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THANWARAT SUWANNA

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PROGRAM IN BUSINESS ADMINISTRATION
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Academic Year	2014

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May 2, 2014

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ABSTRACT

Impacts of dividend policy on stock price have long been argued for the past decades. Life-cycle theory and signaling theory have been criticized in explaining decision to pay dividend. The purposes of this study included (i) to investigate the announcement effects of cash dividend on stock returns (ii) to explore factors determining decision on dividend payout policy, and (iii) to examine how the life-cycle theory of dividend examined the dividend policy.

Abnormal returns of dividend announcement were determined by using event study technique. Panel data of listed companies during 2005-2010 were observed and estimated using random effects Logit models and random effects Tobit to analyze factors determining decision to pay dividend.

According to sixty days event window, event study results revealed significant abnormal returns of the stock during and after cash dividend announcement. This finding confirms signaling theory that listed company can send positive signal of the company through the dividend policy. Investors reacted positively to dividend announcement while negatively respond to negative signal, like dividend omissions. Additionally, estimated results of random effects Logit models indicated significant impacts of retain earnings on decision to pay dividend. This findings support the life-cycle theory that the firm with more retains earning should pay its dividend. Furthermore, the significant impacts of previous year dividend policy also indicated that dividend policy had been used as signaling message to investors. Paid dividend companies last year were more likely to pay dividend this year since decision not to pay dividend would cause negative abnormal returns.

Keywords: dividend policy, event study, abnormal returns, life-cycle theory, signaling theory, stock returns

Acknowledgement

I would like to express my special thanks of gratitude to my advisor Dr.Sittiporn Intuwonges and Associate Professor Dr.Tatre Jantarakolica whose encouragement, guidance and support from the initial to the final level enabled me to develop an understanding of the subject. I am greatly thankful to them.

The research has been supported and guided from several people who have helped and encouraged me in the doing of this project and provided contribution and valuable assistance in the completion of this research. I am very pleased to have the support from many people during this study. I also gratefully acknowledge the help of Dr.Thanomsak Suwannoi, Associate Professor Dr.Sudjai Tolpanichgit, Assistant Professor Dr.Wanchai Prasertsri, and Assistant Professor Dr.Supa Tongkong who provided guidance in what way can this aspect covered. I am grateful to Rajamangla University of technology Tanyaburi for the opportunities they provided, and the financial supports. Moreover, a special thanks to Dr.Kanokporn Chaiprasit who helped me in English language.

Finally, I wish to express my heartiest thanks to my mother for their love and supports, sustenance and patience during the doing of the study. I am grateful, my family, brothers, friends, colleagues, and other significant of my life that have supported, inspired and encouraged me during my study of PhD. At last I thank many others who have helped me in any way during the working of the project.

Thanwarat Suwanna

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List of Abbreviations

Abbreviation	Meaning
AR	Abnormal Return
AGR	Asset growth rate
CAR	Cumulative Abnormal Return
CAPM	Capital Asset Pricing Model
DIV	Dividend payout ratio
OLS	Ordinary least Square
$E(R_{it})$	Expected daily return for stock *i* on day *t*
R_{mt}	Daily market return on day *t*
GLS	Generalized Least Squares
RE	The Random Effect
RE/TE	Retained earning / Total Equity
RE/TA	Retained earning / Total Asset
ROE	Return on Equity
ROA	Return on Asset
FLEV	Financial Leverage
LANS	The natural logarithm of total assets
SGR	Sales growth rate
M/B	Market to book ratio
LagDiv	Previous year's dividend payout
FCF	Free cash flow
CR	Firm liquidity
SET	The Stock Exchange of Thailand

CHAPTER 1

INTRODUCTION

1.1 Background and Statement of the Problem

Dividend means the set of guidelines a company use to make a decision about the amount of the earnings to pay out to shareholders. There are few evidences suggest the investors are not concerned with a company's dividend policy because they would sell a portion of their portfolio of equities if they need cash (Lintner, 1956). Dividend Policy can be defined as one of the most important financial policies, it is not only from the perspectives of the company, but it is for the shareholders, the customers, the workers and the Government. A manager must make a decision on dividend payout; the decisions would impact on the value of the firm. Management could choose to retain the profit that earns from operations to retain them. In addition, current cash or profit from operation can be used to reinvesting the profit that helped to create more profits and further stock appreciation. Alternatively, management could distribute a portion of the profits to shareholders as dividend payment.

A number of authors provided rational explanations about why firms distribute dividends. Finance scholars have involved in extensive theorizing in order to explain about companies should pay or not pay dividend. There are a number of researchers seeking to find out about factors that impact dividend policies. The work of Lintner (1956) claimed that in order to pay dividend, managers consider current earnings and target payout. It is likely that they would prefer to pay dividend than maintaining stability of dividend payout. In addition, the theory of bird in hand by Gordon (1963)

and Lintner (1964) found the dividend policy was positively associated with the firm values. Therefore, investors prefer to obtain certain dividend returns than uncertain capital gain. Moreover, dividend return reduced the agency cost problem. It is significant that the corporations pay dividend are very important as stated by Black and Scholes (1976) because there was no clear about dividend payout. This inspired the researcher to study and seek out the solution of this problem. Litzenberger and Ramaswamy (1979) argued that in western countries, benefits from common stocks return to investors can be identified in to 2 ways: capital gain and dividend. Investors prefer to obtain capital gain than dividend because dividend tax is higher than capital gain tax.

Miller and Modigliani (1961) argued that the dividend payout does not impact on the firm's value and has no effect on stock price, toward the perfect capital market, however firm value depends on firm's investment opportunities which in relation to current plus future free cash flow, in which was wellknown as the dividend irrelevance theory or MM theorems. According to the perfect market, there is no transaction cost, symmetric information and no taxes that can explain the significant of dividend payout. Moreover, many authors agreed that, in the real word the capital markets are no imperfect, thus dividend policies are very important to the firm values. Several empirical studies indicate that manager and investor are interested in dividend payment (Myers, 1977; Lang & Litzenberger, 1989). Dividend payment is considered by many researchers and firms in relation to dividend policy and relevant factors that influence the decision making for dividend payout. Particularly, developing countries, Thailand, company insiders of firms can get information before the official

announcement and this results stock price. For instance, stock prices will increase after the dividend announcement.

Bhattacharya (1979), John and Williams (1985), Miller and Rock (1985), and Williams (1988) presented their works in signaling paradigm of dividend policy and asymmetric information. They claimed that managers would know more about the real value of the firms than investors and they can employ dividends to send information to market. Thus, investor or shareholders can forecast future earning of the company through dividend policy. Other authors concerned about dividend and develop model in order to describe the relation between the prior dividend, the recent dividend and the next payment in the future (Marsh & Merton, 1987). Fama and French (2001) found the disappearing of dividends payment in the United States companies. It agrees that companies with a high profit, and low growth prefer to payout dividend, on the other hand, firm with a low profit, and high growth prefer to keep their dividend for their investment possibilities which relates to life cycle theory. The work of DeAnglo, DeAngelo&Stulz (2006) suggested that the changes of dividend policies of publicly trade industrial firms in the United States can be explained and predicted by the life cycle hypothesis. Besides, when firms decide to pay dividends is positively related to the ratio of retained earnings over total equity (RE/TE). Empirical studies (Anthony and Ramesh, 1992; Grullon, Gustavo, Michaely, & Wwanubatgab, 2002; Denis and Osobov, 2008; Lestari and Jenjag Sri, 2011) suggested that a firms' dividend policy probably depends on the phase of the firm's life cycle, the firms with higher growth but lower profit must pay a little cash dividends or not to pay dividend. On the other hand, mature firms with higher profit but lower growth may distribute more cash

dividend. However there are many interesting ideas in dividend policy, several researchers in Thailand claimed that dividend payout could conduct some information about the future of firm performance to the investors. For instance, in Thailand, the announcement of dividend payout is affected stock price that results the abnormal return. Rungreonglada, *et al.*, (1977) found the abnormal return occur before 9 days of the announcement but have no effect on stock price after an announcement. These imply dividend announcement information probably infuses to the market before the actual announcement date by insider. Punsiri (1999) agreed that Thai market reacts to the information about dividend omission faster than dividend initiation. Dividend payout is important because Assavarugikul (2007) presented a catering theory dividend in Thai capital market. It refers to demand for dividend of investor. If investors prefers dividend, firms will pay dividend to investors. The demand for dividend from investors can be known as the measurement of dividend premium that can be measured by dividend yield and ratio of the market to book value in relation to rate of dividend initiation. Tangjitprom (2011) studied investors' demand for dividends in Thailand claimed that Thai investor prefer dividend even though dividend incomes must paid tax more than capital gains. The result supports the catering theory of dividend. The research indicated the determinants of dividend payout in Thailand found that the constancy of earnings (a proxy risk) and the financial leverage are significantly contrarily related to the firms' payout ratio (Lily J, et al., 2009). It is a signed of economic health, when company is able to pay dividend because faltering company generally has no excess cash. If company has excess cash, it needs cash to keep business running. A high dividend payout is necessary for investors because dividends

provide certainty about the company's well-being and finance. Moreover, dividends are attractive for investors who consider secure current income. Firms have authority to make decision for dividend payout because in some cases firms have profits but may not pay dividend to shareholders and this appears unfair to shareholders. Therefore, this research aims to examine factors that influence dividend policy.

Relying on the important of decision in dividend policy, this study focuses on how does dividend payout announcement impact on stock returns, what are key factors that influence dividend payout in Thai listed firms and how does life-cycle theory of dividend explain the policy of dividend payout of Thai listed firms. The investigation of this research will suggest advantages for regulators, investors, investigators, and divide up the learning on the policy of dividends.

1.2 Purpose of the Study

This study aims to examine dividend policy of Thai listed firms on the Stock Exchange of Thailand (SET) which consists of three main objectives. The first objective is to explore the announcement effect of cash dividend on stock return for Thai listed firms. The second objective is to explore key factors that influence dividend payout policy in Thai listed firms. The third objective is to examine whether the dividend policy of Thai listed firms are consistent with the prediction of the life cycle theory of dividend.

1.3 Research Questions and Hypotheses

Research questions are:

1) How does dividend payout announcement impact on stock returns?

2) What are key factors that influence dividend payout in Thai listed firms?

3) How does life-cycle theory of dividend explain the dividend policy of Thai listed firms?

According to the research questions, three hypotheses are introduced as follow:

1) Dividend announcement impact on stock abnormal return.

2) Dividend payout is function of life cycle factors, firm liquidity, free cash flow and financial leverage

Dividend payout policy = ƒ (life cycle factors, firm liquidity, free cash flow, financial leverage)

3) Dividend payout policy support the life- cycle theory of dividend

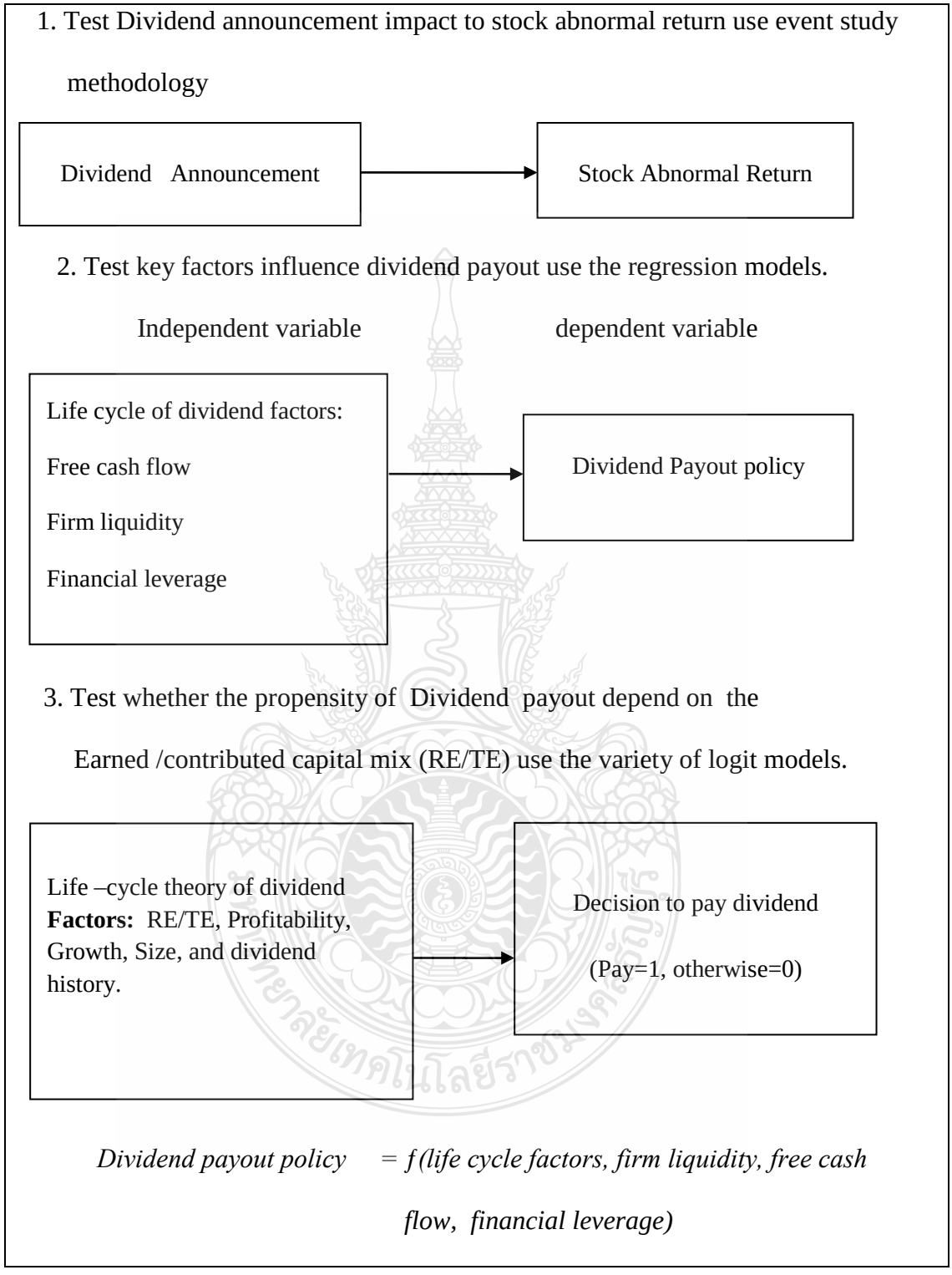


Figure 1.1 Research Frameworks

1.4 Theoretical Perspectives

To formulate a theoretical perspective for observing the impact of dividend announcement on share return, to explore the key factors in dividend payout policy and whether the propensity of dividend payout support the life cycle theory of dividend. Firstly, the signaling theory which was presented by Miller and Modigliani (1961), Bhattacharya (1979), John and Williams (1985), Miller and Rock (1985) with several others studied signaling model of corporate dividend policy, directors apply dividends as a signal for their private information about their views of future earnings prospects. DeAngelo, et al. (1996) examined the policy of dividend, firms with high history growth of earnings and find out that these firms have a propensity to increase dividends are in a term of earning growth. This theory indicated that a company had various ways to sending information to the market such as dividend changes (increase or decreases), dividend initiations (first time dividend announcement of an ordinary or reopening of dividends after lengthy omission), and rejection of dividend payout were announced repeatedly in the financial media. In reply to unexpected dividend changes should be followed by stock price changes in the same direction. As a result there were given an important implication about the significance of dividend and share price argument that share prices involve all trusted future dividends, therefore one of the most significant company events to examine the effecting stock price reaction.

The second relevant theory is proposed by Mueller (1972) the theory of life cycle of the company proposed by Mueller (1972); a firm had a relatively definite life cycle, which was elementary to the firm life cycle theory of dividends. Under the life cycle theory, the characteristic firm would exhibit an S-shaped growth model, which a

stage of slow growth at introduce stage foremost to a quick growth, finally to maturity and decline or inactive growth. A firm initiated in an attempt to invest all available resource in improving and developing its advantageous. The firm's growth was probable to be dawdling until it has fruitfully in the market. Subsequently, the firm would grow speedily, as it entered new markets and enlarges. The firm expects so a lot of possibility for advantageous investment that the chase of growth. It was forced to financing through internal cash from capital market. Eventually, competitors began to join the market, accepting and improving upward the innovator company. The firm needed to generate innovation to continue growth and profitability, however it had a boundary on the capacity of a huge company to grow throughout modernizations. Therefore, the finally company reached a mature stage wherever it lacked beneficial investment occasion to generate the money from businesses. The company would initiate distributing its income to its stockholders for a stockholder value-maximizing. Ultimately, when the accessible procedures of the company were on the border of attractive unbeneficial, a firm would settle its assets and dispense the earnings to its stockholders. Conversely, when the firm directors did not follow the value-maximization, but are more interested in growing the firm than obtain incentives, the dispensation of earnings to stockholders would deflect from the suitable policy.

Lastly, the life cycle of dividend contended that the optimum policy of dividend relies on the stage of company in its life cycle. Several authors focused the link between dividends and the life cycle stage of company. Fama and French (2001) found that the firm with recent high profitability and low growth rates tend to pay dividends, as low profit and high growth firms attend to keep any profits. According to

Grullon, et al. (2002), firms that exhaust their investment possibility when decisions enlarged their dividends, and therefore dividend reveal company maturity more than signaling future profitability. DeAngelo, DeAngelo, and Stulz(2006), Danis and Osobov(2008) as well find supporting information for the life-cycle theory: firm were more possible to pay out dividends when their equity is earned through performances, more than investors contribution. Many authors' researchers observed that companies that pay out dividends will to be more mature and less explosive (Ben-David & Itzhak, 2010).

1.5 Definition of Terms

In the application of the theory to study the significant factors is related to dividend policy of Thai listed firm in SET. In the following several variables are identified.

