

Table of content

<u>Abstract</u>	2
<u>Introduction</u>	3
<u>Literature Review</u>	9
<u>Theoretical Framework</u>	17
<u>Hypothesis</u>	20
<u>Data, Scope of Study and Limitation</u>	22
<u>Methodology</u>	23
<u>Results and Analysis</u>	25
<u>Conclusion</u>	37
<u>Reference</u>	41
<u>Appendix 1</u>	42
<u>Appendix 2</u>	43
<u>Appendix 3</u>	44

**A CATERING THEORY OF DIVIDENDS:
(EVIDENCE FROM LISTED COMPANIES IN THAILAND)**

Abstract

In this paper, I examine the impact of the investor's demand of a dividend payment in the management's decision to pay dividend. I expect that managers cater investors by paying dividends when investors add a dividend premium in stock price and by not paying when the dividend premium is negative. To test this prediction, I find the dividend premium to measures of investor demand for dividend. The results show that on average, firms tend to initiate dividends when demand is high or dividend premium is positive and omit dividends when demand is low or dividend premium is negative. I have used the regression analysis to test the relationship between the rate of dividend initiation, dividend premium and other variables. I find that dividend premium has a significant relation to rate of dividend initiation especially in the case of high book asset firms and not so significant for low book asset firms. Other variables that can help to explain the catering theory is dividend yield and ratio of the market to book value for nondividend paying firms which are significant in relation to rate of dividend initiation.

Introduction

Why firms pay dividends is always an interesting question. In a perfect market, where firms are transparent and investors can clearly see how a business will perform today and in the future, and where there are no taxes, bankruptcy costs, or transaction costs, dividend policy does not matter. What matters for firm value are expected earnings and business risk, as Franco Modigliani and Merton Miller demonstrated in their classic 1961 paper. Modigliani and Miller show that the way a company splits its earnings between dividends and retained earnings affects nothing. That means shareholders gain nothing from the management of dividend. If a firm stops to pay dividend, any shareholder who prefers cash can obtain it by selling some of his shares at no cost. Conversely, if a firm is paying dividends, a shareholder who does not want to hold cash can undo the dividend payment by reinvesting it.

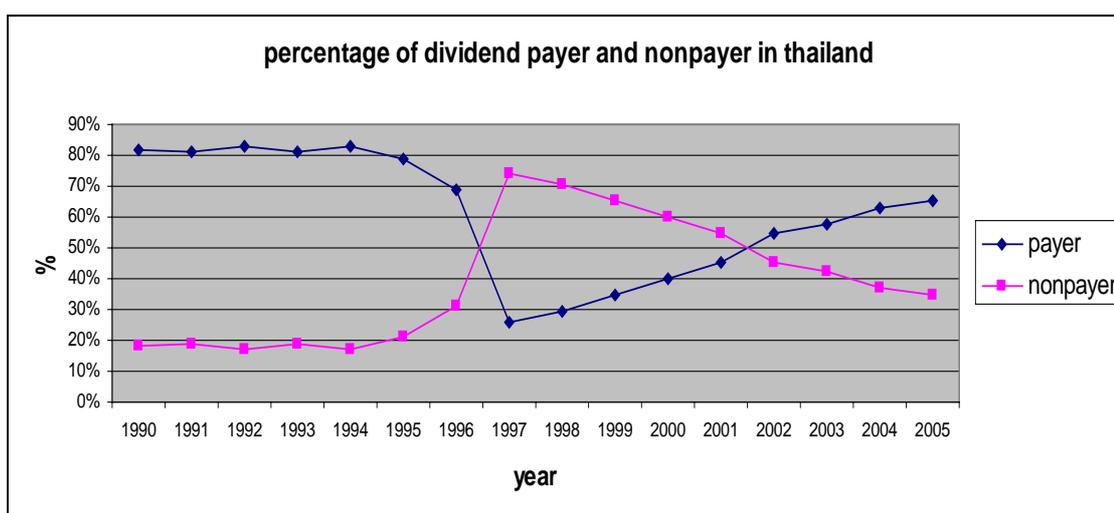
In the real world where financial markets do not come close to the strict conditions of perfect capital, many studies try to explain why investors pay attention to dividends and what factors management use in determining dividend policy. Normally, dividend theory can be divided into three principle theories: first is the dividend irrelevance theory in which Miller and Modigliani claimed that dividend policy does not matter. What matters for firm value are expected earnings and business risk. Second, The bird in hand theory which Gordon claimed that investors prefer receiving current dividend to uncertain capital gain from stock price in the future. Third, the tax preference theory in which dividends are taxed more highly than capital gain. Therefore, investors who have high tax bracket want to defer tax payment by investing in nondividend paying stock. However there are many interesting ideas in behavioral finance involving dividend policy such as signaling hypothesis and dividend clientele. In signaling hypothesis, it is a well-known fact that corporations are extremely reluctant to cut dividends and, therefore, managers do not raise dividends unless they anticipate higher, or at least stable, earnings in the future to sustain the higher dividends. This means that a larger than expected dividend increase is taken by investors as a signal that the firm's management forecasts improved future earnings, whereas a dividend reduction signals a forecast of poor earnings. Aivazian, Booth and Cleary(2002)

study about signaling, dividends and financial structure for 8 developing countries including Thailand and compare with firms in US during 1980 - 1991. When they measured the basic institutional information on macro financial variables and the level of development of stock markets by using real growth rate and the ratio of stock market capitalization to GDP as indicators, they found that Thailand is one of the two highest growth countries and had the most dramatic jump in stock market capitalization from 3.9 percent of GDP to 17.4 percent of GDP. With this result, they concluded that Thailand had a high developed securities market. However, when they measured the overall of the quality of governance of the economy and corruption, Thailand had a high corruption level and low quality of governance of the economy. Therefore offsetting its high ranking on equity and financial intermediary development, Thailand scored very poorly on governance structure, indicating a large degree of corruption, red tape and an inefficient legal system. When this data is combined with only adequate accounting and investor protection, it indicates a poor environment in Thailand for firms to consider financial policies as signals for future economic performance. Moreover, they observed that the average dividend payout of Thailand is higher and EPS/DPS volatility of Thailand is lower than the US. These results support their hypothesis that dividend variability is generally less than earnings variability and the dividend smoothing hypothesis. But after regress the dividend change with current earning and previous dividend payment, the result showed that the model does not work well for Thailand. It implies that dividend in Thailand is not sensitive to current earnings and prior dividend payments. It may be because of Thai markets are characterized by corruption and lax governance structures and Thai firms are relative less indebted.

In a clientele model, different types of investors hold different types of assets depending on their situations such as tax environment, self control problem and catering incentive. For the catering idea, it has been applied to dividend policy by many researchers. Long (1978) provides some early motivation for this application. He finds that shareholders of Citizens Utilities put different prices on its cash dividend share class as compared to its stock dividend share class. In addition, this relative price fluctuates. The unique experiment suggests that investors may view cash dividends as a salient characteristic, and in turn raises the possibility of a catering motive for paying them. Baker and Wurgler (2004a)

outline and test a catering theory of dividends in aggregate US data between 1963 and 2000. They find that firms initiate dividends when the shares of existing payers are trading at a premium to those of nonpayers, and dividends are omitted when payers are at a discount. To measure the relative price of payers and nonpayers, they use an ex ante measure of mispricing they call the “dividend premium.” This is just the difference between the average market-to-book ratios of payers and nonpayers. They also use ex post returns, and find that when the rate of dividend initiation increases, the future stock returns of payers (as a portfolio) are lower than those of nonpayers. This is consistent with the idea that firms initiate dividends when existing payers are relatively overpriced. The evidence suggests that the dividend supply responds to catering incentives or “dividend clienteles”. However, in US data, the dividend premium is unrelated to the tax disadvantage of dividend income.

In Thai stock market, for period 1990-1996, the percentage of dividend payer more than nonpayer and after the economic crisis in Thailand (for period 1997 – 2001) percentage of nonpayer is more than dividend payer. However, after a sharply decrease of the percentage payer in 1997, I observe that the propensity to pay dividend by the listed companies in Thailand has gradually increased.



