investment is balance with the investment potential offered by the growth opportunity, it means that the enterprise invests efficiently:

$$\begin{aligned} I_{NEW,t} = \alpha &+ \beta_1 (V/P)_{t-1} \\ &+ \beta_2 Leverage_{t-1} \\ &+ \beta_3 Cash_{t-1} + \beta_4 Age_{t-1} \\ &+ \beta_5 Size_{t-1} \\ &+ \beta_6 Stockreturn_{t-1} \\ &+ \beta_7 I_{NEW,t-1} \end{aligned} \tag{3}$$

And the residual from model (1) will be zero ($\varepsilon_{i,t} = 0$).

- If the new investment is less than the investment potential offered by growth opportunities, it means that the enterprise is ignoring investment opportunities in projects with NPV$>$ 0. In this case, enterprises are considered ineffective and enterprises are underinvestment.

$$\begin{aligned} I_{NEW,t} < \alpha &+ \beta_1 (V/P)_{t-1} \\ &+ \beta_2 Leverage_{t-1} \\ &+ \beta_3 Cash_{t-1} + \beta_4 Age_{t-1} \\ &+ \beta_5 Size_{t-1} \\ &+ \beta_6 Stockreturn_{t-1} \\ &+ \beta_7 I_{NEW,t-1} \end{aligned} \tag{4}$$

And the residual from model (1) will be negative ($\varepsilon_{i,t}<0$). The negative value of the excess from the model (1) represents the level of investment below the underinvestment potential.

- If a new investment is greater than the investment potential offered by the growth opportunity, it is investing in all projects with NPV$>$ 0 and those with NPV $<$ 0. In this case, enterprises are considered as ineffective investment and enterprises are overinvestment.

$$\begin{aligned} I_{NEW,t} > \alpha &+ \beta_1 (V/P)_{t-1} \\ &+ \beta_2 Leverage_{t-1} \\ &+ \beta_3 Cash_{t-1} + \beta_4 Age_{t-1} \\ &+ \beta_5 Size_{t-1} \\ &+ \beta_6 Stockreturn_{t-1} \\ &+ \beta_7 I_{NEW,t-1} \end{aligned} \tag{5}$$

And the remainder of the model (1) will be positive ($\varepsilon_{i,t}>0$). The positive value of the model (1) represents the level of overinvestment.

Richardson [19] investment-defining model is also referred to as the investment-grade surplus model. The latter model has been used extensively in research into this field, such as Liu and Bredin [15], Fu [10], Liu and Bredin [15], Cai [4], Farooq et al. [9]. Studies on underinvestment, overinvestment indicated that overinvestment or underinvestment had a negative impact on project effectiveness (Richardson [19]; Cai [4]; Farooq et al. [9]). In addition, excessive investment has a greater impact on project effectiveness than underinvestment (Degryse and Jong [6]).

3.2 Identifying Overinvestment Enterprises and Free Cash Flow

3.2.1 Measuring Overinvestment

According to Richardson [19], businesses could make inefficient investments ill regardless of under-invest or overinvest. Underinvestment or overinvestment are determined based on the residuals of the model (1). However, according to Cai [4], the V/P variable of the model (1) is commonly used as an imperfect measure of investment opportunities because it is an average value rather than a marginal value.

On the one hand, the V/P variable only reflects option value relating to firm's long term growth potential. On the other hand, the V/P variable doesn't provide information about investment opportunities in the short-term. Thus, Cai [4] replaces the V/P variable by the revenue growth variable.

In addition, Cai [4] maintained that the number of years a firm has been listed on the stock exchange since IPO (Age) up to the year t was the investment opportunity the year t of the enterprise.