1) Dividend policy refers to dividend payout decision, the amount of cash that a company sends to its shareholders in the form of dividends. The company can decide to send all profits back to its investors, or could keep a portion of profits as retained earnings. The policy of dividend payouts decides by the director of a company. They decide how amounts dividend will pay out the distribution of profit to shareholders. Dividend policy is an important topic for the firm because it may influence to capital structure of firm and stock price.

- Dividend payer: firms are defined as a dividend payer in a specified year when SET reports that the common stock of the firm has paid positive ordinary cash

dividends for that year (Y=1 when the firm pay dividend, or Y=0 when the firm non-pay dividend)

2) Dividend announcement refer to the date on which a company's directors meet to announce the date and amount of the next dividend payment.

3) An Event Study is a statistical method to evaluate the impact of an event on the value of a firm through reflects in its stock price. The basic idea is to find the abnormal return attributable to the event being studied by adjusting for the return that shoots from the price variation of the market as a whole (MacKinlay, McWilliams & Stiegel, 1997). Event study can reveal important information to share is possible to reaction a given event and can forecast a result from a difference event.

4) Earned equity to contributed capital mix means the retained earnings divided by total equity ratio (RE/TE). The probability of dividend paying has been greater impact by its than selection measures for example the retained earnings to total assets ratio.

5) Dividends while explained by The Securities and Exchange Commission (SEC) state to the amount of a company's profits which firms are dispersed to stockholders and rely on the holders' right. For example dividend of preferred stock is usually fixed as percentage of par value of preferred stock, as dividend of a common stock, and investment unit relies on the company's accomplishment over a financial year. The Board of managers of a company announces the dividend payout quarterly, half-year or yearly to common stockholders. The character of dividend is able to cash, or stock. Nevertheless, SEC declared that the in Thailand the investors are not accepted

the stock dividend as the cash dividend. So company avoid to pay stock dividends as a result of the tax charging problem.

1.6 Delimitations and Limitations of the Study

This study employs a quantitative method of multiple regressions to analyze the relation between the evidence and the theories in order to develop the life cycle of dividend theory to the empirical study. This study follows a deductive approach.

In order to preserve the consistency and accuracy in data collection, this study defined sample criteria as follow. All firms in this research were listed in the Stock Exchange of Thailand (SET) except rehabilitation companies through the year 2005-2010 are population for this study. The samples included all companies which had continuous and completed data for consecutive year during the period. The study examined only payment firms particularly cash dividends. The secondary panel data was collected from the Business Online Public Company Limited and the SET.

1.7 Significance of the Study

This study describes an attempt to offer the expected contributions in two folds. Firstly, on the academic side, this study would contribute the knowledge regarding of dividend policy on life cycle theory to explain the significant factors relating dividend payout decisions for the listed companies in SET. Turning to the practical side, the result from this study might assist the financial executive can improvement and justify their dividend policy with the aim of achieve their ultimate objectives. Moreover, the investor can carry on effect of dividend announcement to

stock return to apply on their investment strategy and a better understanding of the dividend policy.

1.8 Organization of the Study

This dissertation is structured into five chapters. The first chapter presents an introduction. Chapter two presents a relevant literature on the dividend policy and previous research. Chapter three discusses the research methodology, including theoretical framework, research design, data processing and data analysis. Chapter four presents and discusses the hypotheses testing and the research results. The last chapter concludes the research finding and provides some discussions, limitations of the study, implications and future research.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter reviews the existing literature to understand and support the study undertaken in this thesis according to the research questions:

1. How does dividend payout announcement impact on stock returns?

2. What are key factors that influence dividend payout in Thai listed firms?

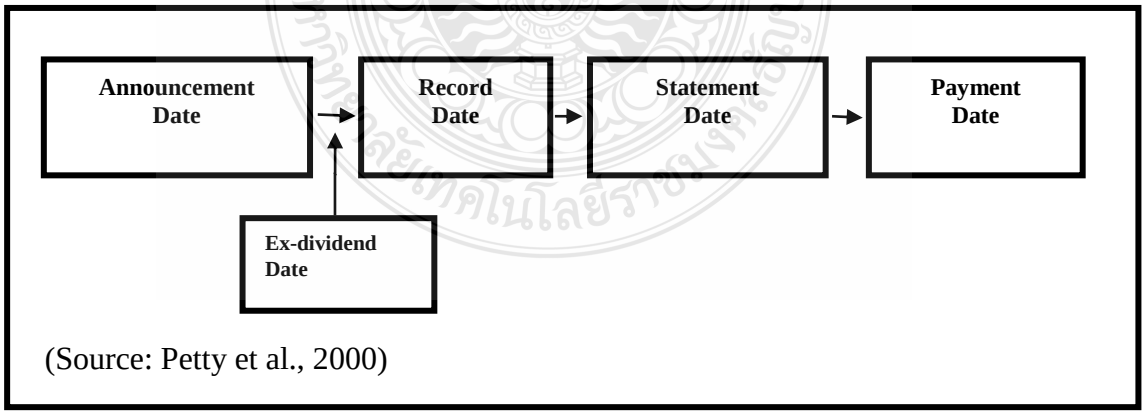
3. How does life-cycle theory of dividend explain the dividend policy of Thai listed firms?

The exploration of literature and concepts are highlighted to answer the research question. This research arises from a background of finance studies, especially the idea of the dividend policy (Gitman, 2000; Lease, et al., 2000; Petty, et al., 2000). It provides the previous studies and theories that consist of the main focus of the research. The purpose of this chapter is to discuss the previous studies on financial management, shareholders and dividend policy which foresees on the factors relating dividend policy of Thai listed firms. And it attempts to trace the key factors that influence dividend payout policy.

The review of this chapter is structured as follows: section A considers definition of dividend policy; section B discusses on the difference theories that are related on dividend policy; and section C presents dividend policy determinants.

2.1 Definition of dividend policy

The term 'dividend policy' refers to '*the practice that management follows in making decisions about dividend payout or, in other words, the size and pattern of cash distributions return to shareholders*' (Lease, et al., 2000, p.29). A dividend payout ratio shows the value of dividend payout which is related to the company's profits (Petty, et al., 2000). When a firm's managements determine a policy for dividend, they confront with the compromise between the stockholders' satisfactions and the amount of external financing requirement (Petty et al., 2000). There would be a less retained earnings and ability to get a greater finance from outside sources (Petty, et al., 2000). The valuation of dividends would be paid to stockholders are decided by board of directors. The performance of firms and the previous of dividend payment are determined before making decision before announcement the dividend payout. (Gitman, 2000) explained that the procedures of the dividend payment including the proportion of dividend to be paid, the date of record and the payment date, respectively. These procedures are shown below.



(Source: Petty et al., 2000)

Figure 2.1 Sequences of Dividend Payment Dates

Dividend payment rule (Sector 1201) in Thailand states that dividend would be paid when the company has a profit but having retained earnings in account in case of deficit earning could not be paid. When payment of dividend, the company must first set the legal reserve for the company at least 5% of company's profit for all time of dividend payment until this reserve reaches 10% of company's capital (sector 1202). Dividend would be consistently approved by Ordinary Annual Shareholder Meeting. In case has preferred stock, this dividend would be paid to preferred stock before payment to common share.

2.2 Dividend policy Theories

In the early stages of business, directors realized the importance of dividend rate payments and consistence payouts. In other word, investors who invest in government bonds get consistence payment with lower interest rate than dividend payout. Corporate directors found that investors favored shares that performed like bonds. Corporate managers realized the importance of dividend payment to the satisfaction of shareholders expectations. Moreover, dividend policy is very important that dividend decreases to shareholder because it affects share price that result, manager used dividend like an implement to send information to the market. Since 1950's the effect of dividend policies have been widely discussed among finance scholars. Besides, dividend policy plays a vital role to develop financial markets. Several theories of dividend have been introduced, which additional increase the puzzle of the dividend.

2.2.1 Dividend Irrelevance Theory

Miller and Modigliani (1961) developed the dividend irrelevance theory. They were the founder of modern corporate finance theory. The conclusion of this theory is that value of firm depends on its earnings and prospect free cash flow that is chosen appropriate investment policy. The dividend policy would not impact on firm value or stock price in the perfect capital market. In other words, dividend policies have no effect on firms. The argument race on the basic assumptions that the symmetric access to credit every stockholder earns the same return from capital gain and dividend yield because of no capital market frictions indifferent taxes and the symmetry information. Thus, these strictly conditions would not happen in the real world. Later a number of researchers agreed not to use this assumption to explain the rational behavior, many theories figured out the advantage of dividend policy.

The MM theorem dividend irrelevance proposition provided the foundation of subsequent research on dividend policy. However, as stated by Ball *et al*. (1979); empirical test of MM's dividend irrelevance theorem has proven difficult to design and achieve because of the assumptions were set out at perfect capital markets.

2.2.2 Dividend Relevance theories

2.2.2.1 Bird-in-the-hand Theory

In an area of uncertainly imperfect information, dividends were valued differently to capital gain. Lintner and Gordon (1962) recommended the *'bird-in-the-hand theory.* This defense simply explains the importance of dividend policy, why a company should pay dividend to stockholders. Gordon (1962) agreed that stockholder like dividend than capital gain as they desire less riskiness of the prospect dividend cash

flow, because of a capital gain had a highly doubtful from uncertain potential investment then they like a high dividend policy. Moreover, when company made a decision on dividend payout, they attend to add value of the firm. Alternatively, Bhattacharya (1979) described a relation a certain level of risk and dividends. This risk is founded on the situation of the company; that is the trade procession, the location, labor power, human capital, competitive forces, etc. so the risk adjusted discount rate takes into environment. The concept that firms facing larger uncertainly of cash flow in the future tended to accept lower payout ratios seems to be hypothetically reasonable.

2.2.2.2 Clientele Effect of Dividends

In their paper MM theorem (1961) famed that the pre-offering dividend clientele effect proposition be part of the cause in dividend policy under certain conditions. On argument of dividend involve tax effect, dividends and capital gains are taxed differently among various types of investors; individual or corporate investors. Tax clientele hypothesis argues that tax clienteles prefer different dividend policies, and investors may attach to firms that have dividend policies appropriate to their particular tax circumstance. For instance, corporate investors, whose dividend had a lower taxed rate than taxed from capital gains. So investors may prefer high dividend payout; on the other hand, individual investors may prefer low dividend payout because of dividend taxed is a high rate than capital gains. As most of the investors are attracted in after tax returns, the difference tax process of dividends and capital gains might persuade their favorite for dividend against capital gains. Recently Allen, et al., (2000) have advanced a theory based on the clientele paradigm to explain why some firms pay dividend and others repurchase share. A modification of the clientele has also been

advance by Baker and Wurger (2004) wherever they hypothesize that dividend payments are in response to demands from investors for dividend.

2.2.2.3 Signaling Theory

Diversion from the MM theorem (1961) dividend irrelevance proposition is available only when the assumptions underlying the setting of Miller and Modigliani are debased. Dividend plays a role as an information to investors concerning the performance of firms' expectations. Under information asymmetry, insiders were able to access better information than outsider investors. The board management of a firm had more data for planning and think up the strategy of the company and predict future earnings. Thus, officer in the firm have more information than the other investors. As a result this led to the question of information asymmetry. So, companies could use dividends as a sign mechanism that sent data to the market, shareholders or investors. The investors were able to consider firm's future earnings through dividends in order for their investment. A company had several ways to send information to the market such as dividend changes, dividend initiations, and deny dividend payouts. And this information is announced commonly in the financial media. In reply to the announcements, stock price often increased when dividend payment increased or dividend initiations, and share price usually declined following dividend cuts and dividend eliminations. On the other hand, the firm must be capable to maintain the costs of sending the information. Knowledge about the forecast of a company may comprise the firm's present project and prospect investment opportunities. The dividend policy, also combine with other signs, for example capital expenses announcement or trading by insiders, may convey this information to a less informed

market. Observed studies in this section included Lintner (1956) suggested that managers were willing to increase dividend rather than reduce dividend levels, and this mean dividend decreases are associated with negative signals while dividend increase signal provided good news to investor. According to the cash flow signaling hypothesis, dividend changes gave a sign about the future firm's prospect. According to signaling theory, Bhattacharyya (1979) developed other explanation for the dividend policy is explained by asymmetric information. Managers had closeted information in relation to the portion carry of the cash flow of scheme and they can send the signal to the market by the preference of dividend policy. Also, Aharony and Swary (1980) found the abnormal return occur 20 days surrounding the announcement. It implied that dividend announcement has infused by insider to the market before the official announcement was made. Divecha and Morse (1983) suggested that the dividend announcement of the cash dividend increases show the positive sign for investment. Miller and Rock (1985) developed model to explain amount of dividend; if dividend payout is high, the investors expect good performance of firms, on the other hands, it dividend payout is low, the investors feel not confident to the long-term operations. According to their research results, it is unexpected dividend changes should be followed by stock price changes in the same direction. Petti (1972) discovered a significant price increase which relied on announcements of dividend increases, and a significant price drop which relied on an announcement of cash dividend decrease s though the earnings performance was positive or negative. Another study of change in the policy of dividend such Asquith and Mullins (1983) studied the initiations of dividend and Womack (1995) studied dividend omissions that showed the market reacts

significantly to such announcement. Other research showed that the changes of dividend showed the signal of the change of operations which results in current earnings. The dividend signal also showed the accurate information of firm (Allen and Michaely, 1995). All of the findings of capital market reactions to dividend announcements revealed the signaling hypothesis, which surprising dividend changes provided information about changes in management's evaluation of a firm's future operational forecasts, and unexpected dividend changes were convoyed by stock price changes in the same direction. Since the investors did not know the current and future levels of earnings, good performance signed by pay dividends would lead to a positive stock price increase.

2.2.2.4 Agency Theory

Jensen and Meckling (1976) analyzed the conflict between shareholders and manager-agents of shareholders. Managers were appointed to act as agents of the shareholders, but in practice it was difficult for shareholder to control managers to make decision for the high interest rate for shareholders. The conflict arose because shareholders required high dividend payouts for their investment, reducing internal resource controlled by managers.

Agency problem result in the information asymmetries and referred to principle-agent trouble where the holder stocks are principle and the agent is the manager. The problem could be incurred by separation ownership and control. The manager had main functions to manage the firm successfully and professionally which aim to maximize valuation of firm and maximize wealth to the stockholders. Though, agency problem arose when directors and stockholders had interested difference idea on

current cash flow. For instance, manager preferred to invest in the interesting projects, however, shareholders disagreed to the investment of projects because it seemed not worth it. So the cost of observe the directors is referred to agency costs. Conversely mangers were aware of the investment that should get higher positive returns. The amount of dividend payouts was determined by stockholders preference as performed by their administration agents. Conversely, the impact of dividend payouts is allowed by a diversity of shareholders with creditors and managers. The other conflict is that shareholders were the only receiving of dividends; prefer to have large dividend payments conversely, but debt holder preferred to limit dividend payments to maximize the firm's capital that were available to repay their obligations. When executives whose compensation financial and otherwise were control to company profitability and size, are interested in low dividend payout levels as a low dividend payout exploits the size of the capitals under organization manage and decreased the need to turn to finance investment. Shareholder could use dividend policy to persuade manager to look after owner's high interest; higher payout provided more checking by the capital markets and management regulation. Therefore the method could be disputed to improve the agency problem throughout dividend payments. The firm would have to financing fund in capital markets through loans from financial institutions. These institutions would be control as by giving recognition so they would be able to check the actions of the firm to decide whether the firm capable to pay back debt responsibilities. Easterbrook (1984) discussed that those dividends are used to remove the free cash from the control of the managers and paid it off to shareholders. Alternatively, the firm would have to cause positive free cash flows thus bringing profits. Therefore it could summarize that

the dividend policy not only decrease the agency cost but also conveyed some news concerning prospect earnings. Consistent with La Porta *et al*. (2000), firms in Thailand were characterized like a country with low stockholder protection so dividend could extend the agency costs of free cash flows and dividend payout are more possible to be used as a instrument that helped moderate the agency cost problem.

2.2.2.5 Free cash flow (FCF) hypothesis

Jensen (1986) explained that the tool to decrease mitigate agency cost of free cash flow referred to dividends. If there is a free cash flow, excess cash can be invested to all projects that have positive net present values in order to discount at the relevant cost of capital. If free cash flow was higher, there will be more agency costs between managers and shareholders because managers might attract to pursue non-profitable investments, such as mergers and acquisitions, excessive salaries, luxury consumption and outright theft.

As mentioned earlier, MM theorem suggested that a dividend policy was independent of firm for investment policy. On the contrary, the free cash flow assumption implied that the policy of dividend and the decision of investment project were relevant. It discussed that an increasing in dividend payouts will decrease the overinvestment trouble, which would have a positive concussion on the market value of the firm (Lang & Litzenberger, 1989). Although, when firm accepted the concept that rising dividend would cut the funds obtainable to directors and forced them to be in the market to obtain fund resources that stockholders should be willing to permit the risk of being more indebted and beside accepted to pay more tax rates on dividend. Conversely, shareholders had to compare between the costs and benefits of obtaining

more dividends. He pointed out that if agency problems were linked to Free Cash Flow, these problems could be solved if Free Cash Flow is minimized, that shareholders forced manager's payout higher dividends. Derived from agency cost, the impact on dividend was negative, firms' decision to pay high dividends when stockholders attempt to minimize excess cash and might firm to apply outside fund (Jensen, 1986). Rozeff (1982), the first explained the dividend policy of corporate has been widely addressed in empirical research using a large sample of US firms. They found the formally regression model agency costs and the hypothesized signs of the variables. Benefit of dividend is to reduce agency cost. For instance, the agency cost is less when the company is operated by the owner. La Porta, et al., (2000) investigated over 4,000 firms from 33 countries together with some emerging markets. They provided the evidence for the agency costs problem that resulted in supporting the agency pattern of dividends. That was firms where shareholders had enhanced protection firms need pay more dividends. Furthermore, firms had a fast growth rate often paid slight dividends than their similarities with firms had slow growth rates. In summary, the results for the agency costs rationale policy of dividend were integration. The agency cost assumption posited that dividends reduce the cash management, then to reduce the opportunity that manager decision would use the funds. Dividend might also limit managers' propensity for investing in other project. This way, it suggested that dividends helped to decrease a conflict of interests between managers and stockholders that meant dividend payout reduced the overinvestment project and agency costs; they might have a positive impact on share price, which was relation to firms' value. The import of the free cash flow assumption was that firm were mature stage then it had plentiful cash. The firm had

limited for investment then it had overinvestment problem. As a result, a firm signals to stockholder by increase a dividend when firm had overinvesting.