As Bager and Wurgler claimed that the results from catering dividend model are better explanations than other theories of dividends. It is interesting to

apply catering theory of dividend to test whether catering theory can explain behavior of management decision for dividend policy and investor demand for dividend in Thai companies. I would like to study catering dividend theory in Thailand because the characteristics of Thai companies and US companies are different in term of dividend policy structure, ownership structure, tax and regulation. In Thailand, dividend policy can be divided in to two types. First, for private firms, there is no certain type of dividend payout policy. It depends on the decision of major shareholders. Second, for listed firms, most of their dividend payout policy was set as a percentage of net income which is in contrast with dividend payout policy of listed companies in US (financial and utilities companies always pay dividend to investors but non-financial companies can omit dividend when they want to keep it for investment other projects and other reasons) . For ownership structure in Thailand, there are evidences to show that the degree of ownership concentration is high. Largest shareholder are also controlling shareholder. These controlling shareholders not only control the vote but control the management of the companies. For tax and regulator, revenue department in Thailand allow investor to use tax advantage from tax credit when they have to evaluate personal tax for the year. Therefore benefit form tax advantage in Thailand makes behavior of Thai investors different from US investors. In US, dividends are tax much higher than capital gain so US investors with high tax bracket often buy low dividend stocks consistent with tax preference theory while in Thailand, Thai investors like to buy dividend stocks because they can get benefit from tax credit and cash dividend which is consistent with bird in hand theory, tax preference theory and dividend clientele theory. I expect the catering theory of dividends should explain investor behavior in Thailand involve investment for cash dividend as well as in US.

This catering theory of dividends is a new descriptive theory of dividend policy. They point out the importance of market demand for dividends and manager's dividend policies. The effect of a firm's dividend policy on the current share price is a matter of considerable importance, not only to the corporate officials who must set the policy but to investors planning portfolios and to economists seeking to understand and appraise the functioning of the capital market. So if we can find the relationship between the dividend premium ,

propensity to pay dividend and the stock price, it is a benefit to investors to forecast the propensity to pay dividend and predict the firm's future stock returns precisely, and then investors can choose the right firms to their portfolio.

To study the propensity to pay dividends that depends on a dividend premium (or discount) in stock price, I reexamine the model of Baker and Wurgler (2004) to find the relationship between dividend premium and stock price of Thai Listed Companies. From this model, I use time series analysis for dividend premium. The definition of dividend premium is the difference between the average market-to-book ratio of dividend payers and nonpayers. Intuition suggests that the dividend premium and rate of dividend initiation are positively related to existing excess demand for payers. To study what other factors can explain propensity to pay dividend, I add the factor of dividend yield and market to book value of nonpaying firms in the equation and using the time series analysis to see the relationship between dividend premium, dividend level, market to book value of nonpaying firms and propensity to pay dividend. To study whether size of book asset can explain the propensity to pay dividend, I divide data into two groups by median of book asset value, find dividend premium of each group and use regression analysis. Intuition suggests dividend premium can explain firms that have more book asset value better than another group.

There are many sources of investor demand create the dividend premium that attracts payers. Black and Scholes (1974) discussed about dividend clienteles, which are generated by taxes, transaction costs, or institutional investment constraints. Understanding whether dividend clienteles exists is important for several reasons. First, if clienteles exist, they could affect optimal corporate financial decision. Second, dividend clienteles can affect stock activity, and asset prices. Moreover, if clienteles affect stock prices, this could have a feedback effect on managerial decisions. Brave, Graham, Harvey and Michaely (2005) document that financial executives are hesitant to make big changes to payout policy because such changes might alter a company's investor base and negative affect its stock prices. Another possible reason is that the dividend premium is driven by sentiment. When the dividend premium is high, investors are seeking safety firms,

including dividend payment. When it is low, investors prefer growth firms with maximum capital appreciation, which means no dividends.

From Behavioral Corporate Finance (Shefrin), there is some changing attitudes of investors and analysts about dividends in recent year. Both tax and risk considerations provide reasons why managers reconsider their dividend policies to cater investors demand. One way to verify whether or not the stocks of dividend-paying firms are priced differently from non-dividend paying firms is comparison book to market ratios. If investors prefer cash dividends, then it would expect the stocks of dividend paying firms to have higher market values and therefore lower book to market equity than those of non dividend paying firms. Dividend increases occur after past earnings have improved, and stock prices respond positively to announcements about dividend increases. There are strong evidences to show that firms which increase dividends are less likely to suffer future earnings decreases than firms that maintain dividend payouts. On the other hand, most firms that omit dividends are prior losers. It is reasonable to predict that the market would overreact to the news of a dividend omission. The reaction to dividend initiation is increasing in stock price but the magnitude of the effect is half as large as it is for dividend omissions. Asquith and Mullins (1983) showed that the market reacts significantly to dividend announcements. The average excess return is about 3 percent for initiation and -7 percent for dividend omissions.

Literature Review

Several studies provide information about dividend policy. Asquith and Mullins (1983) studied the effect of dividends on shareholders' wealth by analyzing 168 firms that pay the first dividend after 10 year break. They hypothesized that dividends effects should be most visible at initiation. If dividend initiation is unexpected, the market reaction on announcement date should be fully effect. Their study regard to the factors that may have a positive wealth effect and negative wealth effect. They find for their sample that initiating cash dividends is associated with a significant positive excess return and the average market response to initiation is larger than the average effect of large subsequent dividend increases even when there is no other information released. Moreover, the results support the hypothesis that on average, any negative wealth effect is offset by positive wealth effect. The part of excess return of initial dividends is due to the increase in dividend yield that consistent with signaling theory in that the market reaction is significantly related to the size of the dividend change.

Baker, Farrelly and Edelman (1985) surveyed management views on dividend policy by using a mail questionnaire that was sent to CFOs of 562 firms. Their objectives were to examine how well Lintner's model describes current practices and to examine management's perception of signaling and clientele effects. Their questionnaire consisted of statements about the importance of various factors that each firm used in determining its dividend policy and the statements about theoretical issues involving corporate dividend policy. For the first objective, the results showed that the anticipated level of a firm's future earnings and the pattern of past dividends are considered most important determinants that consistent with Lintner's findings. However, the availability of cash and the maintaining or increasing stock price are the important determinants that management concerned but Lintner model did not address (Lintner's work (1956) found that major changes in earnings were the most important determinant of the company's dividend decision and firms tend to make periodic adjustments dividend rather than dramatic changes because managements believe that shareholders preferred to get smooth dividend). For the second objective, the statement involving signaling effects, dividend payout affects on common stock prices, was

strongly agreed by the management. The statement involving clientele effects had mixed agreement. Management agreed that investors have different perceptions of the relative risk of dividends and retained earnings and also different between dividend and capital gain. However, there was slight agreement that shareholders preferred dividend to their tax environment.

Black Fisher (1996) found that the answer to the question why firms pay dividend is not obvious at all. The dividend picture seems like a puzzle with pieces that do not fit together. Under M&M theorem, a firm paying no dividends has the same value it would have if it paid dividends. However, in the countries where dividends are taxed more heavily (for the most investors) than capital gain, and where capital gains are not taxed until realized, investors and corporations prefer smaller dividends or no dividends. When dividend value change, the means of dividend change or not change may tell investors more about the news that managers do not say explicitly than explain why firms pay dividends. Lastly, for the Black and Scholes empirical test, they think that if investors do demand dividends, then firms should not eliminate all dividends but their results are unable to show whether investors who prefer dividends or investors who avoid dividends have a stronger effect on the pricing of securities. So it is difficult to tell whether investors demand dividend or not.

Many studies search for evidence of economic determinants and propensity to pay dividend. Tao Zeng (2003) investigated the determinants of corporate dividend policy under the Canadian situation by using Static technique and regression analysis. The result showed that firms pay dividend as a signal and to reduce agency costs. It also shows that liquidity and tax clientele effect are related to dividend policy. With the tax clientele hypothesis: firms paying dividends have significantly higher institutional ownership than firm not paying dividends, and the individual ownership for paying dividend firms is lower but not significantly than non-paying dividend firm. Firm size is significantly positively related to dividend per share or dividend yield. When firm size is positively related to agency cost, then larger firms have larger agency cost and more likely to pay dividends to reduce this cost. Dividend payoff can explain share price as well as the

combination of earnings and cash flow. Pay-dividend firms have significantly lower investment/cash flow ratio and leverage.