Therefore, the Age_{t-1} variable in model (1) was substituted with the Age_t variable. Meanwhile, the rate of return on stocks (Stockreturn) is replaced by earnings before interests and taxes on assets - EOA, which shows the growth opportunities of businesses whereas the revenue growth variable does not. We support these three changes, so transform model (1) into a model:

$$\begin{aligned} INV_{i,t} = {} & \alpha_0 + \alpha_1 GSale_{i,t-1} \\ & + \alpha_2 Cash_{i,t-1} + \alpha_3 LnTA_{i,t-1} \\ & + \alpha_4 EOA_{i,t-1} + \alpha_5 LEV_{i,t-1} \\ & + \alpha_6 I_{i,t-1} + \alpha_7 LnAge_{i,t} \\ & + \sum Year + \sum Industry \\ & + \varepsilon_{i,t} \end{aligned} \tag{6}$$

$$\begin{aligned} \varepsilon_{i,t} = {} & INV_{i,t} - (\alpha_0 + \alpha_1 GSale_{i,t-1} \\ & + \alpha_2 Cash_{i,t-1} + \alpha_3 LnTA_{i,t-1} \\ & + \alpha_4 EOA_{i,t-1} + \alpha_5 LEV_{i,t-1} \\ & + \alpha_6 I_{i,t-1} + \alpha_7 LnAge_{i,t}) \end{aligned} \tag{7}$$

where $\text{INV}_{i,t}$ - investment in current assets, intangible assets and other non-current assets, excluding net cash proceeded from liquidation of current assets, intangible assets and other non-current assets in the period of time t, of enterprise i, divided by the average value of total assets in the year; Gsale - firm's investment opportunities as the difference between the revenue of year t and year t-1, divided by revenue the year t-1; Cash - firm's cash and cash equivalent divided by the book value of total assets as of year t-1; LnTA - natural logarithm of book value of total assets as of year t-1, used to control the effect of company size on the investment; EOA- return on assets as of year t-1, equal to the ratio of the profit before interest and tax to the book value of total assets; Lev - debt-to-asset ratio and measured as the book value of total debt (the sum of short-term debt and long-term debt) divided by the book value of total assets as of year t-1; LnAge - natural logarithm of the number of years the firm has been listed on the stock exchanges; Industry - a vector of indica-

tor variables to capture industry fixed effects; Year - a vector of indicator variables to capture annual fixed effects; ε - residual.

Model (7) gives the result of the residual to determine firm level investment. If the residual is greater than 0, it indicates that firm is overinvesting.

3.2.2 Measuring Free Cash Flow

According to Richardson (2006) and Cai (2013), free cash flow is the cash flow beyond what is necessary to maintain assets in place and to finance expected new investment (ExINV). (ExINV) is a fixed portion of regression model which defines firm investment level (1) and (6). Unexpected new investment is unexpected residual (ε=UnINV). According to the definition above, model (6) is obtained as follows:

$$\text{INV} = \text{ExINV} + \text{UnINV}$$
$$\text{Or} \quad \text{ExINV} = \text{INV} - \text{UnINV}$$

According to enterprises, free cash flow (FCF), is the cash flow beyond what is necessary to maintain current assets and to finance new investments (Richardson [19]). Free cash flow is the difference between the firm's net cash flows from operation (OCF) and its expected level of investment (ExINV), and thus is obtained as follows:

$$FCF = OCF - E \times INV \qquad (8)$$

From model (6) and model (7), we have the formula for calculating free cash flow as follows:

$$FCF = OCF - (INV - \varepsilon) \qquad (9)$$

4 RESEARCH DATA

Data for this study were collected from financial statements of non-financial corporations listed on stock exchanges in Vietnam. The data included large number of observations which satisfy the research models. Based on this criterion, data from 511 non-financial institutions listed on Hanoi Stock Exchanges and Ho Chi Minh City Stock Exchanges between 2008 and 2015 were obtained. The data was collected from independently audited financial statements of enterprises.

The data were organized as unbalanced panel data due to the fact that there were some missing variables in the data over a number of years due to a lack of information. The panel data combines cross-section data in which value of variables collected for a sample unit at the same time and data changes over time series which means the value of the variables is observed over time. The combination of two types of data has many advantages for analyzing economic relationships, particularly when observing, analyzing fluctuations of objects over time, as well as comparing the differences among target groups.