2.2.2.6 The Catering Theory of Dividends

Lastly, The Catering Hypothesis, proposed by Baker and Wurgler (2004), assumed that the decision to pay dividends was motivated by prevailing investor demand for dividend payers. Their empirical work focused on the prediction that the rates of dividend initiation and omission depended on the current "dividend premium" or the difference of the current stock prices between payers and nonpayer's. The results show the prediction of forming price-based proxies for the dividend premium. Baker and Wurgler (2004) also confirmed that dividend payouts rely on satisfaction of the investors. Directors catered to investors through paying dividends when investors put a stock price premium. On contrary, if the investors do not need the dividend, there will be no signal through share value. Moreover, managers likely recognized and catered to shifts in investor demand for dividend payers. One implication of the extended model was that the dividend sum depended on its short-term and long-term effect on the stock price, and also depended on the financial leverage and investment opportunities.

For example, dividend clientele effect pointed to managers of firms making their dividend payout decision based on the clientele they would like to connect to themselves presented by Litzenberger and Ramasawmy (1979). Behavioral explanations, such as the bird-in-the-hand, could also lead to a time-varying demand for dividend paying stocks. Managers catered to this premium by paying out more dividends when the dividend premium was high, and by holding cash inside the company when the dividend premium was low. Although dividend payers and

nonpayer were consistently deference in many characteristics such as size, life-cycle stage and profitability. Recently the Catering Hypothesis has been formulated by Li and Lie (2006) showed that the stock market reaction to dividend changes depended on the dividend premium associated with dividend paying stocks. Assaavaugikul (2007) adopted a catering theory of dividends to examine the impact of the investor's demand of a dividend payment in the management's decision to pay dividend, by using model of Baker and Wurgler (2004) which is based on imperfect capital market assumption, the result showed dividend premium and dividend yield could explain investor demand for dividend at a significant level and management should look at the dividend premium and other focus in order to guarantee their decision to serve investor for maintain maximize share price. Tangjitprom (2011) claimed that Thai investor examine whether the demand for dividends can be link to firms decisions to pay dividends. The catering intensives show by positive dividend premium that reveal the characteristics of investor in Thailand prefer dividends and shows higher demand for firms that pay dividends.

2.2.2.7 Life-cycle of dividend Theory

Fama and French (2001) studied the tendency for dividend payout of firms in U.S. between 1926 to 1999. They found that the extreme decline to pay dividend in the U.S. firms in the period 1978 after payers reach its peak. Furthermore, they found the factors affected the decision to pay dividend that listed firms with high profitability and low growth perspectives tended to pay dividends, while newly firms with low profit and high growth firms tended to retain any profits and never paid dividend. Their result pointed out the factors of life cycle showing a major function in the decision to payout cash dividend, the dividend paying firms were large and highly

profitability and had sufficiently retained earnings for investment. While firms did not pay dividend are slight and not as profitable same firms payout dividend.

Grullon, et al., (2002) found a permanent increase in dividend payment proportions of dividend increasing firms. This effect showed these companies could retain higher dividend was according with Litner (1956) found the managers effort to smooth dividends. Resulting, Grullon, et al., (2002) suggested the maturity assumption, suppose that a firm tended to increase dividends as it moved from growth stage to a more mature stage. Thus, a dividend increase might signal not only a change in the firm's fundamental but also a commitment of management not to overinvest. The former theories, the agency cost based lifecycle theory of payout policy was well accepted to explain most of the observed features of firms' payout patterns.

DeAngelo, DeAngelo, and Stulz (2006) interested in dividends payout via mature and established firms. They explored the theory of life-cycle by examining whether the prospect of dividend payout was linked to the earned/contributed capital mix, when analyzed retained earnings to total equity (RE/TE), otherwise determined retained earnings to total assets (RE/TA). They found that the low earned/contributed capital mix firms were in growth stage and needed on external capital, so they could not provide to pay dividends, even as firms with high earned/contributed capital mix were more mature with large portion of profits, then that firm possible to payout of dividends. According to the life-cycle theory, they found that the prospect to payout dividends had a positive relation with the earned/contributed capital mix, firm size, current and lagged profitability, growth, total equity, cash balances, and dividend history.

Lately, Denis and Osobov (2008) examined evidence on the propensity to pay dividends in developed financial markets over the period 1989-2002. They found that the possibility of dividends paying was related with firm size, growth opportunities, and profitability. The portion of firms that pay dividend was high when the ratio of retained earnings to total equity was high and low when this ratio was low. Consistent with evidence presented by DeAngelo et al., (2006) the finding with the life-cycle theory that distribution on free cash flow was the primary determinant of dividend policy. The life-cycle theory argued that payout policy was determined by how firms were trading off the benefits of distribution and the benefits of retention over time. Powerful shareholder rights, on this dimension could reduce the agency costs of free cash flows and thus were positively correlated with payout ratios. And interaction between shareholder rights and earned/contributed capital mix should further force firms to pay dividend more. This theory linked from the beginning to maturity that was related with a decreasing investment opportunity set, declining growth rate and decreasing cost of raising external fund. It is rooted in the concept that as firm become mature, its capacity to create cash reaches its ability to find advantageous investment projects. Finally, it became best possible for the firm to share out its free cash flow to stockholders in the variety of dividend. Consistent with the life-cycle theory of dividends, a growth firm had a large chance to investment various project, but was not sufficiently profitable to be able to financing through internally-generated cash. Additionally, it faced difficulty in increasing fund from outside sources. Then the growth firm kept cash by previous dividend payment to shareholders. Currently, the firm's was profitability and growth had stable, systematic risk has decreased and the

firm could generate more cash inside than it could receive from investment. Eventually, the firm began to pay dividend to dispense its earning to stockholders. The scope to a mature firm distributed earning to shareholders instead of investing. The work of Ronapat (2004) that studied about the disappearing dividends in Thai listed firms confirmed to the findings of Fama and French (2001) which recommended that firms that willing to payout dividends are likely to be a huge and highly profitable, though they posed low investment possibilities and extended the learning lying on the fact of dividends disappearing through pointing the developing country. Thanatawee (2011) examined dividend policy of Thai listed companies over the period 2002-2008 which the theory of life-cycle of dividend and the hypothesis of free cash flow, the result revealed the bigger and more profitable firms with high free cash flows and retained earnings to equity tended to pay higher dividend and the financial leverage was positively related to dividend payouts. The distinct institutional feature of Thai firms was a major reason why dividend policies in interesting for investigation free cash flow.

2.3 Determinants of Dividend policy.

Based on the theoretical perspectives, numerous empirical studies categorized the dividend payout decisions were relevant to firm's characteristics and factors that might be instrumental in effecting the dividend policy decision are all mention the followings:

Profitability

Corporate profitability has been observed as the primary factor of a firm's capacity to pay dividends. Lintner (1956) and Baker et al. (1985) disclosed that the

dividend payment of a firm was influenced by the current year's earnings and previous year's dividend. It is found that dividends depend on earnings. If the earning is high, dividend is paid more but it is converted with the investment (Higgin, 1972). Pruitt and Gitman (1991) reported that current and past year profits were significant factor in influencing dividend payments. According to Fama and French (2001), it is found that profitability is important to categorize to the firms listed (excluding financials and utilities) on three US stock markets. They suggested the three essential indicators: profitability, growth, and size were relation with the propensity to pay dividend. In addition, an analysis of Logit regression was used as a tool to determine the significance of dividend payout. These factors were consistent with the life cycle theory of dividend.

Growth opportunity

According to Fama and French (2001), companies which did not payout dividends had growth opportunities. In General firms have not ever paid some dividends had a faster opportunity growth than firms paid dividends. It appears that firm lost opportunity to invest in other projects because they already paid for previous payers of dividends or they lost their internal source of finance. Fama and French (2001) stated that the average coefficient to the value of each firm's characteristic such as profitability, investment opportunities or size informed the tendency of the firms' dividend payout. Higgins (1981) found a direct relation between growth and financing need of a firm. Speedily growing firms required external financing to investment that resulted in decision of dividend payment. Rozeff (1982) explained the dividend payout was a significantly negative function of the firm's past and expected future growth rate

of sales. According to pecking model, Myer (1984) suggested dividends were less attractive for firms that had large current and expected investments and high leverage. Therefore, the expected sign of growth opportunity was negative with dividend policy.

Free Cash Flow

Moreover the factor relating dividend policy such as free cash flow (FCF) that define as the cash flow in excess of fund required for vary projects with a positive net present value(NPV) Jensen (1986). When the free cash flow increased so, it raised the agency conflict between manager and shareholders. The shareholders wished manger to maximize value of shares. When a firm had a greater free cash flow, its needed to pay more dividend to reduce the agency costs supported (Jansen, 1986; Holde, et al., 1998; La Porta, et al., 2000). Based on the related studies, it suggested that there were a positive relationship between the free cash flow and the dividend payout ratio.

Firm size

According to the role of dividend to mitigate the agency cost by Easterbrook (1984), the prediction sign of firm size is positive correlated with dividend policy. Additionally, life-cycle hypotheses and the free cash flow assumption that compared between small and large firms. Larger firms tended to be more mature and had higher free cash flows, so they were more likely to pay higher dividends. Thus, these hypotheses expected a positive relation between firm size and dividend payouts.

Financial Leverage

Zeng (2003) presented the result when financial leverage was used as one factor of the future default and positively related to the cost of financial costs, the firm financial leverage (total debt to assets ratio) was opposite related to dividend payout

ratio. The studied of Jansen, et al.(1992); Faccio, et al.(2001) inferred that highly levered firm prefer to maintain the cash flow to pay fulfills duties to protect creditors than distributing available cash to shareholder. Therefore, firms with higher leverage ratios had high transaction costs; avoid paying dividend because of keeping off the cost of external financing; a negative relationship between leverage and dividend payments was expected.

The earned/contributed capital mix

According to DeAangelo, DeAngelo and Stuls (2006) and Denis and Osobov (2008), presented the ratio of earned equity (retained earnings) relative to both total common equity capital, RE/TE, and to total assets, RE/TA. The RE/TE formulation assumed that the key determinant of the decision to pay dividends were the proportion of equity from internal sources, while the RE/TA formulation assumed referred to the amount of total assets funded by earned rather than contributed capital of all types. The lifecycle theory by evaluating whether the probability of firm to pay dividends was positively related to its mix of earned and contributed capital, example whether firms with relatively high retained earnings as a proportion of total equity(RE/TE) and of total assets (RE/TA) were more possible to pay dividends. The earned /contributed capital mix was a proxy for the lifecycle stage because it measured the level to which the firm was self-financing or dependent on external capital. Firms with low earned/contributed capital mix tended to be in the capital as growth stage, while firms with high earned/contributed capital mix tended to be more mature with plenty cumulative profits that made them largely self-financing and probably to pays dividend. DeAangelo, et.al (2006) exposed the proportion of equity capital is a better measure of a firm's lifecycle

stage than its cash balances, because the source of cash impacts the dividend decision. They estimated a firm's stage in its financial lifecycle by the amount of its earned equity (retained earnings), both relative to total common equity, RE/TE, and to total assets, RE/TA. The RE/TE ratio assumed that the key determinant of the decision to pay dividends was the formulation of internally generated to total common equity (earned plus contributed), while the RE/TA assumed that the key determinants was the extent total assets are funded by earned rather than contributed capital. However, they emphasized the RE/TE results because RE/TE excluded any impact of debt (unlike RE/TA where, everything else equal, TA increases with debt) and avoided confusing earned equity and leverage effects.

Consistent with James, Dodd and Kimpton, 1985; Grinblatt and Titman, 1998; Gitman, Juchau and Flanagan, 2002, they mentioned the factors effecting dividend policy as follows.

Legal Obligations

Firms paid dividends when there were existed, or collected profits which were obtainable for sharing to stockholders. Firms were prohibited from payout cash dividends from its lawful or recorded capital. The capital was claimed to record a firm and must not allow to invested. In Thailand, dividend payment rule; dividend would be paid when the company had a profit (Sector 1201) having retained earnings in account in case of deficit earning could not be paid.

Internal Constraints

Consequently, a larger of profitability firms might not have a high capacity to payout dividends. Dividend payouts were a exhaust on a liquid assets firm. The

amount of dividend payouts, as a result depended on the internal constraints of a firm for instance the liquidity of its assets.

Contractual Credit Constraints

Companies with threatening condition in finance accords might have trouble to payout dividends. Normally, credit conditions not allow the payout of cash dividends awaiting a level of secure income has been accomplished. These arrangements care for a creditor of firms as of the case of bankruptcy.

The Prospects of Growth

The policies of dividend might differ depending to the life-cycle of a firms. Growth firms increase investment plans so they might need more cash. Additionally, the firms had low growth might need cash for the substituted of obtainable assets. Accordingly, a dividend policies had effect from the potential growth of firms.

The Owner Considerations

The maximize shareholders' wealth is the purpose of the companies Accordingly, the aspects of stockholders as well influenced a policy of dividend. Moreover they concerned about that would influence the sights of stockholders consist of tax conditions, the opportunities for investment and the intensity of holders.

Market Signals

It is recommended that the market's reaction to a policy of dividend was moreover significant to its achievement and was useful in generating the prospect of dividend payout. As situation former, stockholders regularly viewed the firm's dividend payouts as a sign of its potential achievement (Lintner, 1956).

nevertheless, there were some appealing variables for example a level of cash that hold by firms refer to prior dividend payment define as LagDiv where companies had the sticky specialty on propensity to payout dividend (Lintner,1956). The optimal dividend payout, resulting from a transaction between the costs and profit of raising capital for new investments, evolved with these life-cycle-related changes. While the firm became more mature the optimal payout ratio increased. The empirical evidence normally supported the theory, since dividend payment capacity was related to life-cycle characteristics dividend payers were mature firms, with a high ratio of earned to contribute capital, whereas young, high-growth firms did not pay dividends. In relation to above literatures, factors that were related to dividend policy decision remained problematic to identify of empirical studies. The relation between theory and influential factors were varying in many studies. There were summarized in table 2.1

Table 2.1 Summary of previous studies in influential variables on dividend policy decisions

Theory	variables	Authors
Bird- in-the-hand Theory	Profitability, free cash flow	Litner (1962), Gordon (1962), Bhattacharya (1979)
Clientele Effect of dividend	Profitability, dividend history, growth	Miller and Modigliani (1961), Allen *et al*. (2000)
Signaling Theory	Free cash flow, profitability, dividend history, growth, financial leverage	Litner (1956) , Petti (1972), Bhattacharyya (1979), Aharony and Swary (1980), Divecha and Morse (1983), Asquith and Mullins (1983), Miller and Rock (1985), Allen and Michaely (1995), Womack (1995) , Baker (2009)

Table 2.1 Summary of previous studies in influential variables on dividend policy decisions (Cont.)

Theory	variables	Authors
Agency Theory	Free cash flow, profitability, firm size	Higgin (1972), Jensen and Meckling (1976), Easterbrook (1984) , Murphy (1985), La Porta *et al*. (2000), Fama and French (2001),
Free cash flow (FCF) hypothesis	Free cash flow, profitability, liquidity	Rozeff (1982), Jensen (1986), Lang and Litzenberger, (1989), La Porta *et al*. (2000)
Life-cycle of dividend Theory	earned/contributed capital mix (RE/TE), profitability, growth, firm size	Fama and French (2001), Grullon *et al*. (2002), Aivazain et al(2003), DeAngelo, DeAngelo, and Stulz (2006), Denis and Osobov (2008) , Ronapat (2004), Thanatawee (2011
The Catering Theory of dividends	growth, firm size	Baker and Wurgler (2004), Li and Lie (2006) , Assaavaugikul (2007), Tangjitprom(2011)

Summary this chapter reviews the previous study that related to research questions and objectives. It discusses dividend payment, factors that influence in order to provide the theoretical framework that will later use for data analysis.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

This chapter outlines the research methodology of this study. It describes and explains the methodology and data employed in this study. The purpose of the chapter is to illustrate research strategy and instruments that were adopted and developed according to research questions. This methodology will investigate the factor relating dividend policy of Thai listed firms and whether life cycle theory can explain the dividend policy decision. It discusses research strategy and methods and explores the research questions and objectives in more depth.

3.1 Model/Theoretical Framework

Section 1: to study the impact of dividend announcement on stock return.

Event study methodology

Event study methodology was used to find the behavior of stock price in corporate or economic events i.e. dividend announcements (Mckenly, 1997). The general applications of the event study methodology had led to its wide use. According to the academic accounting and finance area, the event studies was applied to analyze the event occurring to specific firm and economic events. Mostly, event studies frequently was used to determine the effect of events on firms' share for instance, announcement of earning, acquisitions and mergers, issues of new equity or debt, and dividend announcement was discovered in this research. Regarding the work of Bodie,

et al., (1999), they explained an event study in order to use as a technique for the empirical investigate in financial research that permitted to an observer in evaluating the impact of a particular event on a stock price like dividend announcement and stock return. At the first study was Dolley (1933) examined the price effect of stock split. The event study methodology has been developed over the year. Ball and Brown (1968) considered the information content of earnings, and Fama (1969) studied the effect of stock splits after removing the effects of simultaneous dividend increases.