Graham and Kumar (2003) studied about trading behavior of retail investors and found evidence consistent with dividend clienteles. The results show that the retail investor has a preference for dividend stock that increase with age and decrease with income, consistent with age and tax clienteles. They find that, as a group, retail investors prefer non dividend paying stocks over dividend paying stocks. However, within the group, older and low-income investors prefer dividend paying stocks with high dividend yield over low dividend yield. From regression test, age has a positive and significant coefficient but the coefficient of income is negative and statistically significant. After examine the trading behavior around dividend events, they find that on average older investors buy dividends prior to the ex-date, while young investors wait until after the dividend is assigned. Older and low-income investors are net buyers before the ex-dividend date, they have abnormal buying behavior following dividend announcement and increase their holding following dividend initiations. These results are consistent with age clientele trading

Fama and French (2000) studied the characteristics that affect the disappearing dividends of listed companies in US. From 1963 -1999, the percent of firms paying dividends declines sharply after 1978. In 1973, 52.8% of non-financial non-utility firms pay dividends. The proportion of payers rises to 66.5% in 1978 and then falls to only 20.8% in 1999. They found that three characteristics affect the decision to pay dividends: profitability, investment opportunities, and size. Larger firms and more profitable firms are more likely to pay dividends. Dividends are less likely for firms with more investments. The summary statistics provide details on the nature of dividend payers, former payers, and firms that have never paid. Former payers tend to be distressed. They have low earnings and few investments. Firms that have never paid dividends are more profitable than former payers and they have strong growth opportunities. Dividend payers are more profitable than firms that have never paid. But firms that have never paid invest at a higher rate and have a higher ratio of the market value of assets to their book value) than dividend payers. The investments of dividend payers are on the order of pre-interest earnings, but the

investments of firms that have never paid exceed earnings. Finally, payers are about 10 times as large as non-payers. Moreover, the decline after 1978 in the percent of firms paying dividends is due in part to an increasing the characteristics of firms that have never paid - low earnings, strong investments, and small size. Newly listed firms always tend to be small, with extraordinary investment opportunities. What changes after 1978 is newly listed firms profitability. Before 1978, new lists are more profitable than other firms. In 1973-77, the earnings of new lists average a heavy 17.79% of book equity, versus 13.68% for all firms. The profitability of new lists falls throughout the next 20 years. The earnings of new lists in 1993-98 average 2.07% of book equity, versus 11.26% for all firms. The decline in the profitability of new lists is accompanied by a decline in the percent of new lists that pay dividends. During 1973-77, one-third of newly listed firms pay dividends. In 1999, only 3.7% of new lists pay dividends. The surge in numbers and the changing nature of new lists produce a enlargement group of small firms with low profitability but large investments that have never paid dividends. This group of firms is a big factor in the decline in the percent of firms paying dividends. The characteristics of dividend payers (large, profitable firms) do not change much after 1978. Like profitability, investment opportunities differ across dividend groups. Firms that have never paid dividends have the best growth opportunities. They have much higher asset growth rates for 1963-98 (16.50% per year) than dividend payers (8.78%) or former payers (4.67%). The R&D expenditures of firms that have never paid are on average 2.76% of their assets, versus 1.61% for dividend payers and 1.03% for former payers. Thus, though firms that have never paid seem to be less profitable than dividend payers, they have better growth opportunities. During 1963-67, the assets of payers average about eight times those of non-payers. In the non-payer group, former payers are about three times the size of firms that have never paid. During 1993-98, the assets of payers average more than 13 times those of non-payers.

Baker and Wurgler (2002) investigated the causes of time-series fluctuations in the propensity to pay dividends between 1963 and 2000. The basic theme is that variation in the propensity to pay is driven by corresponding variation in the underlying market imperfection or inefficiency. They considered explanations based on fluctuations in dividend clienteles, agency problems,

information asymmetry, executive stock options, catering incentives, tax code awareness and short-lived idiosyncratic factors. (1) The agency cost explanation proposes that the need for dividends to pay free cash flow varies inversely with the effectiveness of governance mechanisms. (2) The asymmetric information explanation proposes that the propensity to pay dividends varies with the need to signal inside information. (3) Clientele equilibrium theory, proposes that changes in dividends are related to changes in the size of traditional dividend clienteles, and the related (4) Catering theory proposes that the incentive to pay dividends depends on whether existing payers are at a stock price premium or discount to nonpayers. (5) Executive stock option compensation may have created a bias against paying dividends. Finally, (6) it may take time for managers to appreciate the tax disadvantages of dividends. Their study began with reviewing New York Times article between 1969 and 2001 that involve dividend to verify that the general explanation is complete. They found many articles refer to tax-based clienteles, catering to investor sentiment for dividends and slow learning about taxes related to dividend policy. After that, they used time series analysis between the propensity to pay and variables. Overall, the results indicate that the propensity to pay dividend was influenced by a combination of catering incentives and idiosyncratic factors such as Nixon dividend control.

Since they found that a catering incentive or dividend premium can explain the propensity to pay dividend better than other variables, Baker and Wurgler (2003a) propose a new dividend theory. They suggested that investor demands for dividend-paying stocks affect the prices of dividend-paying and non-dividend paying stocks to fluctuate. Managers do cater to time-varying investor demand in an effort to maximize current share price. Therefore, they cater to investor demand for dividends by paying dividends when investors place a premium on dividend-paying stocks, and vice versa. Consistent with their theory, they examine whether the aggregate rate of dividend initiations and omissions are connected to the dividend premium. The results show that aggregate dividend initiations are positively related to their dividend premium and dividend premium is a significant predictor of the initiation rate.

Baker and Wurgler (2003b) try to link between fluctuation in the propensity to pay dividends and catering incentives. Their samples consisted of firms between 1963 and 2000 exclude firms with equity below \$250,000 and assets below \$500,000 and exclude utilities and financial firms. The results showed that dividends tend to disappear during booms in growth stocks and reappear after crashes in those stocks. The dividend premium tends to be negative, and the propensity to pay tends to decrease, when sentiment for growth stocks (nonpayers) is high in the late 1960s and late 1990s. The demand appears to favor the safe return on payers, the dividend premium rises and dividends appears in the mid 1960s, early to mid 1970s and the early 2000s. They summarized that dividend premium accurately predicts both initiation and continuation of the trend in the propensity to pay dividend and there is no case in which changes in the propensity to pay predate changes in the dividend premium and only one period in which the lag time was substantial.

Wei Li and Lie (2006) extended Baker and Wurgler's catering theory to include a continuous dividend level since Baker and Wurgler's empirical model explain why some firms initiate or omit dividends but it cannot explain why firms change their dividend levels. The results showed that both the probability of dividend decreases and increases and the magnitude of the dividend changes are related to the dividend premium as predicted by the model. The probability that a firm decreases its dividend is higher when the dividend premium is low and the probability that a firm increases its dividend is higher when the dividend premium is high. Moreover, the magnitude of dividend decreases is greater when the dividend premium is low and the magnitude of dividend increases is greater when the dividend premium is high. They also found that the announcement returns for dividend decreases are negatively related to the dividend premium and that the announcement returns for dividends increases are positively related to the dividend premium. These results are consistent with the predictions of the dividend catering theory.

Lie, E. (2004) incorporated Baker and Wurgler's (2004a) dividend catering theory into the analysis. In particular, they examined whether firms tendency to increase dividends to meet dividend demand obscures the results on performance changes. They partition the sample into 3 groups based on the dividend premium at the time of the dividend announcements, and compare the performance changes across the groups. The mean (median) performance change from year 0 to year +1 is 0.016 (0.007) for the lower dividend premium group, 0.010 (0.005) for the middle group, and 0.008 (0.004) for the upper dividend premium group. The results indicate that the unexpected subsequent performance improvement decreases with the dividend premium. The differences are also economically significant; the first group (with low dividend premium) exhibits a performance improvement that is at least twice as large as that for the third group (with high dividend premium). They also regress future earnings changes against control variables and a dividend increase dummy for each of the years in their sample. The correlation coefficient is -0.6, which is both economically and statistically significant. These results suggest that dividend increases indicate a greater performance improvement if the dividend premium is low. Thus, if a firm raises its dividends despite a relatively low investor demand for dividends, a stronger signal about future prospects is visible. The results in this study provide new evidence in support of both the signaling theory and Baker and Wurgler's catering theory of dividends. Managers appear to consider both future performance changes as predicted by signaling theory and investors' demand for dividends as predicted by the catering theory when raising dividends. Because these considerations act as substitutes, the evidence of future performance improvement is stronger among firms that do not raise dividends merely to meet investor demand.

