Over-investment and Free Cash Flow: Evidence from Thailand

Nopphon Tangjitprom

***Abstract*—**This paper examines whether there is a relation between over-investment and free cash flow. In perfect capital market, it is expected that investment decision should not be influenced by the level of cash flow. However, the free cash flow hypothesis predicts that firms with higher free cash flow will be vulnerable to the agency problem like over-investment. Using the data from listed firms in the Stock Exchange of Thailand during 2001-2013, the result indicates that there is a positive relation between over-investment and free cash flow. Therefore, this evidence supports the free cash flow hypothesis and it implies that corporate governance mechanism is required to mitigate the agency cost of free cash flow.

***Keywords*—**Over-investment, Free cash flow hypothesis, Agency theory, Stock Exchange of Thailand

I. Introduction

IN the perfect capital market, firm's investment decision should be independence with free cash flow. However, with the existence with capital market frictions, there can be association between firm's investment and free cash flow as documented in prior researches. This paper will employ the accounting-based model in determining the level of over-investment or under-investment as in [1].

Using empirical data from listed firms in the Stock Exchange of Thailand during 2001-2013, the level of over-investment is determined by the difference between actual investment measured by capital expenditure and expected investment. The expected investment is determined by the residuals from the regression of a set of variables on the level of capital expenditure. The final result reveals that the level of over-investment is not independent to free cash flow. There is a positive relation between over-investment and free cash flow. Although the regression is modified in order to capture an asymmetric relation, the result is still similar. The level of over-investment representing that the actual investment is too much compared to the expected one will be higher in the firms with higher level of free cash flow.

The evidence from this paper will contribute to the agency cost of free cash flow proposed by Jensen [2]. Firms with higher level of free cash flow will be more vulnerable to the over-investment problem. These firms will use this free cash flow in low return projects that have been never taken if the fund needs to be raised externally. This over-investment may arise from managers who concern about their own private benefits rather than to maximize shareholders' wealth. document is a template for *Word (doc)* versions. If you are reading a paper version of this document, so you can use it to prepare your manuscript.

Nopphon Tangjitprom is with Assumption University, Bangkok, Thailand (corresponding author's phone:+66-85-815-6177; e-mail:tnopphon@gmail.com)

II. Previous Literature about Over-investment

Modigliani and Miller [3] have proposed the capital structure theory under the assumption of perfect captal market. In that situation, firm's investment decision should be independence with free cash flow. If internally-generated free cash flow is not enough for their investment plan, firms can raise fund externally from the capital market. However, if the free cash flow is more than their investment plan, firms can invest or lend the excess cash flow in the capital market. Therefore, the investment decision should not depend on the availability of free cash flow.

However, with the existence with capital market frictions, there can be association between firm's investment and free cash flow as documented in prior researches. Jensen [2] proposed the role of free cash flow in the agency theory that is known as free cash flow hypothesis. Firms can be more vulnerable to the agency problem if the level of free cash flow is higher. Managers may invest too much by taking some projects with low return. The potential of monitoring difficulty can encourage this problem. It is possible that managers invest this internally-generated free cash flow for their own benefits but it can deteriorate firm value and shareholder value [4]

There are many previous researches that provide empirical evidences to support this free cash flow problem. In diversified firms, the segment with higher level of cash balance tends to perform poorly compared to other segments [5]. There is also an evidence from takeover transaction from the firms with higher cash balance, which is known as "cash rich firms"[6]. The acquisition done by such firms will usually result in poorer performance. Moreover, firms with excess cash balance would have higher level of capital expenditures and involve more with acquisition activities though they are poor investment opportunities [7].

Corporate governance is a mechanism designed to mitigate the agency problem based on monitoring and incentives. Therefore, firms with better governance will be less vulnerable to the over-investment problem and managers tend to make better investment decisions. Richardson [1] has provided the

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