Section 2: to employs the panel data methodology to use the technique for estimating model with panel data.

The logistic Regression Analysis (Logit Model)

Logistic Regression was a type of predictive model that could be used when the Target variable was a categorical variable with two categories-for example live/die, Success/failure, purchases product/doesn't purchase, wins/doesn't win, etc. A logistic regression model was additional similar to nonlinear regression such as fitting a polynomial to a set of data values. An outstanding conduct of generalized linear models was presented by Agresti (1996).

Logistic regression could be used in two types of target variables:

1) A categorical target variable that has exactly two categories (i.e., a binary or dichotomous variable).

2) A continuous target variable that has values in the range 0.0 to 1.0 representing probability values or proportions.

3.2 Research Design

The research design indicated the detailed process of design in this study. The framework focused on the process and methods in order to analyzing and collecting data and information that was required to answer a research problem (Emory, 1995). It would examine whether dividend announcement affect to stock return and explore the factors that influence dividend payout of listed firms from Thai capital market. In order to answer the research questions, the research based on a quantitative research design was established. Four main topics that were managing with the design were initiated: purposed of the study, selected the research technique, collected data and planned for data analysis.

3.3 Selection of the Subjects

The study on factors relating dividend policy of Thai listed firms was based on the companies listed in the Stock Exchange of Thailand (SET). In order to have panel data for six consecutive years, the selected samples include all companies that are not under rehabilitation. All companies had continuous and complete data for the period 2005-2010. Therefore, this exploration was rooted in 473 firms. There were 27 firms from resources industry, 60 firms from financial industry, 111 firms from Property &construction industry, 38 firms from technology industry, 83 firms from services industry, 38 firms from agro &food industry, 39 firms from consumer products industry, and 77 firms from industrials industry.

3.4 Variables in the study

Two types of variables were employed in this research. The first category is dependent variables of dividend policy. It is considered to use dividend payout ratios. It should be measured by dividend over net income. The second category is the independent variables influence dividend policy decision. They are referring to the life-cycle theory by assessing mix of earned and contributed capital, retained earnings as a proportion of total equity (RE/TE) and retained earnings as a proportion of total assets (RE/TA). This research selected retained earnings as a proportion of total equity (RE/TE) because this variable excluded any impact of debt unlike retained earnings as a proportion of total assets (RE/TA) and seemed desirable a priori to avoid confounding earned equity and leverage effects and the decision to emphasize the RE/TE results better than RE/TA (DeAngelo *et al*., 2006). The earned/contributed capital mix is a logical proxy for the life-cycle stage because it measures the extent of the firm that is self-financing or finance on external capital. For this study, the proxy is the level of retained earnings as a proportion of total equity. The ratio of earned equity to total common equity (RE/TE) is calculated for firms with retained earnings divided by the total book value of common stockholders' equity, expected to have a positive relation with dividend payouts. The asset growth rate (AGR) is an statistically significant to predict the change in total assets divided for the previous year's level, while the sales growth rate (SGR) is the percentage of growth of total sales. Moreover market to book ratio (M/B) is calculated as market value of equity dividend by book value of equity, the proxy for future investment opportunities. This study expects a negative relation between investment opportunities and dividend payout. Profitability is measured as the

return on assets (ROA) and equals earnings before extraordinary items plus interest expense plus deferred taxes from the income statement (if available), all divided by total assets and measured as the return on equity (ROE). Highly profitability firms are capable to generate lots of free cash flows therefore they operate higher dividend payments. This study expects a positive relation between profitability and dividend payout. Free cash flow (FCF) is valued by cash a business operates (Jensen, 1986). So as to reduce the mitigate agency costs of free cash flows, the managers should pay dividends. This results in a positive relationship between free cash flows and dividend payment expectedly. Firm size (LANs) can be measured by the natural logarithm of total assets. The life cycle posits that, larger firms tend to be more mature and high free cash flow so they are likely to pay dividends. The life cycle hypothesis expects a positive relation between firm size and dividend payout. Financial Leverage (FLEV) is total debt divided by shareholder's equity. Firms with higher debt ratio are more likely to have financially controlled and it causes to pay less dividends. This resulted in the negative relationship between debt ratio and dividend payouts expectedly. Firms Liquidity (CR) is total current assets divided by current liabilities. While firms with high liquidity are more able to pay dividend, expects a positive related dividend payout.

The expected relationships between dividend payouts and Independent variable according to hypothesis are summarize in table 3.1

Table 3.1 Summary of variables and expected sign of variables

Variables	Proxy	Expected sign
Dependent variable		
Dividend payout ratio (DIV)	dividend policy	
Independent variables		
RE/TE	Life cycle theory	Positive(+)
FCF	Free cash flows	Positive(+)
CR	Firm liquidity	Positive(+)
ROA, ROE	Profitability	Positive(+)
LANs	Size	Positive(+)
LagDiv	Previous dividend	positive(+)
SGR,AGR	Growth	Negative(-)
FLEV	Financial leverage	Negative(-)

Note: Dividend payout ratio (DIV), cash dividends over net income is used as proxy for dividend policy. RE/TE is retained earnings divided by the total book value of common stockholders' equity. FCF is the operating cash flows scaled by total asset. CR is total current assets divided by current liabilities. ROA is operating income over total assets; ROE is operating income over total equity. LANS is measured by the natural logarithm of total assets. AGR is the change in total assets divided by the previous year's level and SGR is calculated as the percentage growth of total sales. FLEV is total debt divided by shareholder's equity. LagDiv is previous dividend. The positive sign "+" indicates a positive relationship between the variable and firms' dividend payout, while a negative sign "–" indicates a negative relationship between the variable and firm's dividend payout.

3.5 Population and Sampling

The population in this research was listed firms on SET that paid cash dividends in the operating year between 2005 and 2010. Firm must not have missing information about dividend policy. The analysis employs the event study method, Logit model, Tobit model and multiple regressions to find out the key factors influence dividend payout of Thai listed firms.

Thus, the source of the data is the Stock Exchange of Thailand. Published information of listed firms can be obtained from electronic published information and on the website: settrade.com, BOL Corpus and website: efinance.com. The database of trading and statistical data includes company profiles and highlights, performance and financial statements, announcement event and news. Listed firms are classified into 8 industry groups present in table 3.2. Lists names of these industries were resources, financials, property & contracture, technology, services, agro & food Industry, consumer products and industrials. In order to understand the pattern of dividend payments, it is necessary to classify the samples by industries according to the SET's classification (Table 3.2).

Table 3.2 List Firms in Each Industry according to SET from 2005 to 2010

Number of firms in each industry	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
1.Resources	**18**	**21**	**23**	**26**	**26**	**27**
Energy and Utilities	17	20	21	24	24	25
Mining	1	1	2	2	2	2
2.Financials	**68**	**67**	**62**	**60**	**61**	**60**
Finance and Securities	35	36	33	32	32	32
Banking	14	13	11	12	12	11
Insurance	19	18	18	16	17	17
3.Property & Construction	**89**	**96**	**104**	**108**	**116**	**111**
Construction Materials	39	29	31	31	31	19
Property Development	50	54	57	56	59	62
Property Fund	-	13	16	21	26	30

Table 3.2 List Firms in Each Industry according to SET from 2005 to 2010 (Cont.)

Number of firms in each industry	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
4.Technology	**45**	**36**	**37**	**37**	**38**	**38**
Communication	18	-	-	-	-	-
Electrical Products Computers	10	-	-	-	-	-
Information& Com Communication Technology	-	25	26	27	27	27
Electronic Components	17	11	11	10	11	11
5.Services	**80**	**86**	**83**	**84**	**82**	**83**
Transportation & Logistics	13	14	14	15	14	16
Tourism and Leisure	15	16	14	14	15	13
Commerce	11	15	14	14	14	14
Health Care Services	13	13	13	13	13	13
Media and Publishing	26	26	25	25	23	24
Professional Services	2	2	3	3	3	3
6.Agro & Food Industry	**42**	**43**	**43**	**43**	**39**	**38**
Agribusiness	22	20	20	19	17	14
Food & Beverages	20	23	23	24	22	24
7. Consumer Products	**37**	**43**	**41**	**40**	**40**	**39**
Home & office Products	8	12	12	10	10	10
Personal Products Pharmaceuticals	4	6	6	6	6	6
Fashion	25	25	23	24	24	23
8. Industrials	**52**	**70**	**69**	**70**	**69**	**77**
Petrochemicals & Chemicals	14	13	12	12	12	12
Packaging	14	13	13	13	13	12
Paper & Printing Materials	3	3	3	2	2	2
Automotive	19	20	19	20	19	18
Machinery and Equipment	2	-	-	-	-	-
Industrial Materials and Machinery	-	21	22	23	23	6
Steel	-	-	-	-	-	27
Total 8 Industrial	**431**	**462**	**462**	**468**	**471**	**473**

Source: SET (2005-2011)

3.6 Data Collection

The data is primary data from listed on the Stock Exchange of Thailand (SET) from electronic published information and on the website: www.eFinanceThai.com, www.settrade.com, www.set.or.th and BOL Corpus. The sample consists the operating year between 2005 and 2010.

3.7 Research Instrumentation

3.7.1 The event study process

The following steps were followed to perform event study.

1) Is study, a particular event day is defined as the date of dividend announcement when the board of directors clarified the dividend proposal in each of data from 2005 to 2010.

2) The time window of study explains the estimation and event period which the time period is fixed and the share prices of the firms are included. In practice, the event window is often expanded to two days, the days of announcement and the day after. The interest period is the event date either before and after to represent the price impact of announcements which occur after stock market is closed on the announcement day (MacKinlay, 1997). This paper employs a period of -10 to +10. It is totally up to investigator what kind of time periods are used. Asquint and Mullins (1983) have chosen -10 to +10 while Michaely and Womack (1995) use -254, +1 and -1, +758. Moreover Kapoor (2009) use -20 to + 20. It is assumed that all the abnormal returns due to dividend announcement will be captured in 21 days.

3) Define Estimation procedure to estimation the parameters of model. The most general choice is to use the period prior to the event window for the estimation period. This study using daily data and the market model, the parameters could be estimate over the 110 days prior to the event. Normally the event period is not included in the estimation period to defend the event from influencing the normal performance model parameter estimates. There are present the time frame of this study in figure 3.1

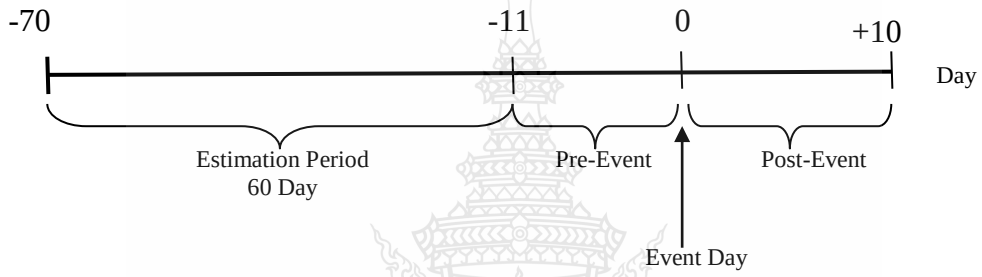


Figure 3.1 The line of the study

Estimate Market Model

The return parameters estimation can be defined as an estimated window period of 60 days. An estimated market model using data t = -70 to t = -11 (where t = 0 is dividend announcement date) use OLS (Ordinary Least Square):

Under the Market Model, the expected daily return $E(R_{it})$ for stock *i* on day *t* is calculated as follows (MacKinlay, 1997)

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where the value of α_i and β_i are ordinary least square(OLS) is estimated by period estimation, and R_{mt} is the daily market return on day *t*

Calculate the abnormal return and Cumulative abnormal return

The abnormal returns for a specific group of firms are examined in order to determine whether the event produce returns which cannot be explained by the CAPM. Abnormal return (AR) during t = -10 to +10

Can be calculated as follows:

$$AR_{it}=R_{it}-(\alpha_i+\beta_i R_{mt})$$

When we should obtain $\acute{\alpha}_1, \acute{\alpha}_2, \ldots, \acute{\alpha}_i$ *and* $\beta_1, \beta_2, \ldots, \beta_i$ from market model After obtaining the each period time of abnormal return derived from the stock, then the cumulative abnormal returns (CAR) are derived from aggregating daily ARs over time which starts at before the day of announcement to after the dividend announcement date.

Cumulative daily average abnormal returns for an event period from T_1 to T_2 can compute as follows:

$$CAR_{it} = \sum_{t=T_1}^{T_2} AR_{it}$$

$$\overline{CAR}_{it} = \frac{1}{N} \sum_{i=1}^{n} \overline{CAR_{it}}$$

Then the result of $\overline{CAR_{it}}$ may is positive or negative, if positive CAR_{it} means dividend payout adds values to shareholders through good news to the market. However, $\overline{\text{CAR}}_{it}$ is negative in period after dividend announcement, this implies dividend announcement do not carry information on future earnings and cash flows of the companies.

Test for statistical significance

Despite, a researcher showed the abnormal returns, it is necessary to prove the results because they were not obtained by unexpectedly or biased time series. The basic assumption of the daily abnormal returns were independently and identically distributed. It can be presumed that over a long time stock prices had a tendency to approach the expectation value, t that mean value. The testing was compute by the t-statistic for the sample of N observation s for each day 't' in the event window.

The Hypothesis: there is no cumulative abnormal return or $\overline{CAR} = 0$

The hypothesis can be tested using *t-test:*

$$t = \frac{1}{\sqrt{n}} \sum_{i}^{n} \sum_{t=T_1}^{T_2} \frac{AR}{S_{it}}$$

Where n = Number of total stock

S_{it} = Square Root of variance of CAR from $t = T_1$ *to* T_2

3.7.2 The relationship between dividend policy and the predictor variables.

The multiple regressions were used to explain the relationship between dividend policy and the predictor variables. The dividend payout would be follows:

Dividend payout = f (life cycle factors, firm liquidity, free cash flow, financial Leverage)

Where:

Dividend payout (DIV) = define as dividend payout ratio (cash dividend/net profit)

Life cycle factors = RE/TE, ROA, SGR, LANs, LagDiv

Free cash flow = (net profit- changes in fixed assets- change in net working capital) / total assets; FCF

Firm liquidity = current asset / current liabilities; CR

Financial leverage = total debt / shareholders' equity; FLEV

To identify the financial variables that affects dividend policy in a regression model:

DIV = f (RE/TE, ROA, SGR, LANs, LagDiv, FCF, CR, FLEV)

To investigate of dividend payout is function of life cycle factors, firm liquidity, free cash flow and financial leverage. The results of the test of hypothesis on the research question what the key factors are influence the dividend payout for Thai listed firms. The multiple regressions are employed to explain the relationship between dividend policy and the predictor variables. In this study employ multiple regression analysis in analyzing the relationship of the variables. Since the data using in this study is Panel data. Thus, random effect model is also applied to solve Endogeneity problem of the model. Since dependent variable is binary choice data (Y=0, not pay or Y=1, pay dividend), Logit model is also employed. Dividend payout can also be treated as or Zero (Y=0) or amount of dividend paid (more than zero>0), Tobit model is also applied. Model in this study are follows:

1) Model using all data (Negative, Zero, positive dividend) used Multiple Linear Regression Model with Random Effects Model. In addition to Binary Choice Model used Random Effect Logit Model.

2) Model using only zero and positive dividend used Multiple Linear Regression Model with Random Effect Model and Random Effects Tobit Model.

3.7.3 Test dividend propensity supports the life-cycle theory of dividend

The statistic methodology was to test whether the probability on propensity to pay dividend support the life-cycle theory of dividend. To test dividend factors on life-cycle Theory. The test employed the logistic Regression Analysis (Logit model) to estimate the chance to dividend payment. The model helps in making the decisions to dividend payment (dependent variables). The independent variables included growth, the earned/contributed capital mix (RE/TE), profitability, size and dividend history. The theory of life-cycle explained the state of introduction for instance, firm currently established. It described a very high risk to operate business and explained how products or services attracted the customer demand as to maintain the business. The operation showed a high cost, less profit or loss. Secondly, the growth state explained how firm was known by the public. The growth climbed up, the risk was slightly low. Firm earned more investment opportunities. However, firm might face with the investment strategy challenges and firm have had not enough money to support its projects. Thirdly, the mature state identified the longest phase of the cycle. The firm was in a fully grown and it became well-known. Its profit was highest which resulted in more free cash flow however, it was less investment opportunities because there were a large number of competitors in the market. Final state, decline state explained how firm

was decreased. Its profit was dropped. Firm would make decision to continuing operation at loss or quit off the business. According to Fama and French (2001), they depicted the three fundamental indicators: profitability, growth, and size that were very important to the propensity to dividend payment which are related to the theory of life-cycle of dividends. Return on equity (ROE) was a determinant of the profitability of the operation of firm. Growth is measured the sales growth rate (SGR) which illustrated the ability of the firms to increase the revenue. Assets growth rate (AGR) was defined as an increase in assets. Size define as total asset (TA). DeAngelo, et al., (2006) proposed earned/contributed capital mix as a main measurement for the firm's life-cycle, therefore implying the ability to pay dividend. However, there were some interesting variables such as lagged dividend payment (LagDiv) where firms might possess the sticky characteristic on propensity to pay dividend.

The model used in this study can be illustrated as follow:

$$\Pr (y_1 = 1 \mid x_1, x_2, x_3, x_4, x_5)$$

Where:

y_1 = Decision to pay dividend (1 = Pay, 0 = Otherwise)

x_1 = Earned / Contributed capital mix (RE/TE)

x_2 = Profitability defined as return on total asset(ROA) , return on total equity(ROE)

x_3 = Growth defined as sales growth rate(SGR) and Assets growth rate(AGR)

x_4 = Size defined as the natural logarithm of tota l assets(LANs)

x_5 = Other variables as the previous year's dividend (LagDiv)

The Logit model uses the logistic regression to predict the binary response. Then the result could give each beta (β_i) that referred to regression coefficients of independent variables to described the relationship of the variable to the probability. A positive coefficient indicated that the variable had the positive correlation with the probability of outcome while negative coefficient presented a negative correlation. Then used the t-statistic to test the significant of the coefficient value and used panel logit with fixed effects model present the individual effects.