Mia and Chin-Hsiang from Cheng-Chi University used part of model of Baker and Wurgler (2004) to find the importance of dividend premiums in determining managers' catering to dividend demand of firms in 31 countries from 1998 to 2000 including Thai stock market. They found that the importance of dividend premiums in determining managers' catering to dividend demand increases with the development of stock market, the degree of investor protection and the tax disadvantage of dividend income but decreases with the ownership concentration. For Thai capital market, when compare dividend premium with

percentage of dividend payer , dividend premiums and percentage of dividend payer are the same trend that is when dividend premium is negative, investors prefer nonpayer more than payer and manager cater to investor by not paying dividend. However, Mia and Chin-Hsiang's research doesn't explain in detail about their result and characteristic of Thai capital market.

Theoretical Framework.

In order to focus in dividend policy, there has been a great deal of financial, economic, as well as accounting literature analyzing why firms pay dividends, given the fact that effective tax rate on capital gains lower than the effective tax rate on dividends. Researchers have been taken to figure out the benefits from paying dividends, which may compensate the tax disadvantages. The benefits from pay dividends or the reasons justifying dividend payoff are summarized as follows:

1. Tax clientele

Dividends and capital gains are taxed differently among various types of investors, individual investors, corporate investors, and tax-exempt or tax-deferred investors. Tax clienteles prefer different dividend policies and investors may attach to firms that have dividend policy appropriate to their particular tax circumstance. For example, corporate investors, whose dividends are taxed at a lower rate than capital gains, may prefer high dividend payout ratio: on the other hand, high-income individual investors, whose dividends are taxed at a higher rate than capital gains, may prefer low dividend payout ratio. Litzenberger and Ramaswamy (1980) presented evidence that seems consistent with a tax-induced clientele effect. A clientele effect exists in the economy when investors in higher (lower) tax brackets buy stocks with low (high) dividend yield. L&R assumed that a larger dividend yield coefficient implies higher investors' marginal tax rates.

2. Agency cost

Dividends provide a mechanism for restricting managerial discretion. It reduces the agency costs of free cash flow by cutting down the cash available for spending, and hence provides some protections to the firm against management. If firm size is positively related to diversification and decentralization, then the larger the firm, the less observable the action of management and the higher agency costs may be incurred. Also, Gaver and Gaver (1993) argue that when the firm growth opportunities increase, the observation of managerial action decrease. It is difficult for outsiders like shareholders, without inside information and specified knowledge of managers, to determine the growth opportunities available to the firm. In

contrast, maintenance and supervision of existing assets are more readily observable.

Based on agency costs, the two explanations for dividends suggested by Easterbrook (1984) imply three relationships between the dividend policies and characteristics of firms.

- Firms that have large shareholders have less need for monitoring by outside professionals. Large shareholders have strong incentives to monitor managers tightly themselves. Accordingly, these firms normally have low dividend payouts.
- Firms with low levels of debt will suffer little if managers reduce leverage. Therefore shareholders of firms with low leverage have little demand for dividends as a way of maintaining leverage. Accordingly, these firms such as high-growth firms are expected to pay low dividends.
- Firms with high leverage also are those where value shifting is potentially costly. These firms are expected to pay large dividends. In other words, Easterbrook's analysis suggests a positive relationship between leverage and dividend payout.

Jensen (1986) suggests another argument based on agency costs for the desirability of dividends. The starting point is that managers cannot be perfectly monitored and cash is the asset that managers can misuse most easily. Manager with large balances of excess cash may use this cash in ways not in shareholders' best interests. Jensen's analysis implies that dividends, which extract surplus cash from management control, benefit shareholders.

Agrawal and Jayaraman (1994) reported that the dividend payout ratios of all equity firms were significantly more than the dividend payout ratios of leveraged firms. They also compared firms within the group of all equity firms where managers have significant share holdings to firms in which managers have little equity stake. They reported that firms with high managerial shareholdings have lower payout ratios than firms with low share holdings. Overall, the results suggest that dividends do serve as a means to reduce the conflict of interest between managers and shareholders regarding the use of free cash flows.

3. Signaling

Dividends are paid to communicate information to investors about firm future prospects. Under information asymmetry, insiders are better informed than outsider investors. If managers have information that outside investors do not have, they may use dividends as a way to signal this private information and reduce information asymmetry. Dividends may affect firm market value because they may signal favorable inside information. Hence insider will pay dividends to communicate information and achieve a higher market price for the stocks.

Ofer and Thakor (1987) and Brennan and Thakor (1990), also addressed a firm's choice between cash dividend and share repurchases. Their works showed that share repurchases also have a disadvantage in that informed investors can wait from selling underpriced stocks back to the firm and sell when stocks are overpriced. Therefore, share repurchases suffer from the costs of adverse selection.

4. Corporate liquidity

Liquidity requirement may also affect firms' dividend decisions. A high degree of liquidity might be expected to encourage dividends by paying high dividends without require external finance. Firm's free cash flows may be used as an indicator of firms' liquidity, high degree of free cash flow encourage high dividend payments, if leverage is used as one indicator of the financial distress, and positively related to the costs of financial costs, when the firm's leverage ratio is high, and dividend payoff may increase financial distress, firms may reluctant to pay dividends. To increase liquidity, firms might lower dividend payments.

Myers (1984) acknowledges that the pecking order model does not explain why firm pay dividends. But when firms choose to pay dividends, pecking order considerations should affect dividend decisions. Since it is expensive to finance investment with new securities, dividends are less attractive for firms that have large current and expected investments, and high leverage. Thus, controlling for other effects, more profitable firms pay out more of their earnings as dividends. But the payout ratio is negatively related to investment opportunities and leverage. Later, Higgins (1972) found that dividends varied positively with earnings but negative with investment.

Hypothesis

For the purpose of this paper's studying on dividend premium and propensity to pay dividend, I first examine the market response at the end of calendar year. The key variable of this studying is dividend premium. It is the difference in the logs of the average market to book ratios of payers and nonpayers. The market-to-book ratio is book assets minus book equity plus market equity all divided by book assets. Then take equal- and value-weighted averages of the market-to-book ratios separately for payers and nonpayers in each year. The final dividend premium series are the difference of the logs of these averages. I define payer if the firm has positive dividends per share by the ex date, or else it is a nonpayer

Besides, examine whether observed dividend premium are related to the aggregate rate of dividend initiations and omissions. Since dividend premium arises from investor demand for dividend payment, intuition suggests that rate of dividend initiation increase when dividend premium is high and omission rate increase when dividend premium is low. To test this hypothesis the variables which relate to the propensity to pay dividend are investigated. They include rate of dividend initiation (the fraction of surviving nonpayers that become new payers), continuation rate (the fraction of surviving payers that continue paying).

$$Initiate_t = \frac{New\ Payers_t}{Nonpayers_{t-1} - Delist\ Nonpayers_t}$$

$$Continue_t = \frac{Old\ Payers_t}{Payers_{t-1} - Delist\ Payers_t}$$

where

$$Payerst = New\ Payerst + Old\ Payerst + List\ Payerst, \text{ and}$$

$$Old\ Payerst = Payerst-1 - New\ Nonpayerst - Delist\ Payerst$$

Payers is the total number of payers, *New Payers* is the number of initiators among last year's nonpayers, *Old Payers* is the number of payers that also paid last year, *List Payers* is the number of payers this year that were not in the sample last

year, *New Nonpayers* is the number of omitters among last year's payers, and *Delist Payers* is the number of last year's payers not in the sample this year.

Regresses dividend payment measures on the lagged demand for dividends measures

$$Initiate_t = a + bP_{t-1}^{D-ND} + u_t,$$

$$Continue_t = a + bP_{t-1}^{D-ND} + u_t,$$

where, *Initiate* is the rate of initiation, P^{D-ND} is the market dividend premium (value-weighted or equal-weighted). The initiation rate *Initiate* expresses payers as a percentage of surviving nonpayers from $t-1$. The continuation rate *Continue* expresses payers as a percentage of surviving payers from $t-1$. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers.

To study whether the investment opportunities explain propensity to pay dividend, two potential measures of investment opportunities are the average market to book of the firm and the average dividend yield. Intuition suggests that nonpayers are less likely to initiate dividend when their average market to book is high and when the overall dividend yield is low

$$Initiate_t = a + bP_{t-1}^{D-ND} + c\frac{M}{B}_{t-1} + d\frac{D}{P}_{t-1}$$

$$Continuation_t = a + bP_{t-1}^{D-ND} + c\frac{M}{B}_{t-1} + d\frac{D}{P}_{t-1}$$

where P^{D-ND} is the market dividend premium (value-weighted or equal-weighted). M/B is the VW market-to-book ratio averaged across nonpayers and D/P is average dividend yield is from SETSMART.