5 RESEARCH APPROACHES

With the unbalanced data of 511 non-financial institutions listed on Vietnamese stock market exchanges over the period 2008 - 2015, regression model OLS was employed to regression model (6), then the residual as model (7) was calculated. As argued above, if the residual is greater than 0, the firm is

determined as overinvesting. On the contrary, if the residual is less than 0, the firm is concluded as underinvesting. The residual is equal 0, it means that firm is reasonable for enterprise potential. The results of the residual were calculated and the data of overinvestment enterprises with positive residual were separated. A third of data from overinvestment enterprises were used to test whether overinvestment enterprise statistics are positively correlated with free cash flow or not. The data of the overinvestment enterprises with positive residual were arranged by the value of residual from high to low. One-third of enterprises at the top of scale with the largest residual is highest overinvestment enterprises; One third of enterprises in the bottom of scale with the lowest residual is lowest overinvestment enterprises; One third of enterprises in the middle of scale with the average residual is medium overinvestment enterprises. Three different groups of enterprises were separated as highest overinvestment, medium overinvestment and lowest overinvestment. Accordingly, free cash flow comparison of these three groups was conducted.

6 OVERINVESTMENT AND FREE CASH FLOW: EVIDENCE FROM VIETNAMESE ENTERPRISES

From regression model, we determine firm investment level as model (6), then take the residual as model (7). The results of firm investment level determination are presented in Table 1. According to the results in Table 1, each year the number of overinvestment enterprises is greater than the number of under-investment enterprises. In terms of value, the value of overinvestment is greater than the value of under-investment. This result shows that most Vietnamese enterprises are overinvesting in the period 2008 - 2015.

After determining firm investment level, samples of overinvestment enterprises were divided into three groups, corresponding to three levels of overinvestment to compare free cash flow of the three groups. The statistical results are presented in Table 2.

Table 2 shows that with investment

Table 1. Results of residual model determining firm investment level

Investment level		**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Overinvestment	Number of enterprises	219 (64%)	261 (61%)	264 (57%)	287 (60%)	282 (60%)	302 (63%)
	Value (million dongs)	11,318	11,878	10,942	9,855	9,333	11,984
Underinvestment	Number of enterprises	123 (36%)	169 (39%)	196 (43%)	194 (40%)	191 (40%)	179 (37%)
	Value (million dongs)	-3,832	-6,232	-5,422	-4,764	-5,677	-9,871
Total number of enterprises		342	430	460	481	473	481

Source: Compiled from calculating of authors' group.

Table 2. Overinvestment and free cash flow

Unit: million dongs

Enterprises	**INV**	**ExINV**	**UnINV**	**OCF**	**FCF**
(1)	(2)	(3)	(4)	(5)	(6)
Highest overinvestment	103,502	6,931	96,572	289,580	282,649
Medium-sized overinvestment	111,275	76,476	34,799	112,213	35,738
Lowest overinvestment	153,470	127,995	25,475	153,142	25,147
Total number of overinvestment	122,749	114,511	8,238	184,978	114,511

Source: Compiled from calculating of authors' group.

opportunities from revenue growth, with net cash flow, profitability, with total asset size, leverage, with investment from the previous years, highest overinvestment enterprises only increase current asset size at the sufficient level of VND 6,931 million (ExINV), but they were at VND 103,502 million (INV). Unexpected investment (UnINV) were VND 96,572 million. Thus, they have overinvested a value of VND 96,572 million. Column (5) of Table 2 shows the average operating cash flow (OCF) of overinvestment enterprises - the highest at VND 289,580 million, financing reasonable and necessary investment (ExINV) of VND 6,931 million and free cash flow (FCF) of VND 282,649 million. Free cash flow of these enterprises is ten times higher than free cash flow of the lowest overinvestment enterprises (VND 25,147 million). The huge free cash flow has created incentives for managers to invest in low NPV projects, even those with negative NPVs, in order to increase a strong tie to enterprises from them. So that it is easier for managers to require more priorities. The results are consistent with agency theory which indicates that when enterprises with high free cash flow have low growth opportunities, they are more likely to overinvest. As shown in column (6), Table 2, the level of overinvestment has a positive association with free cash flow size. Enterprises with the highest free cash flow are the most likely to overinvest whereas those with lower free cash flow are less likely to overinvest. Especially, with the FCF up to 242,649 million, the highest overinvestment enterprises have invested in unexpected projects (UnINV) up to 96,572 million, which is 2.77 times higher than the unexpected investment (UnINV) of the medium-sized overinvestment; and 3.79 times higher than the unexpected investment (UnINV) of the lowest overinvestment enterprises.