This chapter examined the process of research methodology and research design. The statistics techniques including the importance of dividend policy and related dividend actors have been illustrated.

CHAPTER 4

RESEARCH RESULT

Introduction

This chapter describes and discusses the analysis of findings such as descriptive statistics, event study and the logistic regression. Additionally, the significant variables are clarified and determined as the key factors that influence the payment of dividends in Thai listed firms. It also examines the findings of the hypothesis testing. These data are kept by the name of each company as a document. The SET publishes the closing price of each company and market index 'SETINDEX' which contains all companies' weighted price data. The daily returns are calculated as a percentage increase in the closing price of sequential days. The data which consists of 473 listed companies from SET, covered the time period beginning 2005 to 2010. The yearly figures are derived from fiscal year-end classified by pay dividend or non-pay dividend.

The yearly figures are derived from fiscal year-end that classified when firms in correspondent year announced dividend payment or not. If any firms have not had the completed variables analysis, these firms will not be included in the analysis.

4.1 Description of Event Study Data

Before constructing the appropriate event window, it is important to determine the event day of the analysis. It seems usual in many studies the event day to be called as day 0. Furthermore, the purpose of the matching event window length is a topic that employed the various researchers. There was a study of short event window, compared

with other event studies, seek to investigate the impact of dividend announcement in Austrian stock markets and prices by including an event window which included 5 trading days, two days before (-2), two days after (+2) and the event day (0) Gurgul, et al. (2003). Another even shorter event window was used by Lonie, et al. (1996) study the UK market response to dividend announcements in a 3-days event window. Moreover the other researchers use of 41-day event window (-20 days before and +20 days after the announcement day (Dasilas, 2007) and Asquint and Mullins (1983) have chosen 21-day event window (-10, +10). In addition, Balachandran (1998) used multiple event windows, the larger of which did not exceed 20 days before and 20 days after announcement day. The reason and suggestion of the event windows is reviewed on the table 4.1

Table 4.1 Reason for Opening and Implications of Event Windows

Event Windows			Reason for Opening Window	Implications
No	**Begin**	**End**		
1	-5	-1	To test information leakage	Efficiency in regulation and effectiveness of supervision
2	-2	-1		
3	0	1		
4	0	2	To test announcement	
5	0	4		
6	0	10	Effect of dividend and market efficiency	Information content of dividend and duration of price adjustment
7	0	15		
8	0	20		

Source: Kadioglu (2008)

Table 4.1 compare the event windows on the first day in this study. There are 7 event windows which are specified in first column, the beginning and ending day of the event windows are seen on second column and third column respectively. This table also shows the reasons for opening the event windows and possible implication of event windows.

This study adopts Balchandran's (1998) model, while it employs much more one event window. According to the event study data, there are 1128 events. The daily abnormal returns are defined as the difference between the return of separate share and the return on market index extending event windows from t-10 to t+10.

4.2 Descriptive Statistics

The descriptive statistics of daily abnormal returns are given in the table I. In order to carry out both the event study analysis and regression analysis, the cumulative abnormal return is calculated for the following event windows. The highest average abnormal return was on day 0 which is 2.36% because it was the event day. Whereas the lowest average abnormal return was on day t +10 which is -4.09% because was less prior. The standard deviation of the daily abnormal return did not change much and lies between 0.05% and 0.92%. The minimum abnormal return was on day t +10 which is -21.9534% because this day not effect from event day. Conversely, the maximum abnormal return was on day 0 (event day) which is 8.95% because when firms announced dividend the market reacted event through stock return.

The descriptive statistics about factor are relation to dividend payout report in table II shows the yearly descriptive statistics including mean and median of each variable for all firms over the six consecutive years for the period 2005-2011. The average dividend payout ratio is 56 percent, and standard deviations are around 37 percent. The variability in the RE/TE, which means life cycle theory proxy, is around 44 percent and 66percent for the standard deviations.

4.3 Hypothesis Testing

4.3.1 The result of test for Hypothesis

The first hypothesis relates to the test of dividend announcement impact on stock abnormal return. The results of the test of hypothesis on the research question how dividend payout announcement impact on stock returns? In order to investigation the impact of dividend announcement on stock price, through event study shows that the dividend announcement impact on stock prices.

Hypothesis 1: Dividend announcement impact on stock abnormal return.

The objective of the study is to examine whether the announcement of cash dividends have a significant effect on the share price. In order to examine this topic, both the event study and regression analyses are used. The cumulative abnormal returns are tested for a whole sample and divide by industry group. The following tables summarize the results of the event study. Table 4.2 presents the average abnormal returns of dividend announcement during the year of 2005-2011. Figure 4.1 show consistently the graphical development of the cumulative average abnormal return (CAAR) during the 21-day event window. These results imply that the general investor perceived the dividend announcement as a positive signal or good news, for the shareholder value. As one can observe from table 4.2, the majority of the Average abnormal return (AAR) in the pre-announcement period appears to have a negative sign, although most of them move at statistically insignificant levels. On the other hand, on the day t = -3,-2,-1 the market reacts abnormally, which are statistically significant at the 0.05, 0.01 level of significance. While the time of the years that have been examined separately, on the event day there is positive, while statistically insignificant

abnormal return. At last, throughout the post-announcement period the market seems to react positive with abnormal return around the announcement day. Specifically, on the day t = +1 the abnormal l return +0.826% respectively which is statistically significant at the 0.05 level of significance, and thus, it can be clearly stated that the market has a tendency to react to dividend announcements. The Cumulative abnormal returns (CAAR) follow generally similar trend as the abnormal returns.

Table 4.2 Daily averages abnormal returns (AAR), cumulative average abnormal return (CAAR) during the 21-day event window

Event	T(day)	AAR_t (%)	t-stat	CAAR (%)	t-stat
	- 10	0.2595	1.2624	- 0.2595	1.2624
	- 9	- 0.2866	- 1.0412	- 0.2709	- 0.0591
	- 8	0.7515	0.9971	0.4649	0.8716
	- 7	0.9479	1.6683	1.69951	2.2977
Pre-Announcement	- 6	- 0.1439	- 0.4658	0.8041	1.6211
	- 5	0.1829	0.7793	0.0390	0.1126
	- 4	- 0.2346	- 0.9326	- 0.0517	- 0.1962
	- 3	1.4156	2.1296 **	1.1814	2.386 **
	- 2	- 0.5972	- 3.0696 ***	0.8188	1.5294
	- 1	- 0.53631	- 1.7692 **	- 1.1335	- 2.4831 **
Announcement	0	2.3898	2.0785 **	- 1.85351	2.1094 **
	1	0.8258	2.4425 **	3.21565	3.2901 ***
	2	- 0.4602	- 1.0474	0.6656	1.8051 **
	3	- 4.06235	- 1.5502	- 4.2226	- 1.6055
	4	- 1.59751	- 1.4156	- 5.6599	- 1.5140
Post-Announcement	5	1.37715	1.1441	- 0.2204	- 1.0211
	6	0.37728	0.9066	1.75442	1.1280
	7	- 2.80902	- 1.5481	- 2.4317	- 1.6194
	8	- 4.0040	- 1.6491	- 3.2135	- 1.8655
	9	- 0.8467	- 2.9951	- 1.2471	- 3.0347
	10	- 4.14781	- 1.4735	- 5.0046	- 1.9072

Table 4.2 presents the average abnormal returns (AAR) on the announcement date and the cumulative average abnormal returns (CAAR) of the total firms for the event window -10 to +10 relative to the announcement date for the all the examined year(2005- 2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

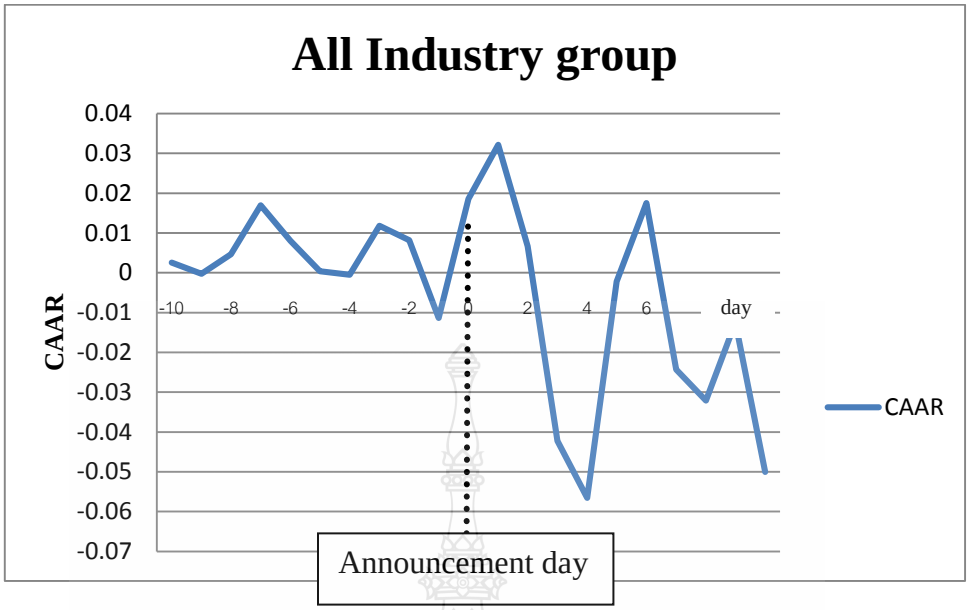


Figure 4.1 Show CAAR for simultaneous dividend Announcement during the 21-day event window

In contrast, throughout the event windows that precedes the dividend announcement (-5, +5) there is an abnormal movement on the stock prices; though it appears to be statistically insignificant. As one can observe from table 4.3, it is quite evident that the market reacts negative during the period before the dividend announcements. Whereas during the three days before announcement period have abnormal return are observed and Figure 4.2 show consistently the graphical expansion of the cumulative average abnormal return (CAAR) during the 11-day event window. The CAAR seem to be marginally negative similar AAR, but statistically insignificant. Conversely, there are positive signal all through the event windows that the announcement day, there are positive and statistically significant both abnormal returns and cumulative average abnormal return. Finally, all through the post-announcement period the market look likes to react positive with abnormal return around the

announcement day. Particularly, on the day t = +1 the abnormal return +0.0078% respectively which is statistically significant at the 0.05 level of significance.

Table 4.3 Daily averages abnormal returns (AAR), cumulative average abnormal return (CAAR) during the 11-day event window

Event	T(day)	AAR_t (%)	t-stat	CAAR (%)	t-stat
Pre-Announcement	- 5	0. 1734	0.7168	0.1734	0.7168
	- 4	- 0. 2290	- 0.9495	- 0. 0560	- 0.2080
	- 3	1.3934	2.0882 **	1.1639	2.3289 **
	- 2	- 0. 6328	- 3.1890 ***	0.7606	1.4044
	- 1	- 0. 5818	- 1.8377 **	- 1.2150	- 2.5533 **
Announcement	0	2.3467	2.0558 **	1.7649	2.0534 **
Post-Announcement	1	0.7813	2.2292 **	3.1280	3.2356 ***
	2	- 0.1790	- 1.1575	0. 6020	1.5222
	3	- 4.0772	- 1.5494	- 4.2570	- 1.6049
	4	- 1.6070	- 1.4083	- 5.6850	- 1.5108
	5	3.1941	1.1574	- 0. 210	- 1.0386

This table shows the average abnormal returns (AAR) on the announcement date and the cumulative average abnormal returns (CAAR) of the total firms for the event window -5 to +5 relative to the announcement date for the all the examined year (2005- 2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

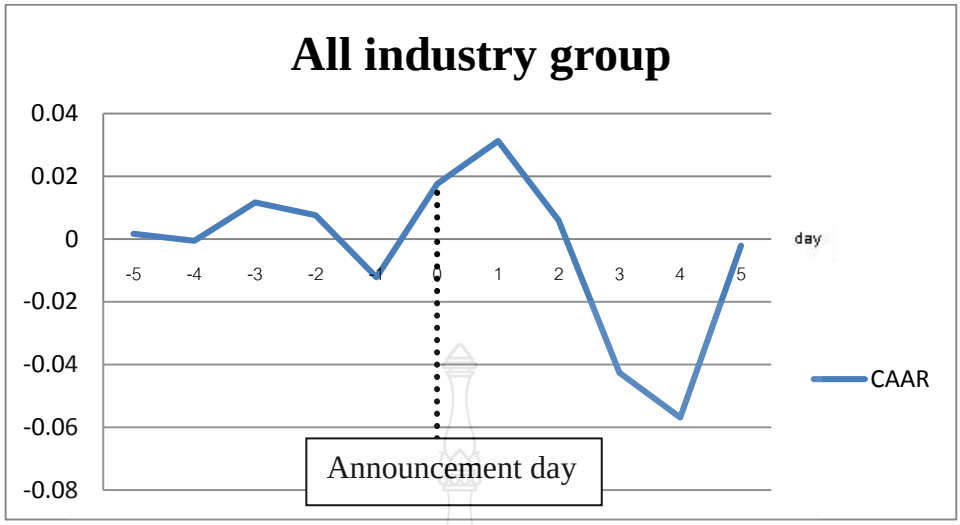


Figure 4.2 Show CAAR for simultaneous dividend Announcement during the 11-day event window

The result from event study method presents the average abnormal returns of dividend announcement during the year of 2005-2011 divide by industry group. It is quite obvious that the market reacts negative during the period before the dividend announcements. While throughout the three days before announcement period have abnormal return and the cumulative average abnormal return (CAAR) are observed from table 4.4 and Figure 4.3 show consistently the graphical development of the cumulative average abnormal return (CAAR) during the 21-day event window. According to firms in agro and food industry obvious that the market react positive on announcement and after announcement that similar firms in other industry such as firms in financials industry, resource industry, industrial industry and property industry. Conversely the market react before announcement day which firms in technology industry, consumer products industry and service industry. These results imply that the general investor perceived the dividend announcement as a positive signal or good

news, for the shareholder value. As one can observe from table 4.5, the result from event study method presents the average abnormal returns of dividend announcement during the year of 2005-2011 divide by industry group. The event study precedes the dividend announcement (-5, +5) the majority of the abnormal return (AAR) and the cumulative average abnormal return (CAAR) in the pre-announcement period appears to have a negative signal, though most of them move at statistically insignificant levels. The result of firms in technology industry shows that on the day t=,-2,-1 the market reacts abnormally, which are statistically significant at the 0.05, 0.1 level of significance. In addition firms in agro and food industry ,firms in financial industry, consumer product industry, industrial industry and property and construction show positively abnormal return after dividend announcement which are statistically significant at the 0.01, 0.05 level of significance, and thus, it can be clearly stated

Table 4.4 Daily averages abnormal returns (AAR), cumulative average abnormal return (CAAR)

Table presents the average abnormal returns (AAR) on the announcement date and the cumulative average abnormal returns (CAAR) of the Whole firms separate by industry group for the event window -10 to +10 relative to the announcement date for the all the examined year(2005-2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

T	Agro& Food Industry		Technology		Financials		Consumer products		Services		Resources		Industrials		Property& Construction	
(day)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)
-10	0.172	0.1725	0.592	0.592	0.302	0.302	- 0.783	- 0.783	0.206	0.2	- 0.162	- 0.162	0.4	0.401	0.821	0.821
-9	- 0.122	0.0503	- 0.69	0.098	- 0.002	0.301	- 1.229	- 2.012	0.201	0.1	- 0.136	- 0.297	0.34	0.43	0.912	0.979
-8	0.146	0.0242	2.068	1.378	- 0.019	- 0.02	- 0.182	- 1.41	0.193	0.1	0.289	0.153	- 0.01	- 0.012	0.123	0.249
-7	0.108	0.2541	2.997	5.065	- 0.196	- 0.215	- 0.078	- 0.26	- 0.461	- 0.3	0.248	0.537	- 0.03	- 0.032	0.759	0.152
-6	0.19	0.2973	- 1.121	1.876	0.431 **	0.235	- 0.273	- 0.351	- 0.321	- 0.3	- 0.086	0.162	0.19	0.135 *	1.655	0.155
-5	0.207	0.3969	- 0.064	1.185	0.078	0.509	1.422 ***	1.149 *	1.564	1.2	0.719 ***	0.632	0.45	0.451	2.1	1.254
-4	0.265	0.4729	- 1.862	1.926	0.486 *	0.564	- 0.067	1.355 **	0.219	0.1	0.006	0.725	0.35	0.456	0.913	0.151
-3	0.074	0.3392	4.909	3.047	0.072	0.559 *	0.135	0.067	0.078	0.1	0.396 *	0.402	0.32 **	0.567	0.2	0.21
-2	- 0.189	- 0.1155	- 1.847 ***	3.062	0.016	0.088	- 0.263	- 0.128	- 0.214	- 0.1 **	0.625	1.022 ***	0.24	0.076	0.184	0.296 **
-1	- 0.06	- 0.2492	- 1.813	- 3.659	- 0.157	- 0.141	- 0.334	- 0.597	- 0.723	- 0.6	0.072	0.697 *	- 0.52	- 0.131 **	0.912 **	0.431
0 (Announcement)	0.675 **	0.6147	6.879	5.066	0.477 **	0.32	0.416	0.082	0.187	0.1 *	0.785 **	0.857 *	0.26 **	0.23	0.645	0.465
1	0.77 ***	1.453 ***	0.85	7.729	0.784 ***	1.26 ***	0.312	0.729 *	0.678 **	0.7	0.124	0.909 **	0.42 **	1.325 **	0.541	0.671
2	0.101	0.8795 ***	- 0.786	6.363	0.103	0.887 ***	0.824 **	1.136 **	2.156 *	1.2	0.384	0.509	0.73	0.786	0.149 **	0.633
3	- 0.13	- 0.0298	- 13.97	- 1.476	- 0.16	- 0.056	0.04	0.864	0.812	0.8	- 0.287	0.096	- 0.22	- 0.045	- 1.343	- 1.278 *
4	0.189	0.0587	- 6.157	- 2.013	0.4 **	0.241	0.029	0.069	0.543	0.7	- 0.213	- 0.501	0.13	0.123	- 0.911	- 0.202
5	- 0.362 *	- 0.1732	5.645	- 5.119	0.029	0.429	- 0.166	- 0.137	- 0.031	- 0	0.372	0.159	0.32	0.413	- 0.074	- 3.114
6	- 0.08	- 0.4419	1.444	- 7.089	0.0087	0.115	- 0.124	- 0.291	- 0.191	- 0.1	- 0.072	0.3	0.32	0.111	- 0.501	- 0.501
7	- 0.028	- 0.1079	- 9.826	- 8.383	0.443	- 0.356	- 0.212	- 0.337	- 0.387	- 0.3	- 0.364	- 0.437	- 0.01	- 0.321	- 0.693	- 0.743
8	- 0.432	- 0.4599	- 0.179	- 1.006	- 0.62	- 1.063	0.603	0.391	0.043	0.3	- 0.607	- 0.971	- 2.11	- 2.114	- 0.325	- 0.41
9	- 0.728	- 1.1597	- 1.011	- 1.484	- 0.929	- 1.549	- 0.313	0.29	0.041	0.3	- 0.131	- 0.738	- 1.79	- 1.413	- 0.211	- 0.412
10	- 0.037	- 0.7072	- 14.99	- 1.602	0.057	- 1.249	- 0.074	- 0.387	0.043	0.2	- 0.056	- 0.739	- 0.19	- 1.344	- 0.125	3.212