To study whether book asset has effect to determine propensity dividend, I divide data into two groups and measure dividend premium for each group. I expect dividend premium of the group that has more book asset value should explain propensity to pay dividend better than another group. I assume that size of firm

represents the ownership concentrate. Shareholder of high book asset value should have less power in managing dividend policy of that firm so dividend premium of this group can explain propensity to pay dividend or initiation rate as well.

Data, Scope of Study and Limitation

The sample of this study consists of listed companies in the stock exchange of Thailand during 1997 to 2005. The observations include those firms with calendar year ends in t that have the following data: Total assets, stock price, liabilities, dividend yield and shares outstanding at the end of the year. Firm is defined as a payer if it has positive dividends per share by the ex date, or else it is a nonpayer.

The limited and unavailable information has caused some difficulties in obtaining the data for the study. In order to preserve the consistency and accuracy in data collection, I define sample criteria as follows:

- Firm must be listed in Stock Exchange of Thailand
- Firm must have closing price at the end of the year
- Dividend payment in my study is only cash dividend
- Model of Baker and Wurgler based on imperfect capital market assumption

Methodology

A Simple Model

From paper of Bager and Wurgler (2004), consider a firm with Q shares outstanding. At $t = 1$, it pays a liquidating dividend of $V = F + \varepsilon$ per share, where F is the expected fundamental value of the firm and ε is a normally distributed error term with mean zero. At $t = 0$, the manager choose to pay an interim dividend $d \in \{0,1\}$. This dividend reduces the liquidation value by $d(1+c)$, where c is the unit cost of issuing the dividend. There are two types of investors, category investors and arbitrageurs that have aggregate risk tolerance per period are γ^C and γ^A respectively. Like Baker and Wurgler model, I assume that the category investors misestimate the mean (but not the variance) of the liquidation distribution and they fail to recognize the cost of issuing the dividend. Thus, they expect a payment of $E^C(V) = V^D$ from dividend payers and V^G from nonpayers, which they view as growth firms.

At time $t = 0$, demand from investor group k , where $k = C$ for the category investors or A for arbitrageurs is

$$D_0^k = \gamma^k (E^k(V) - P_0)$$

where $E^C(V) = V$ and $E^A(V) = F - cd$. The market clearing condition, $D_0^C + D_0^A = Q$, lead to the price

$$P_0 = \begin{cases} P_0^D \equiv \frac{\gamma}{\gamma + \gamma^A} V^D + \frac{\gamma^A}{\gamma + \gamma^A} (F - c) - \frac{Q}{\gamma + \gamma^A} \\ P_0^G \equiv \frac{\gamma}{\gamma + \gamma^A} V^G + \frac{\gamma^A}{\gamma + \gamma^A} F - \frac{Q}{\gamma + \gamma^A} \end{cases}$$

Given these prices, the manager chooses dividend policy. In particular, suppose that the manager is risk neutral and cares about both the current stock price and the fundamental value of total distributions. The manager has no control over total distributions except through the cost parameter c . With his horizon measured as λ , the manager's maximization problem is:

$$\max_d (1 - \lambda)P_0 + \lambda(-dc)$$

The manager pays dividends if the dividend premium exceeds the present value of the long-run cost that he incorporates. That is, when

$$P_0^D - P_0^G \equiv \frac{\gamma}{\gamma + \gamma^A} (V^D - V^G) - \frac{\gamma^A}{\gamma + \gamma^A} c \geq \left(\frac{\lambda}{1 - \lambda} \right) c.$$

The first term in the middle is the immediate positive price impact of switching categories. The second term is the immediate negative price impact of the arbitrageurs' recognition of the cost of paying dividends. To induce payment, the net of these must exceed the long-run cost that the manager incorporates, the term on the right. Qualitatively, the propensity to pay dividends is decreasing in c , increasing in the dividend premium, decreasing in the existence of arbitrage, and decreasing in managers' horizons. The announcement effect of a dividend initiation is positive and increasing in the dividend premium. This simple model illustrates the basic tradeoffs in dividend catering. A robust conclusion is that the propensity to pay dividends is increasing in the dividend premium, and decreasing in the long-run costs of paying dividends.

Results and Analysis

I undertake two exams to see whether the catering theory of dividends hold in Thai listed companies. First, I measure dividend premium for the year 1997 – 2005. Second, I use regression analysis to test whether the propensity to pay dividend is related to dividend premiums Third, I add two variables – market to book ratio of nonpayers and dividend yield into the equation and use regression analysis to test whether the propensity to pay dividend is related to dividend premium, market to book ratio of nonpayer and dividend yield for overall listed companies. Forth, I categorize the listed companies into large and small book asset value groups according to the median of book asset value and then use regression analysis to test whether the propensity to pay dividend is related to dividend premiums and other variables for each group.

First, I find the dividend premium by taking equal and value weighted averages of the market to book ratios for payers and nonpayers in each year. The dividend premium is the difference of the log of these averages. Table 1 reports dividend premiums for year 1997 to 2005. The figures show that the average payer and nonpayers market to books diverge from zero. EW dividend premium start out at a premium in the first year of the sample and then rise sharply in the year 2002, fall sharply to be negative after 2002 for two years and then it rise sharply to be positive again in the year 2005. On the other hand, VW dividend premium start out at discount in the first year and gradually increase and peak in the year 2002. After that, VW dividend premium turn down but still positive in the year 2003 – 2005. I observe that dividend premium from two method – equal weighted method and value weighted method have different sign in the year 1997 – 1998 and 2003 – 2004. These dividend premiums show that investors have dividend demand in the large book asset companies more than low book asset companies so when I use value weighted method by book asset value, the sign of dividend premiums show different way.

Table 1 Dividend premiums for year 1997 to 2005.

A firm is defined as a dividend payer if it has positive dividends by the ex date. The market to book ratio is the ratio of the market value to book value. Market value is equal to market equity at calendar year end plus liability. Market equity is equal to stock price at the calendar year end multiply by number of shares at the end of calendar year. Book value is book asset minus liability. The market-to-book ratio is equal-weighted (EW) and value-weighted by book asset (VW) across dividend payers and nonpayers. The dividend premium P^{D-ND} is the difference between the logs of the dividend payers and nonpayers market-to-book ratios.

Year	Payer		Nonpayer		Dividend Premium	
	EW M/B	VW M/B	EW M/B	VW M/B	EW M/B	VW M/B
1997	1.2600	1.0200	1.2000	1.0300	2.12%	-0.42%
1998	1.3900	1.0061	1.1200	1.0127	9.38%	-0.28%
1999	1.6000	1.2200	1.3600	1.1000	7.06%	4.50%
2000	1.2600	1.0900	1.2000	1.0214	2.12%	2.82%
2001	1.5600	1.4000	1.4800	1.0300	2.29%	13.33%
2002	1.9300	1.6100	1.4500	1.0100	12.42%	20.25%
2003	2.7200	1.5700	3.1400	1.1400	-6.24%	13.90%
2004	1.4300	1.2700	1.7900	1.1000	-9.75%	6.24%
2005	4.0300	1.2000	2.9000	1.1800	14.29%	0.73%

Second, I correlate independent variables to see the correlation between them and compare with Bager and Wurgler's study. The correlation matrixes for the independent variables are as follow:

Table 2 reports the correlations among the variables. I expect the initiate rate, dividend premium and dividend yield to be positively correlated with each other and negatively correlated with market to book ratio of nonpaying firm. The actual correlations are not as expected. For table 2, I test correlation for overall listed companies in equities market. The results shows initiate rate has positive relationship with value weighted dividend premium as I expected and inconsistency with Bager and Wurgler's study while it has negative relationship with equal weighted dividend premium Moreover Initiate Rate has positive relationship with market to book ratio of nonpayer firm and dividend yield which is not consistent with Bager and Wurgler's study.

Table 2 Correlation among independent variables (Overall listed companies)

The initiation rate expresses payers as a percentage of surviving nonpayers from t-1. The continue rate expresses payers as a percentage of surviving payers from t-1. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers. Market to book ratio of non paying companies M/B is EW and VW averaged across nonpayers. Dividend Yield is from SETSMART.