Overinvestment enterprises were divided into sectors (Table 3) and were sorted according to level of overinvestment from high to low (Column 4, Table 3). The results indicate that free cash flow of these enterprises was in order from high to low (Column 6, Table

Table 3. Overinvestment statistics by sectors

Unit: million dongs

Enterprises by sectors	INV	ExINV	UnINV	OCF	FCF
(1)	(2)	(3)	(4)	(5)	(6)
Distribution of gas and electricity	419,741	-230,455	650,196	1,896,699	2,127,153
Mining	230,579	37,422	193,157	433,469	396,047
Production	94,297	19,999	74,298	260,176	240,176
Sales	110,119	71,922	38,197	138,611	66,688
Construction and real estates	38,490	18,555	19,935	72,540	53,985
Transportation and warehousing	25,187	9,067	16,119	63,024	53,956
Telecommunication	15,096	3,850	11,246	74,887	71,036
Industry	874	-1,077	1,951	20,325	21,401

Source: Compiled from calculating of authors' group.

3). In short, there is a positive association between overinvestment and free cash flow.

7 CONCLUSIONS AND RECOMMENDATIONS

By adopting Richardson (2006) and Cai (2013)'s approaches to measure firm investment level, with 3750 samples of observations of 511 non-financial institutions listed in HNX and HOSE stock exchanges in Vietnam over the period 2008 – 2015, this paper presents empirical evidence that Vietnamese enterprises have been overinvesting. Overinvestment enterprises were divided into three different groups including highest, lowest and medium-sized which aims to test the relationship between overinvestment and free cash flow of enterprises. The findings shows that non-financial institutions in Vietnam in the period under research which are overinvesting and have high free cash flow. The analysis also shows that there is a positive correlation between free cash flow and overinvestment from enterprises in the sample. In other words, as Vietnamese enterprises have more free cash flow, the more they invest in unexpected projects, especially those with NPV<0, the lower returns they obtain. This finding is consistent with overinvestment theory and agency hypothesis. Agency theory maintains that to ensure its benefits, enterprise managers tend to use free cash flow to invest in projects with NPV less than 0.

Since the Vietnamese enterprises in this research are largely overinvesting, it is recommended to have mechanisms to control investment decisions of enterprises to limit overinvestment. Overinvestment which means the acceptance of investment in both low-efficiency projects and negative NPVs will reduce investment efficiency of en-

terprises; not only harm shareholders, as well as enterprises, but also result in economic instability. Therefore, in order to limit overinvestment, enterprises need to be active in setting up a mechanism for investment decisions. This mechanism should be developed in all stages of investment process, including pre-investment monitoring, during-investment monitoring and post-investment monitoring. In particular, in pre-investment supervision, shareholders need to check feasibility and effectiveness of investment projects as well as issues related to capital raising resources. Monitoring of disbursement should be carried out throughout project implementation process by tracking, checking implementation, following plans and progress of projects. In post-investment monitoring, creditors of enterprises need to check and evaluate results of projects, enterprises. The establishment of a strict and thorough mechanism of investment governance will enable managers to be more cautious when making investment decisions, thus ensuring that enterprises to invest reasonably and thus meet return targets for shareholders and raise the market value of enterprises.

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