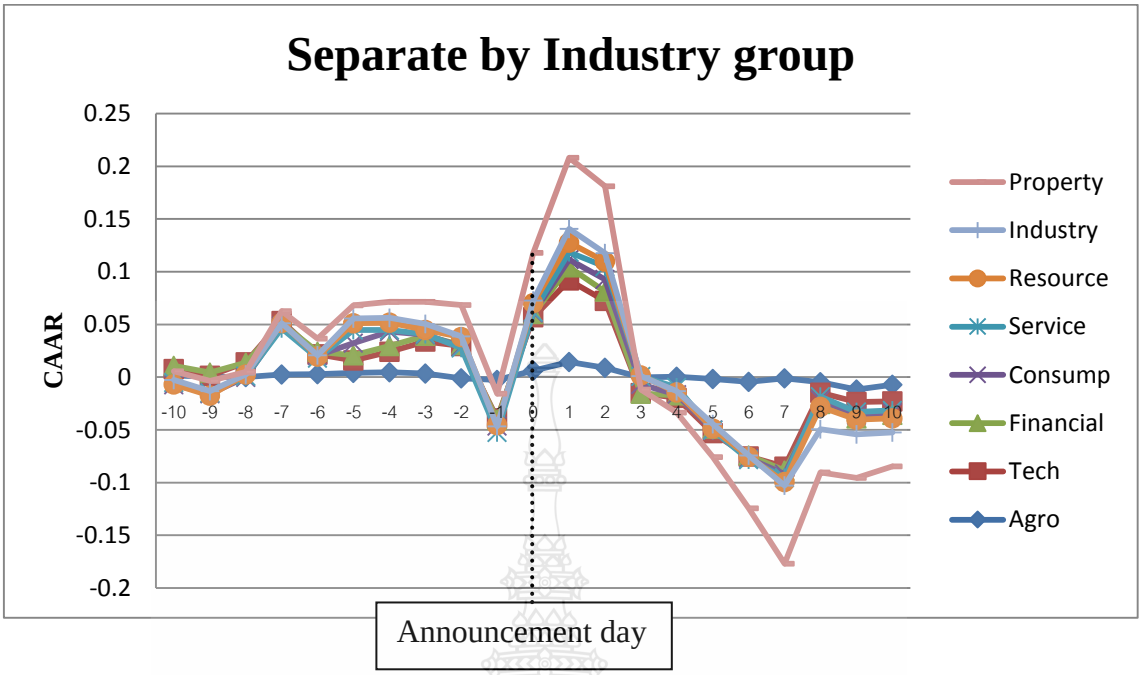


Figure 4.3 Show CAR for simultaneous dividend Announcement during the 21-day event window separate by industry group

Table 4.5 Daily averages abnormal returns (AAR), cumulative average abnormal return (CAAR)

Table presents the average abnormal returns (AAR) on the announcement date and the cumulative average abnormal returns (CAAR) of the Whole firms separate by industry group for the event window -5 to +5 relative to the announcement date for the all the examined year(2005 – 2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels

T	Agro& Food Industry		Technology		Financials		Consumer products		Services		Resources		Industrials		Property& Construction	
(day)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)	AAR_t (%)	CAAR (%)
-5	0.1793	0.1793	- 0.1705	- 0.1705	0.1229	0.1229	1.5203 *		308	0.0308	0.7184	0.7184	0.0667	0.0667	0.1811	0.181
-4	0.2485	0.4278	- 1.9072	- 2.078	0.4814 *	0.6043	0.0027	1.5231 **	0.0949	- 0.0958	0.0287	0.6897 *	0.0123	0.0769	0.3112	0.277
-3	0.0452	0.2937	4.7651	2.8579	0.1072	0.5886 *	0.1727	0.1754	- 0.4493 **	- 0.4532	0.3957 **	0.3669	- 0.4014	- 0.1314	0.4312	0.431
-2	- 0.2301	- 0.185	- 1.9466 *	2.8185	0.0076	0.1148	- 0.1988	- 0.026	0.1992	0.2254	0.6255 **	1.021 ***	0.3115 **	0.2308	0.5242	0.455
-1	- 0.0918	- 0.322	- 2.0238	- 3.97 *	- 0.1462	- 0.1386	- 0.2876	- 0.486	0.4256	0.7831	0.083	0.7085 *	3.698	1.325 *	0.6752	0.662
0 (Announcement)	0.6535 ***	0.5617	6.6732	4.6494	0.4956 ***	0.3495	0.4951	0.2075	0.085 *	1.1276	0.7712 **	0.8542 *	0.9162	0.786	0.7867	6324 *
1	0.7395 ***	1.393 ****	0.6452	7.3184	0.7775 ***	1.2731 ***	0.3949	0.8899 **	0.7343	1.056 **	0.114	0.8852 **	0.8913 **	0.6439 **	0.1843	0.127 **
2	0.078	0.8175 ****	- 0.8821	- 0.237	0.0948	0.8723 ***	0.945 **	1.3399 **	0.0113 **	0.0309 *	0.3453	0.4594	0.1234 **	0.0667	0.4581	0.202
3	- 0.1388	- 0.061	- 14.0844	- 14.967	- 0.1467	- 0.0519	0.1792	1.1242 **	- 0.072	- 0.0843	- 0.3084	0.0369	0.0881	0.0769	0.2108	0.163 *
4	0.1769	0.0381	- 6.2387	- 20.323	0.3908 **	0.244	0.1256	0.3048	- 0.1278	- 0.3411	- 0.2097	- 0.5181	- 0.2051	- 0.1314	0.0075	0.033
5	- 0.3634	- 0.161	5.6027	- 0.636	0.0055	0.3963	- 0.085	0.0406	0.0844	0.1235	0.361	0.1514	0.245	0.2308	0.1462	0.034

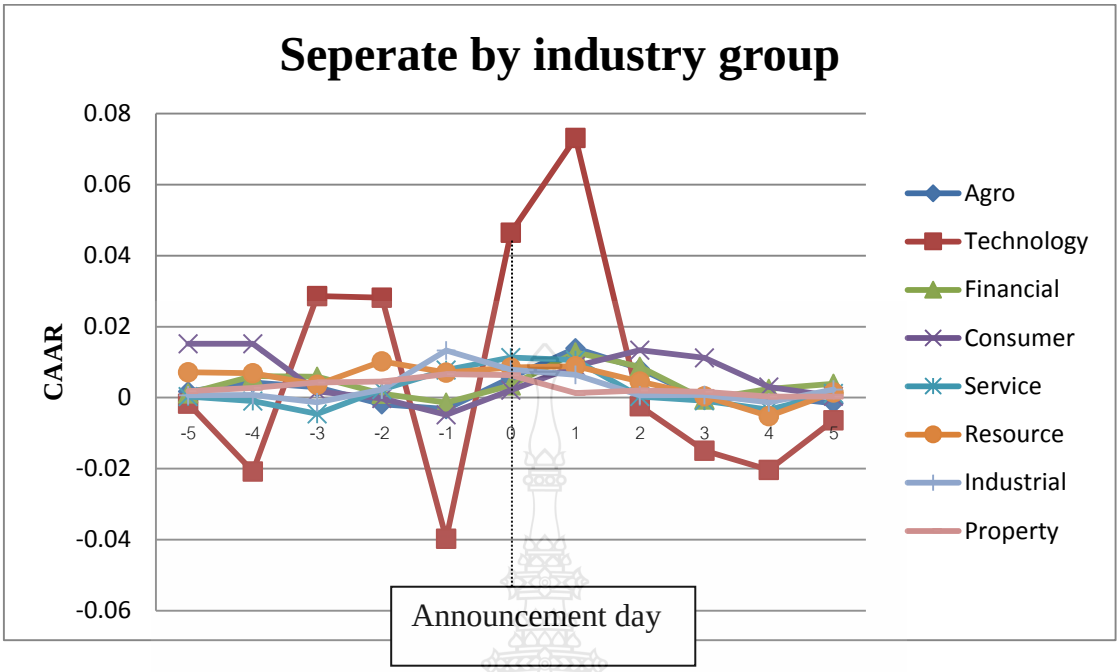


Figure 4.4 Show CAAR for simultaneous dividend Announcement during the 11-day event window separate by industry group

In order to above results that supports while abnormal returns were sighted both before and after the dividend announcements proposed by Miller and Modigliani (1961). Normally, the trend that has been followed by the abnormal returns is positive in the pre-announcement period and negative in the post –announcement period. To concern with the information content of dividend announcement and stock market behavior. This study investigates abnormal returns when listed companies in SET announce dividend initiation, dividend stable or dividend omission. The initiation sample that initiated dividends after paying zero dividends for at least one year. The omissions sample consist firms that omitted dividends after paying dividends for at least one year. The finding in table 4.6 and table 4.7 are generally support the signaling theory that dividend announcement can generate abnormal returns. A stable or an initiation in dividend announcement would generate statistically significant positive

abnormal returns. Conversely, a dividend omission gives statistically significant negative abnormal returns. The result show that companies increase their dividend had a higher abnormal return than companies did not pay dividends. From the event study finding support the dividend signaling theory in explaining the positive price reactions to an increase in dividend payment.

Table 4.6 Effect of Changes in Dividend Policy for the event window (-5, 5)

T(day)	Positive Signal				Negative Signal	
	Dividend initiation		Dividend stable		Dividend omission	
	AAR_t (%)	CAAR (%)	AAR_t(%)	CAAR (%)	AAR_t(%)	CAAR (%)
-5	- 0.0890	- 0.0890	0.1552	0.1552	- 0.7730	- 0.7730
-4	0.6950	0.6056	0.0607	0.2159	- 0.3550	- 1.1280
-3	0.0533	0.6589	0.1093	0.3252 **	0.7695	- 0.3580
-2	- 0.2120	0.4471	0.0254	0.3507 **	0.5986	0.2405
-1	0.3739	0.8209	- 0.0095	0.3411	- 1.6350	- 1.3940
0 (Announcement)	0.5936	1.414	0.7037	1.0448 ***	- 0.3280	- 1.7220
1	2.4290 ***	3.8439 **	0.5962 ***	1.6411 ***	- 2.4450 ***	- 4.1670 **
2	0.5888 *	4.4327 ***	0.0965 ***	1.7376 ***	- 2.6410 **	- 6.8090 **
3	- 0.4050	4.0276 **	- 0.1913	1.5462 ***	- 0.9550	- 7.7640 ***
4	1.2443	5.2719 ***	0.0623	1.6085 ***	- 0.1520	- 7.9160 **
5	0.6456	5.9170 ***	- 0.1815	1.4270 ***	0.4965	- 7.4190 ***

This table examines the effect of dividend changes on the market price for stocks that change their dividends during the period 2005 to 2010. AAR is the average abnormal return surrounding announcements of cash dividend changes. CAAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes for the event window -5 to +5 relative to the announcement date for the all the examined year(2005- 2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

Table 4.7 Effect of Changes in Dividend Policy for the event window (-10, 10)

T(day)	Positive Signal				Negative Signal	
	Dividend initiation		Dividend stable		Dividend omission	
	AAR_t (%)	CAAR (%)	AAR_t(%)	CAAR (%)	AAR_t(%)	CAAR (%)
-10	0.1966	0.1966	0.1551	0.1551	1.7854	1.7853
-9	0.3210	0.5176	- 0.1144	0.0407	- 1.0788	0.7065
-8	- 0.3030	0.2142	0.0707	0.1114	1.3131	1.8376
-7	- 0.3230	- 0.1090	0.1674	0.2788	0.3533	2.1909
-6	0.6999	0.5911	0.2491	0.5280	- 0.1784	2.0201
-5	- 0.0830	0.5083	0.1664	0.6944 ***	- 0.7402	1.2724
-4	0.6486	1.1569	0.0735	0.7680 ***	- 0.3656	0.9068
-3	0.0259	1.1829	0.1215	0.8895 ***	0.8179	1.7248
-2	- 0.1860	0.9965	0.0351	0.9246 ***	0.5003	2.2251
-1	0.3853	1.3818	- 0.0003	0.9215 ***	- 1.6270	0.5976
0 (Announcement)	0.5711	1.9529	0.7060 ***	1.6275 ***	- 0.3049	0.2927
1	2.4112 ***	4.3641 **	0.6016 ***	2.2291 ***	- 2.3136 ***	- 2.020
2	0.6031	4.9672 ***	0.1046	2.3338 ***	- 2.6745 ***	- 4.6954
3	- 0.4260 **	4.5416 ***	- 0.1804	2.1534 ***	- 0.9817 ***	- 5.6671 ***
4	1.2920	5.8336 ***	0.0640	2.2174 ***	- 0.1017	- 5.7780 ***
5	0.7006	6.5341 ***	- 0.1606	2.0569 ***	0.5243	- 5.2545 **
6	- 0.0890	6.4448 ***	0.1198	2.1767 ***	- 0.3058	- 5.5604
7	- 1.5560	4.8892	- 0.3817 **	1.7950	- 0.7915	- 6.3519
8	- 0.9360	3.9533	- 0.4946 ***	1.3003	0.5013	- 5.8505 *
9	0.5858	4.5390	- 0.4755 ***	0.8248	- 1.0820	- 6.9325
10	0.0038	4.5429	- 0.2116	0.6455	1.9450	- 4.9875

This table examines the effect of dividend changes on the market price for stocks that change their dividends during the period 2005 to 2010. AAR is the average abnormal return surrounding announcements of cash dividend changes. CAAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes for the event window -10 to +10 relative to the announcement date for the all the examined year(2005- 2010). The data Symbols denote statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

The result is consistent with the fact that dividend announcement have information content. There is a positive relation between the announcements of increase dividend and dividend stable. Investors react positively to the announcement. The average abnormal return are positive for most of the day. On the announcement day (day 0) the AAR is 0.57% and 2.41% on the day after announcement dividend

increase, AAR_1, is highly significant for dividend initiation (2.41%) and dividend stable(0.60%) but negative AAR for dividend omission(-2.31%). Figure 4.5 and 4.6 present the result of this analysis. The announcement effect of a cash dividend increase is significantly positive. Therefore, the market reacts negatively significant for the dividend omission. The average abnormal return is -2.31% and -2.67% on the day after announcement negative signal. This indicates that dividend decrease release negative information to the market. Figure 4.7 present the result of this analysis. The announcement effect of a dividend omission is significantly negative. Overall the result indicate that market reactions on the announcement date to positive and negative dividend changes.