Correlation	Initiate Rate	Continue Rate	$EW P^{D-ND}$	$VW P^{D-ND}$	EW M/B - Nonpayer	VW M/B - Nonpayer	Yield
Initiate Rate	1.0000	0.6475	-0.2085	0.0642	0.8416	0.8286	0.0855
Continue Rate	0.6475	1.0000	-0.3420	0.5120	0.4463	0.2812	0.0793
$EW P^{D-ND}$	-0.2085	-0.3420	1.0000	-0.1456	-0.1666	-0.1184	-0.0475
$VW P^{D-ND}$	0.0642	0.5120	-0.1456	1.0000	0.2048	-0.1076	-0.3818
EW M/B - Nonpayer	0.8416	0.4463	-0.1666	0.2048	1.0000	0.8627	-0.2391
VW M/B - Nonpayer	0.8286	0.2812	-0.1184	-0.1076	0.8627	1.0000	-0.2041
Yield	0.0855	0.0793	-0.0475	-0.3818	-0.2391	-0.2041	1.0000

For relationship of continuation rate and other variables, the results are same as initiate rate that is it has positive relationship with value weighted dividend premium, market to book ratio and dividend yield while negative relationship with equal weighted dividend premium.

Table 3, 4 shows correlation of variable in large book asset value firms and small book asset value firms. The results has some difference when compare with results of overall listed firm that are for large book asset value firms, initiate rate has positive relationship with dividend premium, market to book ratio of nonpayer and dividend yield while for small book asset value firms, initiate rate of this group has positive relationship with equal weighted dividend premium and negative relationship with value weighted dividend premium. Moreover, initiate rate of this group has positive relationship with market to book ratio and dividend yield.

Table 3 Correlation among independent variables (Large Book Asset Value)

The initiation rate expresses payers as a percentage of surviving nonpayers from t-1. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers. Market to book ratio of non paying companies M/B is EW and VW averaged across nonpayers. Dividend Yield is from SETSMART.

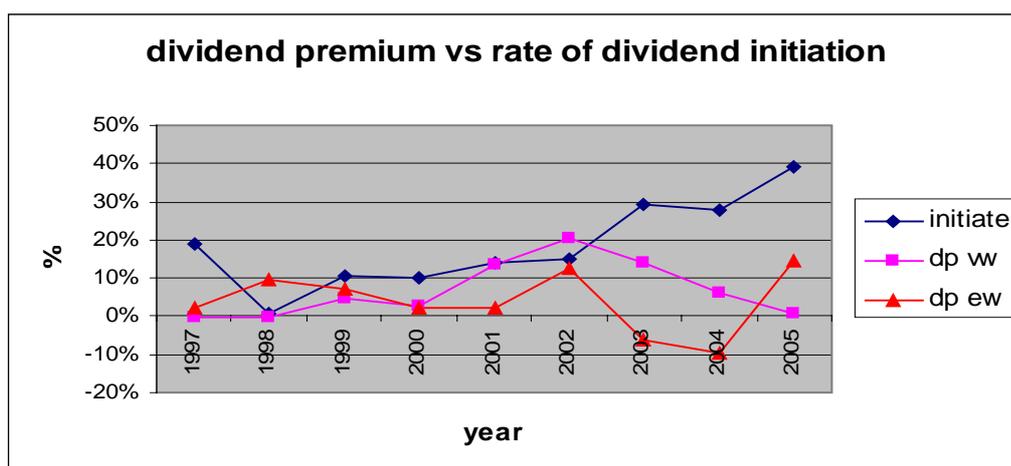
Correlation	Initiate Rate	$EW P^{D-ND}$	$VW P^{D-ND}$	EW M/B - Nonpayer	VW M/B - Nonpayer	Yield
Initiate Rate	1.0000	0.4223	0.2556	0.8135	0.7541	0.0628
$EW P^{D-ND}$	0.4223	1.0000	0.8835	0.2988	0.1912	- 0.1697
$VW P^{D-ND}$	0.2556	0.8835	1.0000	0.0371	- 0.0007	- 0.2529
EW M/B - Nonpayer	0.8135	0.2988	0.0371	1.0000	0.7323	- 0.1887
VW M/B - Nonpayer	0.7541	0.1912	- 0.0007	0.7323	1.0000	- 0.2258
Yield	0.0628	- 0.1697	- 0.2529	- 0.1887	- 0.2258	1.0000

Table 4 Correlation among independent variables (Small Book Asset Value)

The initiation rate expresses payers as a percentage of surviving nonpayers from t-1. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers. Market to book ratio of non paying companies M/B is EW and VW averaged across nonpayers. Dividend Yield is from SETSMART.

Correlation	Initiate Rate	$EW P^{D-ND}$	$VW P^{D-ND}$	EW M/B - Nonpayer	VW M/B - Nonpayer	Yield
Initiate Rate	1.0000	0.0160	- 0.3556	0.6505	0.8358	0.0918
$EW P^{D-ND}$	0.0160	1.0000	0.7851	- 0.3838	0.1029	0.1272
$VW P^{D-ND}$	- 0.3556	0.7851	1.0000	- 0.2804	- 0.0281	- 0.1542
EW M/B - Nonpayer	0.6505	- 0.3838	- 0.2804	1.0000	0.8550	- 0.3193
VW M/B - Nonpayer	0.8358	0.1029	- 0.0281	0.8550	1.0000	- 0.2307
Yield	0.0918	0.1272	- 0.1542	- 0.3193	- 0.2307	1.0000

Before applying regression to the equation, I start with a plot of the dividend premium against the rate of dividend initiation. I expect dividend premium and rate of dividend initiation to have a positive relationship. The figure shows that dividend premium and subsequent dividend initiation move almost in the same step. On average, value weighted dividend premium increase and to be positive in the year 1997 – 2002 and rate of dividend initiate also high. After year 2002, the relationship has broke down by dividend premium decrease, value weighted dividend premium remain positive but equal weighted dividend premium turn to be negative, while rate of dividend initiation move up in year 2003, down in 2004 and move up again in year 2005. VW dividend premium and EW dividend premium do not move in the same trend because investors have dividend demand for large size companies more than low size companies which effect VW dividend premium more than EW dividend premium for the year 2001 – 2004.



To examine whether observed dividend premiums are related to the aggregate rate of dividend initiations and continuation formally, I regress rate of dividend initiation and dividend continuation measures on the lagged dividend premium for all listed companies.

Table 5 Estimated coefficients from OLS regressions for dividends demand (all listed companies), 1997 - 2005 (t-statistics are shown below each coefficient)

Regressions of the propensity to pay dividends on measures of the dividend premium.

$$Initiate_t = a + bP_{t-1}^{D-ND} + \varepsilon$$

$$Continuation_t = a + bP_{t-1}^{D-ND} + \varepsilon$$

A firm is defined as a new dividend payer at time t if it has positive dividends per share by the ex date at time t and zero dividends per share by the ex date at time $t-1$. The propensity to initiate dividends $Initiate$ expresses payers as a percentage of surviving nonpayers from $t-1$. The propensity to continue paying dividends $Continue$ expresses payers as a percentage of surviving payers from $t-1$. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers.

	Initiate		Continue	
Intercept		0.2026	0.6979	0.8524
VWP $_{t-1}^{D-ND}$	1.0763	0.1051	1.9844	
	1.8855***		2.1185*	
EW $_{t-1}^{D-ND}$		-0.8164		-0.3934
		-1.3522**		-0.3349
Adjusted R ²	0.2700	0.1100	0.3300	- 0.1500
Prob	0.1100	0.2600	0.0800	0.7500
N	8	8	8	8

* Significant at the 10 percent level

** Significant at the 5 percent level

*** Significant at the 1 percent level

The table 5 shows that in the first column, one standard deviation increase in the value weighted dividend premium is associated with a 1.08 percentage increase in the dividend initiation rate in the following year with significant at 1 percent level and one standard deviation increase in the value weighted dividend premium is associated with a 1.98 percentage increase in the continuation rate of dividend in the following year with significant at 10 percent level in the fourth column. The second column shows that the effect of the equal weighted dividend premium is negative relationship with rate of dividend initiation by one standard deviation increase in the equal weighted dividend premium is associated with a 0.82 percentage decrease in the dividend initiation rate in the following year with significant at 5 percent level while equal weighted dividend premium can not explain rate of dividend continuation. Therefore because value weighted dividend

premium can explain rate of dividend initiation, continuation which is consistent with catering theory of dividend, it seems that catering theory of dividend should work to measure dividend demand for Thai investor and value weighted dividend premium method should work to measure dividend demand for Thai investor more than another method.

To examine whether investment opportunities and dividend level can work with dividend premium to explain propensity to pay dividend, Table 6 regresses dividend payment measures on the lagged dividend premium, market to book ratio of nonpayer and dividend yield for overall listed companies.

The table 6 shows that in the first column, one standard deviation increase in the value weighted dividend premium is associated with a 0.65 percentage increase in the initiation rate in the following year with significant at 1 percent level. Moreover, one standard deviation increase in the value weighted market to book ratio of nonpaying firms and dividend yield are associated with increase in the initiation rate in the amount of 1.26 percent and 7.63 percent respectively with significant at 1 percent level as well. The second column shows that the effect of the equal weighted dividend premium has a negative relationship with rate of dividend initiation with not significant level. Therefore, this table confirms that value weighted dividend premium can predict rate of dividend initiation better than equal weighted method and catering theory of dividend can explain dividend demand of Thai investor as well.

The third column reports regressions for the rate of dividend continuation. The results show that one standard deviation increase in the value weighted dividend premium is associated with a 5.16 percentage increase in the continuation rate in the following year with significant at 10 percent level and one standard deviation increase in the dividend yield is associated with a 26.89 percentage increase in the continuation rate with significant at 5 percent level. Value weighted market to book ratio of nonpayers has negative relationship with continuation rate but not significant level. The last column shows that the effect of the equal weighted dividend premium is positive relationship with rate of dividend continuation with not significant level. Therefore, value weighted dividend premium still explain rate

of dividend continuation better than another one. Moreover I observe that all variable can explain rate of dividend initiation better than dividend continuation because all variables have relationship with dividend initiation rate with significant at 1 percent level but market to book ratio of nonpayers can not explain rate of dividend continuation and other variables have relationship with dividend continuation with less significant level. However, this table confirm the hypothesis that investment that dividend premium, dividend level and investment opportunities can explain propensity to pay dividend for dividend initiation and only dividend premium and dividend level can explain dividend continuation of Thai listed companies. It means investors in Thailand have demand for dividend so they put a dividend premium in stock price and firms tend to pay dividend to investors follow to catering to pay dividend theory.

Table 6 Estimated coefficients from OLS regressions for dividends demand (overall listed companies), 1997 - 2005 (t-statistics are shown below each coefficient)

Regressions of the propensity to pay dividends on measures of the dividend premium.

$$Initiate_t = a + bP_{t-1}^{D-ND} + c \frac{M}{B}_{t-1} + d \frac{D}{P}_{t-1}$$

$$Continuat on_t = a + bP_{t-1}^{D-ND} + c \frac{M}{B}_{t-1} + d \frac{D}{P}_{t-1}$$

A firm is defined as a new dividend payer at time t if it has positive dividends per share by the ex date at time t and zero dividends per share by the ex date at time $t-1$. The propensity to initiate dividends *Initiate* expresses payers as a percentage of surviving nonpayers from $t-1$. The propensity to continue paying dividends *Continue* expresses payers as a percentage of surviving payers from $t-1$. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers.

	Initiate Rate		Continue Rate	
Intercept	- 1.4407	- 0.1877	1.0386	- 0.6331
VW P_{t-1}^{D-ND}	0.6565		5.1587	
	4.7375***		1.8409*	
EW P_{t-1}^{D-ND}		- 0.3669		1.8872
		- 1.2798		1.9347
VW M/B - Nonpayer	1.2557			
	7.9859***			
EW M/B - Nonpayer		0.1290		
		6.1167**		
VW M/B - Payer _{t-1}			- 1.0868	
			- 1.1999	
EW M/B - Payer _{t-1}				0.2103
				1.8294
YIELD	7.6288	4.9169	26.8863	36.4835
	4.8051***	1.3749	3.2472**	3.1133 **
Adjusted R ²	0.9617	0.8855	0.7316	0.5768
Prob	0.0009	0.0078	0.0418	0.1004
N	8	8	8	8

* Significant at the 10 percent level

** Significant at the 5 percent level

*** Significant at the 1 percent level

After study catering theory of dividend with all listed companies, I confirm that catering theory can explain propensity to pay dividend of listed companies in Thailand. Dividend premium and other variable work well to explain dividend initiation more than dividend continuation and value weighted method explain propensity to pay dividend better than equal weighted method. Since value weighted method weights by book asset value of firm and it affects sign of relationship of VW dividend premium and EW dividend premium to be opposite when I regress with dividend initiation rate. Therefore, I set the next hypothesis about whether size of firm or book asset value has effect to determine propensity dividend of listed companies. For this hypothesis, I test only propensity to initiate dividend.

After dividing listed companies into 2 groups and applying the regression to equation again, I find that dividend premium can explain rate of dividend initiation for the high book asset value group better than low book asset value group. The table 7 shows that in the first column, one standard deviation increase in the value weighted dividend premium is associated with a 0.48 percentage increase in the initiation rate in the following year with significant at 5 percent level. Moreover, one standard deviation increase in the value weighted market to book ratio of nonpaying firms and dividend yield are associated with increase in the initiation rate in the amount of 1.42 percent and 8.57 percent respectively with significant at 1 percent level as well. The second column shows that the effect of the equal weighted dividend premium is almost the same. For the third and last column, the results show that dividend premium can not explain rate of dividend initiation since value weighted and equal weighted dividend premium has different sign of coefficient with not significant level.

Therefore, this table confirm that the relationship of initiation rate, dividend premium and other variables for the high book asset firm is almost follow to Bager and Wurgler model while the results for low book asset firms do not follow to their model. Dividend premium and other variables can explain rate of dividend initiation for high book asset value firms extremely. Moreover I observed that coefficient of EW and VW dividend premium in high book asset group are positive

at a significant level which contrast with table 5 and 6 (coefficient of EW and VW dividend premium have opposite sign and VW method seems work better when measure dividend demand and propensity to pay dividend in Thai listed companies). It confirms that size of firm has effect to propensity to pay dividend and for the high book asset group, both EW and VW can explain rate of dividend initiation.

These tables provide support for the catering theory of dividend. Firms are more likely to initiate when the dividend premium is positive and more likely omit when it is negative. Thai investors have investment behaviors to invest in dividend paying stock because they can use tax advantage from tax credit of dividends which help them to save tax payment when they have to evaluate tax payment at the end of the year which follow tax preference theory. Moreover, Thai investors also get certain cash dividend from companies which they consider it better than uncertain capital gain from stock price in the future which follow to bird in hand theory and dividend clientele. However, the catering theory of dividend can explain propensity to pay dividend of high book asset firms and it is not work for low book asset firms. It means that Thai investors buy stock of large companies for dividend and management of these companies cater to investor demands by paying dividend to investor that follow to Bager and Wurgler's study in US companies.

**Table 7 Estimated coefficients from OLS regressions for Dividend Demand:
Large book asset value VS Small book asset value
(t-statistics are shown below each coefficient**

Regressions of the propensity to pay dividends on measures of the dividend premium.

$$Initiate_t = a + bP_{t-1}^{D-ND} + c \frac{M}{B}_{t-1} + d \frac{D}{P}_{t-1}$$

A firm is defined as a new dividend payer at time t if it has positive dividends per share by the ex date at time t and zero dividends per share by the ex date at time $t-1$. The propensity to initiate dividends $Initiate$ expresses payers as a percentage of surviving nonpayers from $t-1$. The propensity to continue paying dividends $Continue$ expresses payers as a percentage of surviving payers from $t-1$. The dividend premium P^{D-ND} is the difference between the logs of the EW and VW market-to-book ratios for dividend payers and nonpayers.

Initiate Rate	High Book Asset		Low Book Asset	
Intercept	- 1.5522	- 0.3121	- 0.1865	- 0.3124
VWP_{t-1}^{D-ND}	0.4791		0.0731	
	2.8127**		0.1662	
$EW P_{t-1}^{D-ND}$		0.5072		- 0.3426
		5.9268***		- 1.7770
VW M/B - Nonpayer	1.4186		0.1337	
	4.7500***		3.6925**	
EW M/B - Nonpayer		0.2587		0.0780
		5.2728***		3.3244**
YIELD	8.5675	5.1623	3.8488	9.0355
	6.0643***	3.2397	0.9937**	2.0891*
Adjusted R ²	0.9563	0.9648	0.6716	0.6698
Prob	0.0012	0.0008	0.0618	0.0624
N	8	8	8	8

* Significant at the 10 percent level

** Significant at the 5 percent level

*** Significant at the 1 percent level

Conclusion

The objective of this paper is to study investor behavior in the view of dividend demand and how managers react to this demand by using model of Baker and Wurgler which is based on imperfect capital market assumption. The importance of catering theory is that managers give investors what they currently want. In the case of dividends, catering theory of dividend implies that managers tend to initiate dividends when investors put a relatively high stock price on dividend payers, and tend to omit dividends when investors prefer nonpayers.