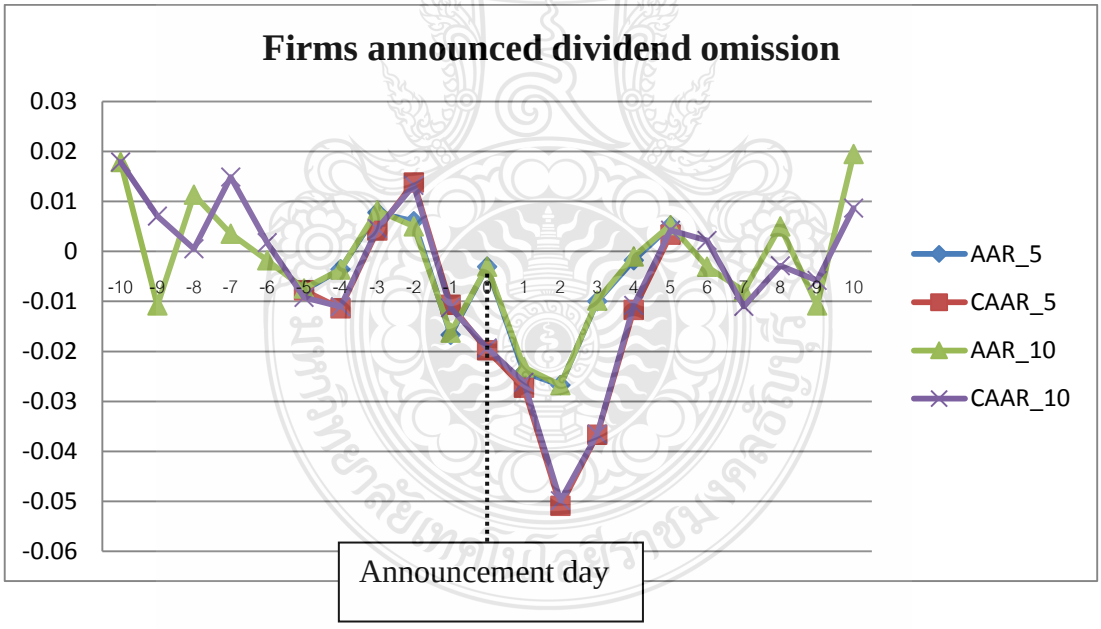


Figure 4.5 Average Abnormal Return and Cumulative Abnormal Return on Days Surrounding the Announcement of Dividend omission during the 11-day and 21-day event window

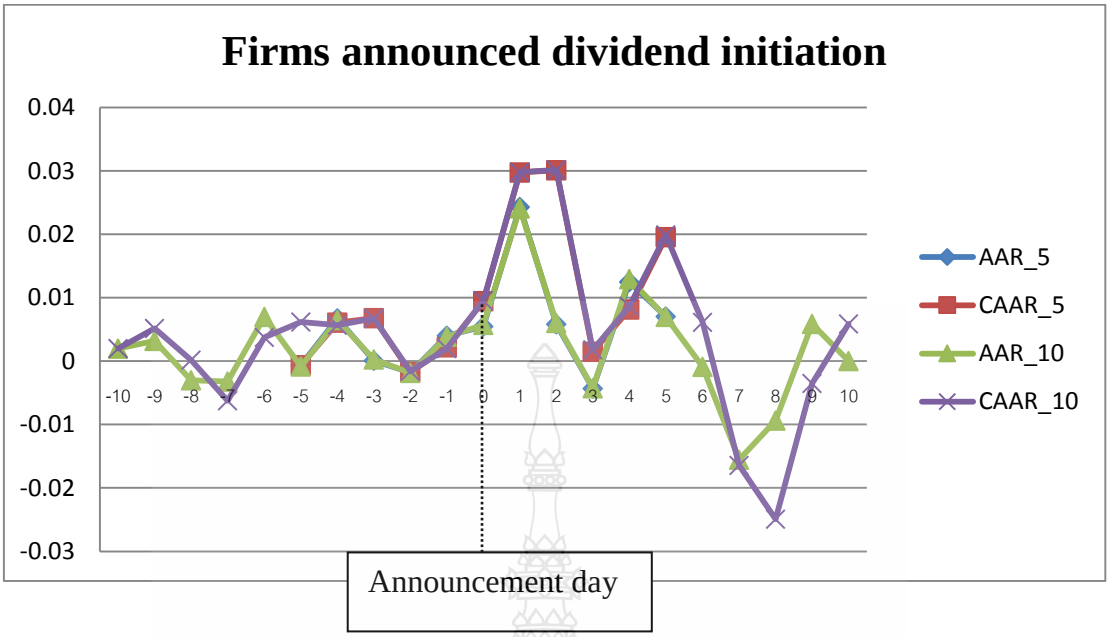


Figure 4.6 Average Abnormal Return and Cumulative Abnormal Return on Days Surrounding the Announcement of dividend initiation during the 11-day and 21-day event window

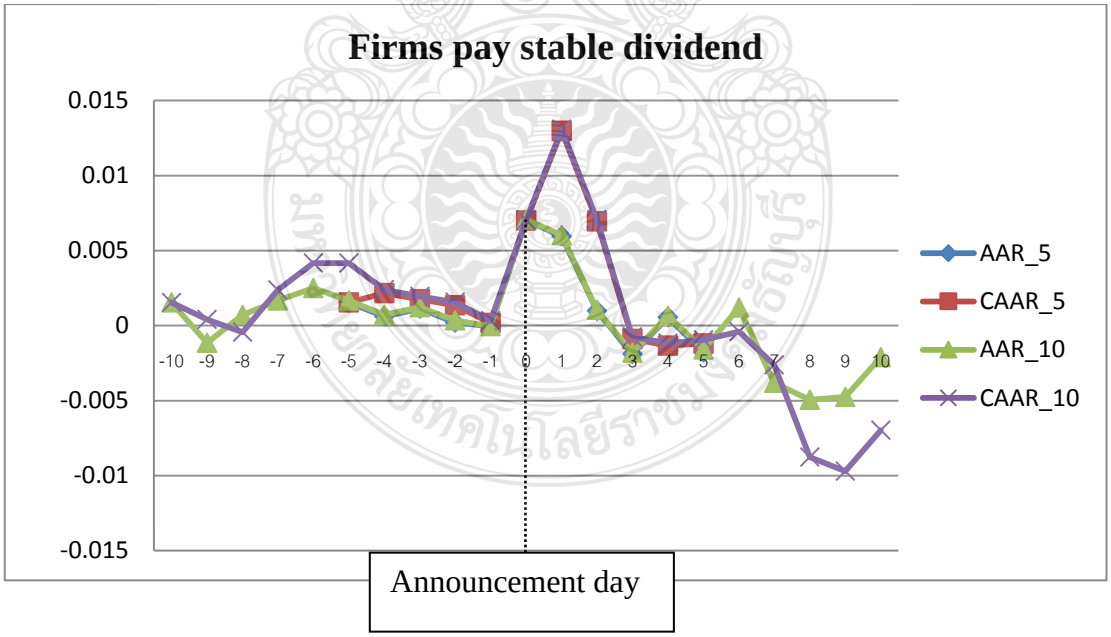


Figure 4.7 Average abnormal return and cumulative average abnormal return on Days Surrounding the Announcement of stable dividend during the 11-day and 21-day event window

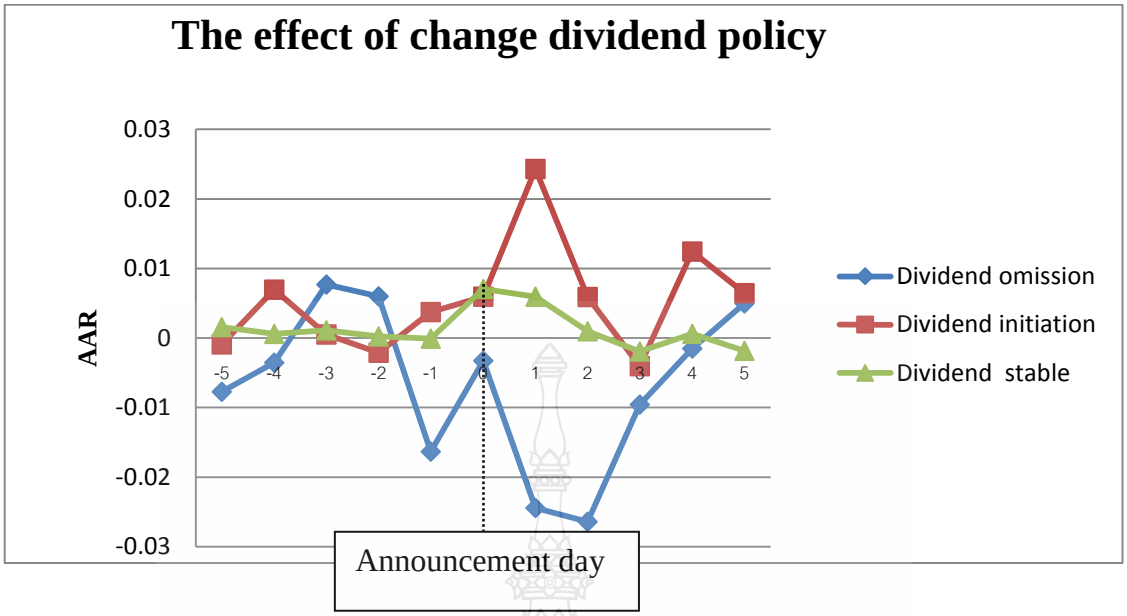


Figure 4.8 Average abnormal return for simultaneous dividend Announcement during the 11-day event window

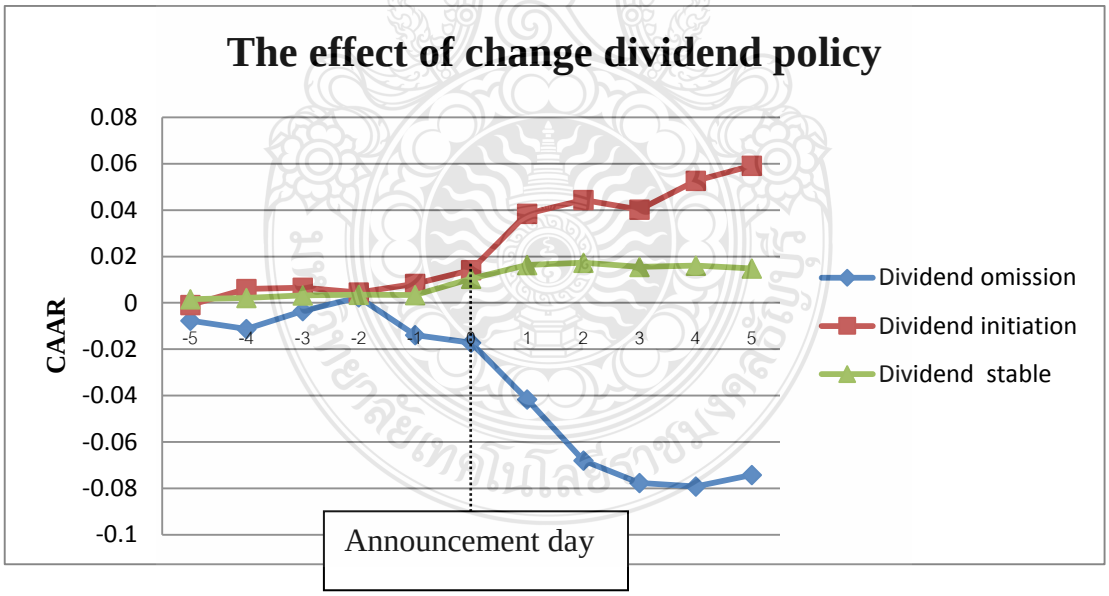


Figure 4.9 Cumulative average abnormal returns for simultaneous dividend Announcement during the 11-day event window

The result is consistent with the fact that dividend announcement have information content. There is a positive relation between the announcement of increase dividend and stock price. Investors react positively to the announcement. Therefore, when manager makes a decision about dividend payment, the history of dividend payment is one of the factors that influence the payout decision.

Hypothesis 2: Dividend payout is function of life cycle factors, firm liquidity, free Cash flow and financial leverage

Dividend payout policy = ƒ (life cycle factors, firm liquidity, free cash flow, financial leverage)

The second hypothesis relates to the analyses of dividend payout is function of life cycle factors, firm liquidity, free cash flow and financial leverage. The results of the test of hypothesis on the research question what is the key factors influence the dividend payout for Thai listed firms? The multiple regressions are employed to explain the relationship between dividend policy and the predictor variables. The dividend payout would be follows: The variables used for the determination of dividend policy are explained with expected relationship with dividend policy in table 4.8

Table 4.8 Factors related Dividend payouts the results based on RE Linear, RE Logit and RE Tobit

Variables/Technique	ALL Firms			
	RE Linear	**RE Logit**	**RE Linear +**	**RE Tobit**
Constant	- 0.1247	- 6.0773 ***	0.9662 **	- 1.1763 *
RE/TE	0.0057 ***	0.4184 ***	0.0031	0.1719 ***
LagDiv	0.5787 ***	3.6746 ***	0.5933 ***	2.0514 ***
FCF	0.1255	1.0893	0.1477	0.4327
ROE	0.0001	0.0044 ***	0.0000	0.0017 *
SGR	0.0000 **	0.0000	0.0000	0.0000
FLEV	0.0000	0.0000	0.0000	0.0000
LANs	0.0482 ***	0.5560 ***	- 0.0777	- 0.0237
Statistics				
N	2221	2221	2075	2075
LL		- 714.591		- 3088.076
Chi2	1513.16 ***	534.058 ***	70.6474 ***	357.4401 ***
Pseudo R2	0.5160	0.0415	0.0415	

Note: Dependent variable is dividend payout (DIV). RE/TE is retained earnings over total equity. Lag DIV is the previous dividend payout. FCF is the operating cash flows scaled by total assets. ROE is the operating income over total equity. SGR is the percentage change in total sales. FLEV is Total debt over total equity. LANs is the natural logarithm of total assets. The sign ***, **,* indicate statistical significance at 1%, 5% and 10% respectively.

To estimate the revealed model, the present study used three techniques e.g. random effects GLS regression (RE Linear), random effects logistic regression (RE Logit) and random effects Tobit (RE Tobit) etc. All three techniques used in the study indicated that the dividend payout had positive relationship with earned/contributed capital mix (RE/TE), profitability, size of the firm. The result from first technique; random effects GLS regression (RE Linear) found that the significant values were shown as 0.5787, 0.0057, 0.00, 0.0482 in order dividend history, RE/TE, growth, and firm size. The second technique; found the significant values were shown as 3.6746,

0.4184 and 0.0044 and 0.5560 in order dividend history, RE/TE, profitability and firm size from random effects logistic regression (RE Logit). The last technique, RE Tobit shows the result the significant values as 2.0514, 0.1719 and 0.0017 in order dividend history, RE/TE and profitability. It seemed that RE Logit were the appropriate techniques among the other two that provided significant values and maximum values which influenced the dividend payouts. The result indicates that the significant factors related dividend payout is dividend history, the earned/contributed capital mix (RE/TE), profitability and firm size. When Thai listed firms make dividend decision, the dividend history is the one factor that important because the dividend announcement affects the stock price. The investors expect the profit from dividend. Consistent from the previous study, the positive announcement had a higher abnormal return and higher cumulative abnormal return. In addition listed firms be able to pay dividend when their earning grow up the shareholders also benefited, Moreover ,greater profitability allowed the firms to easily afford dividend payouts, which did not disturb its financial needs. Dividend payout was a positive function of profitability implied that firms announce more dividend as their net income increase. Moreover, larger firms had more chance to distribute cash dividend.

Hypothesis 3: Dividend payout policy support the life- cycle theory of dividend

The third hypothesis relates to the test of dividend policy supported the life-cycle theory of dividend. The results of the test of hypothesis on the research question how the life-cycle theory of dividend explained the dividend policy of Thai listed firms?

The logistic Regression Analysis (Logit model) was used in this hypothesis in order to estimate the probability of pay dividends. And the dividend payout depended on the earned/contributed capital mix, RE/TE. The results showed the decision to payout dividends as dependent variable, with life-cycle measure, profitability measure, growth measure, size mature and other measures as the independent variables. Table 4.9 showed the basic model including one item from each measurements, retained earnings over total equity(RE/TE) from life cycle measure ; return on equity(ROE) from profitability measure; sales growth rate (SGR) from growth measure; and total asset(Log asset) from size measure. In this result from Random effect Logistic Regression analysis of the decision to pay dividends as function of the ratio of earned equity to total common equity(RE/TE) and other variables of the firms listed in SET over 2005-2010. For each year, the data consists of firms listed in SET and non-missing data for every variable. Logistic regression reported in the table represent the data symbols denoted statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

Table 4.9 Factors related Dividend payouts by Random effect Logistic Regression Analysis (RE Logit)

Variables	All Firms
	Random Effect Logistic Regression(RE Logit)
Constant	- 6.0773***
Lag Div	3.6746***
FCF	1.0893
RE/TE	0.4184***
ROE	0.0044***
SGR	0.0000
LANS	0.5560***
Statistics	
N	2221
LL	-714.591
Chi2	534.058***

Note: Dependent variable is dividend payout (DIV). Lag DIV is the previous dividend payout. FCF is the operating cash flows scaled by total assets. RE/TE is retained earnings over total equity. ROE is the operating income over total equity. SGR is the percentage change in total sales. LANs is the natural logarithm of total assets. The sign ***, **,* indicate statistical significance at 1%, 5% and 10% respectively.

The results supported the hypothesis of the relationship between RE/TE and the decision to payout dividends. By using a variety of multivariate logit specifications, control for firm size, current and lagged profitability, growth, total equity, and dividend history. It consistently shows a positive and significant relation between the probability that a firm pays dividends and its earned/contributed capital mix. The result show the coefficients on RE/TE of the predicted sign and highly significant in logit model. The results also consistently reveal statistically significant relations between the probabilities a firm pays dividends and its size, profitability, and growth. The summary

statistic in table 4.9, as RE/TE, profitability measure (ROE) and size measure (total asset) have positive significant coefficient, meaning that the higher ratio, the higher the probability to pay dividend. From the life-cycle theory of dividends, firms with high ratio of RE/TE are good applicants for paying dividend.

This chapter presented what has been achieved for significant variables which were determined as the key factors that influenced the payment of dividends in Thai listed firms. It is also shown the analysis of closing price of each company and market index 'SETINDEX' which contained all companies' weighted price data and the daily returns in terms of percentage increase in the closing price of sequential days.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter consisted of five sections. The first section summarized the research findings. The second section discussed the details of the findings while the third section presented theoretical implications. The fourth section was managerial implications and the last part presented limitations of the study and recommendations for future research.

5.1 Summary of the Findings

Based on the significance of decision in dividend policy, this study aimed to examine dividend policy of Thai listed firms on the Stock Exchange of Thailand (SET) under the three major objectives. The first objective was to explore the announcement effect of cash dividend on stock returns for Thai listed firms. The second objective was to investigate key factors influencing dividend payout policy of Thai listed firms. The last objective was to examine how the life-cycle theory of dividend explained the dividend policy of Thai listed firms. In order to achieve the research aims, three hypotheses were suggested as follows:

Hypothesis 1: Dividend announcement affects stock abnormal returns.

Hypothesis 2: Dividend payout is a function of life cycle factors, free cash flow, firm liquidity, financial leverage, and dividend payment history.

Hypothesis 3: Dividend policy supports the life-cycle theory of dividend.

Hypothesis 1: Dividend announcement affects stock abnormal returns.

According to the hypothesis testing, it could be concluded that dividend announcement affected on stock returns by causing abnormal returns and cumulative average abnormal returns significantly. Findings also revealed that two dividend policies: (1) Dividend initiations and (2) Dividend omissions, influenced on stock returns and this could be identified as follows.

1. Dividend initiations: when a firm omitted dividend for the previous year and announced dividend payment in the current year, a significant positive abnormal return was occurred.

2. In terms of dividend omissions, when a firm paid dividend for the previous year and announced omitted dividend in current year, a significant negative abnormal return was existed.

It could be noted that the announcement of dividend payout of Thai listed firms caused abnormal returns. This reflected that the SET rapidly responded to public information. Moreover, the different dividend policies showed the different signals to investors in financial market. For instance, when there was a positive announcement of dividend payout, abnormal return might be positive. On the other hand, when there was a negative announcement of dividend payout, abnormal returns might occur negatively. In conclusion, the announcement of dividend payout might signal the future company performance to the shareholders and investors.

Hypothesis 2: Dividend payout is a function of life-cycle factors, free cash flow, firm liquidity, financial leverage, and dividend payment history.

Hypothesis testing revealed that four key factors: retained earnings, profitability, firm size, and dividend payment history had significant positive relation to the dividend payout decision of Thai listed firms. Dividend payment history had the highest coefficient value among the other factors, reflecting that it was the most influential factor for dividend payout and followed by firm size, retained earnings, and profitability respectively. However, free cash flow, growth rate, and financial leverage related insignificantly to the decision of dividend payout. Accordingly, Thai listed firms should consider carefully in four keys factors: dividend payment history, firm size, retained earnings, and profitability before making decision in dividend payout. For instance, if firms paid dividend for the previous year, firms should pay dividend in current year. Larger firms had propensity to pay dividend more than smaller firms. Firms with more retained earnings might pay more dividends the same as firms with higher profitability.

Hypothesis 3: Dividend policy supports the life-cycle theory of dividend.

The analysis of Random-effect Logit model revealed that there was a positive significant relation between retained earnings and dividend payout. This meant that firms would pay more dividends if they had high retained earnings, while firms paid fewer dividends when it had low retained earnings. Retained earnings (Earned to contribute capital mix, RE/TE) were represented as a key factor to test the relationship between retained earnings and dividend payout to determine life-cycle stage of firms.

The hypothesis testing implied that firms with high retained earnings were mature firms or in mature stage. The Life- cycle theory of dividend stated that if firms were in growth stage, they had high investment opportunity to make profit. However they had low internally generated capital until unable to pay dividend. If firms were in mature stage, they had less valuable investment opportunity, but they had high retained earnings to pay dividend to the investors in order to reduce agency cost problems. According to the hypothesis testing, it concluded that dividend policy of Thai listed firms supported the life-cycle theory of dividend.\

In conclusion, it was apparent that the three hypotheses were exposed. Hypothesis 1 presented the announcement of dividend affected stock returns reflecting from abnormal returns and it also supported the signaling theory. Hypothesis 2 explored the four key positive significant factors relating to dividend payout: dividend payment history, firm size, retained earnings and profitability. Hypothesis 3 clarified that retained earnings was a major factor determining the dividend payout which supported the life-cycle theory of dividend.

5.2 Discussions of the Findings

This research focused on key factors that related to dividend policy of Thai listed firms based on the three research questions:

1. How does dividend payout announcement impact on stock returns?
2. What are the key factors that influence on dividend payout for Thai listed firms?

3. How does the life-cycle theory of dividend explain the dividend policy of Thai listed firms?

In this section the discussion of three research questions was presented.

Research Question 1: How does dividend payout announcement impact on stock returns?

Based on the meaning of dividends described by the Securities and Exchange Commission Thailand (SEC), dividends can be explained as the proportion of firm's profits that pay to the owners. After the meeting, the board directors of the company or firm consider to pay or not pay dividend to common shareholders annually, semi-annual or quarter basis. The dividend could be in cash dividend, or stock dividend (SEC 2002a). Dividend payment rule (Sector 1201) in Thailand stated that only profitable firms could pay dividend. However, firms with loss were unable to pay dividend in spite of having retained earnings. According to the research question 1, the answer was that if there was a positive announcement of dividend payout, it caused positive abnormal returns. In contrast, if there was a negative announcement of dividend payout, it caused negative abnormal returns. The findings consistently confirmed to a number of previous studies about the impact of dividend announcement on stock returns of companies. For example, Gordon (1962), Foster and Vickey (1978), Lea (1995), and Lonie (1996) presented the positive impacts of dividend payment announcements on positive abnormal returns of stocks and also confirmed to the findings of current thesis. This research also supported work of Asquith and Mullins (1983), Dielman and Oppenheimer (1984), John and Lang (1991), Lie, et.al (2008) that financial market responded to dividend initiations and/or omissions. Furthermore, the finding showed

that dividend omissions provoked greater market reaction than dividend initiations. Additionally, the findings supported Below and Johnson (1996) that market stage significantly impacted on abnormal returns around the announcement. The change of dividend announcements also signaled more information to investors.

Research question 2: What are the key factors that influence on dividend payout for Thai listed firms?

The second question related to the analysis of the key factors influencing the dividend payout for Thai listed firms. The answer for this research question indicated that the dividend payout had a significant positive relationship with retained earnings (earned/contributed capital mix, RE/TE), profitability (ROE), firm size (LANs) and dividend payment history (previous dividend, LagDiv). Four key factors related to dividend payout of Thai listed firms could be identified into four categories as follows.

1. Retained earnings (RE/TE) referred to a representation of corporate life cycle stages. The RE/TE indicated that firms choose to self-financing or catering external capital. The findings showed that RE/TE positively related to dividend payout implying that firms with low RE/TE were in the beginning stage. On the other hand, firms with high RE/TE were in a mature stage. Accordingly, firms in mature stage catered more dividend than firms in the beginning stage due to having more retained earnings. This research also supported Lintner (1956); Fama and French (2001); Grullon et al., (2002); DeAngelo et al., (2006) that companies in a growth phase tended not to distribute dividends.

2. Profitability had been a primary factor reflecting a firm capacity to pay dividend. Many authors found a positive relationship between profitability and

dividend payout such as Lintner, 1956; Higgins, 1972; Baker et al., 1985; Gitman, 1991; Baker and Powell, 2000 in line with the results of this research. As a result, firms with the higher profitability were likely to pay dividend more than firms with lower profitability.

3. Firms size was positively related to dividend payout. Larger firms were more likely to pay dividends than smaller firms. The findings showed that dividend payout reduce the agency cost in accordance with Easterbrook (1984) and Jensen (1986).

4. Dividend payment history was positively related to dividend payout. This meant that if there was dividend payout in the previous year, dividend would be paid in the current year to meet the expectation of the shareholders and to provide good signal to the shareholders. This finding also indicated that dividend payout had been used as signaling message to investors. According to Lintner (1956), Gwilyn, Morgan and Thomas (2000), managers would pay dividend because if shareholders did not receive dividend, they would obtain less returns from investment and this current research confirmed to their studies. Most shareholders did not want capital gain because of higher risks from price fluctuation than dividend payout. Moreover, shareholders who received continuity annually dividend, they would receive more returns than other investments and this results supported Bhattacharya (1979-1980); Asquith and Mullins (1983); John and Williams (1985); Miller and Rock (1985); Healey and Paleou (1988). Also this research supported Frankfurter and Lane (1992), Frankfurter and Wood (2006) that the effect of dividend payment became a social norm. Lintner (1956) used qualitative method to explore the dividend policy in 28 corporations by interviewing

managers. They found that managers considered the amount of dividend payout relating to the benchmark of the existing dividends payment rather than the theoretical rate which also supported the current research.

It was important to realize that Thai investors preferred dividend rather than capital gain, even though they had to pay tax for dividend (SEC, 2002). Based on Thai norms, Thai investors were risk averse; therefore, before they decided to invest in the stock, they would consider the history of dividend payout and company performance in order to determine returns. In brief, the history of dividend payout was very important to the decision for dividend payment.

Research question 3: How does the life- cycle theory of dividend explained the dividend policy of Thai listed firms?

This question examined dividend policy of Thai listed firms from 2005 to 2010 in order to test the life-cycle hypotheses. Based on the relations between retained earnings and dividend policy on the context of the life cycle theory, this approach focused on firm's profitability that affected directly to dividend policy. When the firms grew up from growth stage to maturity stage over time, its proportion of earned surplus relating to the total earned equity (RE/TE) was increased. This research found that firm with current high profitability and low growth rates tended to pay dividends, whereas firms with low profitability and high growth rates tended to accumulate retained earnings in accidence with Fama & French (2001). DeAnglo et al. (2006), who created the life-cycle theory of dividend, suggested that dividend tended to be paid by the mature firms. They used the logistic regression analysis (Logit model) to estimate a possible dividends payment depended on the earned/contributed capital mix, RE/TE.

The current research supported the life-cycle theory by showing that the decision to pay dividends rely on profitability, growth, and size. Similarly, the earned equity ratios (RE/TE), a proportion of total equity and total assets, had positive influenced on paying dividend of Thai listed firms. This meant that the mature firms with plentiful earned surplus had more capability to pay dividends because they had higher probability and less attractive growth opportunities. These findings were consistent with many researches such as Denis and Osobov (2008), Shin et al. (2010) and Thanatawee (2011) who suggested that the ratio of retained earnings to equity, a proxy for life-cycle of firm, provide a positive impact on dividend policy.

5.3 Theoretical Implications

Several conflicting theoretical models described the current attempts to explain corporate dividend behavior. Life-cycle theory and Signaling theory have been criticized in explaining decision to pay dividend. This research concerned with the propensity of Thai listed firms to pay dividends and history of dividend payment that could be explained the obtainable literature and offer additional support for the findings of DeAngelo et al. (2006).

'Life- cycle theory of dividend explained a propensity to pay dividend, While firms grow up from growth stage to maturity stage, its proportion of earned surplus relative to the total equity (RE/TE) increased, that means the firms have plentiful earned surplus and able to pay dividends because they have higher probability and less attractive growth opportunities (DeAngelo et al., 2006:228).'

They found that firms had a significant positive ratio of earned to the contributed capital mix in relation to corporate dividend policy in many developed countries. Likewise, this research studied in the same issues but focused in developing countries. The findings also explained on the relationship between contributed capital mix and corporate dividend policy in line with the life- cycle theory. The findings revealed that the firm with more retained earnings should pay the dividend. Moreover, this study contributed to the Asian and Thai stock market toward life- cycle theory of dividend. It was interesting that this research observe the significant impacts of previous year dividend policy, explained that the dividends policy played role as a signaling massage. Additionally, it was found that in Thailand the previous of dividend payout was major information for Thai investors. Paid firms paying dividend last year were more likely to pay dividend this year. The results revealed that listed firms in Thailand exposed to positive abnormal returns after the dividend initiations announcement and negative abnormal return after the dividend omission announcement. It would also contribute to scholars, who were interested in dividend payment in emerging countries such as Malaysia, Indonesia and China.

5.4 Managerial Implications

This research concentrated on dividend policy of Thai listed firms. The results of this research could be used as a beginning exploration of the characteristics of Thai firms to predict dividend policy or monitor the performance of Thai listed firms. Managers and policy makers concentrating to maximize the shareholder wealth; therefore, might pay attention in making decision in dividend payment and they should

the dividend signaling. An implication of this research was to encourage managers to be aware about signaling message in dividend policy to investors about the changes in dividends payment. This study also provided some supports about the concept of life-cycle theory of dividend; for example, the firms with more retained earnings should pay dividend. This study revealed the dividend propensity; therefore, investor could choose the right stock rely on their condition in order to maximize their wealth with low risk. Investors who preferred dividend rather than capital gain could observe the performance of the firms by investigating the increased in earned equity, high profitability, large size, and high growth rate. Hence, a change in dividend policy signaled the changes in the firms' life-cycle. Furthermore, the findings in the research could be used as a guideline for the investors in investment decision making.

5.5 Limitations of the Study and Recommendations for Future Research

The limitations of this study were classified into two issues. First, this study analyzed only firms paying dividend both profitable firms, and losing firms having retained earnings. In regards to losing firms with no dividend payment, this study excluded them due to having small observations. Last, this study focused only cash dividends, whereas there were many dividend payment methods such as stock dividends, and property dividends. This was because cash dividend was a major factor reflecting the stage of a firm's life-cycle.

The future research could investigate the key factors relating to the dividend policy of the value stocks, blue chip stocks and growth stocks. Furthermore, the examination of the difference factors impacting on dividend policy among these groups

should be included. To depth insights, qualitative research should be employed to investigate the dividend policy of the losing firms having retained earnings but paying dividends. Additionally, the optimal dividend payout model of Thai firms should be conducted in the future. This might be contributed for firms'executives to perform appropriated dividend policies. Lastly, a comparative study of the determination of dividend policy should be performed among companies in ASEAN countries such as Malaysia, Singapore, and Indonesia.

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APPENDICES

Table I Descriptive Statistics of Event Window Abnormal Returns

Table I presents the descriptive statistics of the daily abnormal returns (%) which are calculated by using Market adjusted model. The table gives mean, median, standard error, standard deviation, minimum and maximum value abnormal returns within the event windows from t-10 to t+10 from the 473 firms for total 1128 event in the total period 2005-2011.

Day	Mean	Median	St. Error	St. Dev.	Minimum	Maximum
-10	0.257368	0.02199	0.068312	0.068282	-0.99613	0.988816
-9	-0.28339	-0.04207	0.091464	0.091423	-1.78811	0.952803
-8	0.741634	-0.01344	0.250441	0.250330	-1.00130	3.745911
-7	0.938496	-0.04977	0.188811	0.188727	-1.24320	3.352060
-6	-0.14228	-0.09953	0.102600	0.102554	-1.46966	1.403215
-5	0.182367	0.01397	0.077977	0.077942	-0.80458	1.396844
-4	-0.22987	0.00500	0.083585	0.083547	-1.40125	0.299434
-3	1.401387	-0.00321	0.220937	0.220839	-0.52520	4.669266
-2	-0.59239	-0.06121	0.064649	0.064620	-0.86884	0.150627
-1	-0.53111	-0.04412	0.100723	0.100679	-2.17173	0.145576
0	2.363877	0.20963	0.382057	0.381888	-0.55699	8.953216
1	0.819022	0.22693	0.112351	0.112301	-1.48896	1.678167
2	-0.15862	-0.03654	0.050827	0.050804	-0.90894	0.289646
3	-4.01978	-0.13352	0.870772	0.870386	-20.6226	0.524862
4	-1.57858	0.02013	0.374981	0.374814	-8.82542	0.270666
5	1.361894	-0.09090	0.399967	0.399789	-0.57817	0.457267
6	0.372773	-0.06145	0.138267	0.138205	-0.74859	0.609154
7	-2.77895	-0.06749	0.602920	0.602652	-14.3105	0.139226
8	-0.39670	-0.14908	0.080566	0.080530	-0.73627	1.216372
9	-0.83767	-0.20831	0.093806	0.093765	-1.06539	1.534250
10	-4.09397	0.05400	0.929010	0.928595	-21.9534	0.489757

Table II Descriptive Statistics of the sample firms.

This table present descriptive statistics for the variables used in these study. The data are mainly from BOL Corpus and the sample contains six consecutive years for the period 2005-2011 from 473 firms established in all firms. There are listed on the Stock Exchange of Thailand (SET). DIV is the dividend payout ratio; RE/TE is retained earnings over total equity. ROE is the operating income over total equity. SGR is the percentage change in total sales.CR is the current asset over current liability. Lag DIV is the previous dividend payout. FCF is the operating cash flows scaled by total assets. FLEV is Total debt over total equity. LANs is the natural logarithm of total assets.

variables	Observations	Mean	Median	S.D.
DIV	2221	0.561	0.452	0.371
RE/TE	2221	0.442	0.361	0.662
ROE	2221	0.190	0.104	0.454
SGR	2221	9.890	4.490	57.340
CR	2221	9.290	1.620	44.830
FCF	2221	0.102	0.001	0.070
FLEV	2221	1.012	0.532	2.204
LANs	2221	9.550	9.400	0.683

Table III The results based on RE Linear, RE Logit and RE Tobit of firm's decision whether to pay dividend

	All Firms							
Variable	**RE Linear**		**RE Logit**		**RE Linear +**		**RE Tobit**	
Lagdiv	0.5787	***	3.6746	***	0.5933	***	2.0514	***
fcf								
L1.	0.1255		1.0893		0.1477		0.4327	
RE/TE	0.0057	***	0.4184	***	0.0031		0.1719	***
ROE	0.0001		0.0044	***	0.0000		0.0017	*
SGR	0.0000	**	0.0000		0.0000		0.0000	
FLEV	0.0000		0.0000		0.0000		0.0000	
LNAS	0.0482	***	0.5560	***	-0.0777		-0.0237	
constant	-0.1247		-6.0773	***	0.9662	**	-1.1763	*
lnsig2u								
_cons			-0.0753					
sigma_u								
_cons							0.3229	**
sigma_e								
_cons							1.7689	***
Statistics								
N	2221		2221		2075		2075	
LL			-714.5910				-3088.0766	
F								
chi2	1513.1602		534.0583		70.6474		357.4401	
r2_o	0.5160				0.0415			

Note: From Logit analysis ,dependent variable is a dummy variable equal to 1 for dividend paying firms and 0 for no-paying firms the value reported statistical significance at the 0.01 (***), 0.05 (**) and 0.10 (*) levels.

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Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and beliefs, contains on material previously published or written by another person, except where due reference has been made in the text.

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Thanwarat Suwanna