To test whether catering theory of dividend can use to explain investor and management behavior in Thailand which has characteristics different from US investors and US firms, my study starts with study in background of dividend policy, ownership structure, tax and regulation of Thai companies. In Thailand, dividend policy can be divided into two types. First, for private firms, there is no certain type of dividend payout policy. It depends on decision of major shareholders. Second, for listed firms, most of their dividend payout policy was set as a percentage of net income which is in contrast with the dividend payout policy of listed companies in US. For ownership structure in Thailand, there are evidences showed that the degree of ownership concentration is high. Largest shareholders are also controlling shareholders. These controlling shareholders not only control the vote but control the management of the companies. For tax and regulator, revenue department in Thailand allow investor to use tax advantage from tax credit when they have to evaluate personal tax for the year. Therefore benefit from tax advantage in Thailand makes behavior of Thai investors different from US investors. In US, dividends are tax highly more than capital gain so US investors with high tax bracket often buy low dividend stocks consistent with tax preference theory while in Thailand, Thai investors like to buy dividend stocks because they can get benefit from tax credit and cash dividend which consistent with bird in hand theory, tax preference theory and dividend clientele theory. I expect the catering theory of dividends should explain investor behavior in Thailand involve investment for cash dividend as well as in US. After that, I focus on the rates of dividend initiation that depend on the dividend premium, or the difference between the current stock prices of payers and nonpayers. From the first hypothesis, I find

that the rate of dividend initiation and continuation are significantly positively related to VW dividend premium but the rate of dividend initiation is significantly negatively related to EW dividend premium and rate of dividend continuation is not significant related to EW dividend premium. It seems that catering theory of dividend should work to measure dividend demand for Thai investor and value weighted dividend premium method should work to measure dividend demand for Thai investor more than another method. From second hypothesis, I find that the rate of dividend initiation is significantly positively related to dividend premium, dividend yield and market to book ratio of nonpayers for value weighted method while dividend premium can not explain propensity to pay dividend for equal weighted method. It confirms that catering to pay dividend can use to explain propensity to pay dividend of Thai listed companies. From the third hypothesis, I find that size of firms also has effect to dividend premium and rate of dividend initiation. Dividend premium and other variables can explain rate of dividend initiation for high book asset firms better than low book asset firms because both EW and VW dividend premium show positive coefficient with significant level in high book asset firms but they show different sign of coefficient with not significant level in low book asset firm. These results provide support for the catering theory of dividend. Firms are more likely to initiate when the dividend premium is positive and more likely omit when it is negative. Thai investors have investment behaviors to invest in dividend paying stock because they can use tax advantage from tax credit of dividends which help them to save tax payment when they have to evaluate tax payment at the end of the year which follow to tax preference theory. Moreover, Thai investors also get certain cash dividend from companies which they consider it better than uncertain capital gain from stock price in the future which follow to bird in hand theory and dividend clientele. However, the catering theory of dividend can explain propensity to pay dividend of high book asset firms and it is not work for low book asset firms. It means that Thai investors buy stock of large companies for dividend and management of these companies cater to investor demands by paying dividend to investor.

For management

Most companies have set a goal to maximize shareholder wealth. Therefore when management decides to pay or not pay dividend, management has to manage dividend policy to serve their goal. Good dividend policy is managing balance between current dividend payout and future growth rate of firms in order to maintain share price at a maximum level. After study about catering dividend theory in Thailand, I find that dividend premium and dividend yield can explain investor demand for dividend at a significant level. So in order to maintain maximize share price, management should look at the dividend premium and other factors in order to guarantee their decision can serve investor need in the right way. However, there are many constraints in dividend payment decision such as

- Capital impairment
Companies can not pay dividend more than share capital and statutory reserve.
- Protective covenants
It is the condition when companies have loan and preferred stock. To protect benefit of creditor and shareholder of preferred stock, the companies can not pay dividend if they can not maintain the target covenant ratio or other condition which mentioned in the agreement.
- Cash availability
Cash dividend must be paid from only cash. However, the companies can solve this problem by making loan to increase more cash availability.
- Tax concern
The companies have risk from tax charge if revenue department has evidence that the companies intend to omit dividend or pay dividend less in order to help investor defer tax payment unnecessarily. This regulation objective is to protect wealth investor avoid tax payment by leave profit into the company without any capital expenditure support.

For investor

Thai regulator allows investors use dividend tax as tax credit when they evaluate themselves for tax payment every year. This is benefit for investor who has low tax bracket (tax bracket lower than 30%) to use tax advantage and get more benefit when they invest in dividend paying stock. From literature review I find that firms in Thailand has high dividend payout ratio that means low tax bracket investor can get benefit from dividend and tax advantage from tax credit and investment from good dividend paying stock may generate higher return to investor more than return from saving bank. After study about catering theory of dividend in Thailand, I think if investors use the stock price at the end of calendar year and dividend premium as additional factor for investment consideration, they can predict propensity to pay dividend of the companies and they can choose the right stock according to their tax environment and their condition in order to maximize their wealth with low risk.

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Appendix 1

Number of payers, nonpayers, dividend initiation rate and dividend continuation rate and dividend yield for all listed companies

$$Initiate_i = \frac{New\ Payers_i}{Nonpayers_{i-1} - Delist\ Nonpayers_i}$$

$$Continue_i = \frac{Old\ Payers_i}{Payers_{i-1} - Delist\ Payers_i}$$

where, $Payerst = New\ Payerst + Old\ Payerst + List\ Payerst$, and

$$Old\ Payerst = Payerst-1 - New\ Nonpayerst - Delist\ Payerst$$

Payers is the total number of payers, *New Payers* is the number of initiators among last year's nonpayers, *Old Payers* is the number of payers that also paid last year, *List Payers* is the number of payers this year that were not in the sample last year, *New Nonpayers* is the number of omitters among last year's payers, and *Delist Payers* is the number of last year's payers not in the sample this year.

Year	Payers					Nonpayers					Payment Rate%		Div
	Total	New	Old	List	Delist	Total	New	Old	List	Delist	Initiate	Continue	Yield
1996	359					96				1			
1997	296	18	302	2	0	127	57	68	2	1	19%	84%	16%
1998	109	1	102	1	18	285	176	109	0	14	1%	37%	2%
1999	115	30	46	0	40	240	23	217	0	2	11%	67%	2%
2000	132	24	90	1	19	210	6	203	1	3	10%	94%	3%
2001	153	29	114	1	12	190	6	178	6	3	14%	95%	3%
2002	182	28	135	3	13	176	5	151	20	1	15%	96%	3%
2003	231	51	169	5	9	160	4	134	22	3	29%	98%	2%
2004	265	44	211	6	9	166	11	112	43	3	28%	95%	3%
2005	321	64	243	13	5	157	17	103	37	3	39%	93%	4%

Dividend premiums for year 1997 to 2005 for all listed companies

A firm is defined as a dividend payer if it has positive dividends by the ex date. The market to book ratio is the ratio of the market value to book value. Market value is equal to market equity at calendar year end plus liability. Market equity is equal to stock price at the calendar year end multiply by number of shares at the end of calendar year. Book value is book asset minus liability. The market-to-book ratio is equal-weighted (EW) and value-weighted by book asset (VW) across dividend payers and nonpayers. The dividend premium P^{D-ND} is the difference between the logs of the dividend payers and nonpayers market-to-book ratios.

Year	Payer		Nonpayer		Dividend Premium	
	EW M/B	VW M/B	EW M/B	VW M/B	EW M/B	VW M/B
1997	1.2600	1.0200	1.2000	1.0300	2.12%	-0.42%
1998	1.3900	1.0061	1.1200	1.0127	9.38%	-0.28%
1999	1.6000	1.2200	1.3600	1.1000	7.06%	4.50%
2000	1.2600	1.0900	1.2000	1.0214	2.12%	2.82%
2001	1.5600	1.4000	1.4800	1.0300	2.29%	13.33%
2002	1.9300	1.6100	1.4500	1.0100	12.42%	20.25%
2003	2.7200	1.5700	3.1400	1.1400	-6.24%	13.90%
2004	1.4300	1.2700	1.7900	1.1000	-9.75%	6.24%
2005	4.0300	1.2000	2.9000	1.1800	14.29%	0.73%

Appendix 2

Number of payers, nonpayers, dividend initiation rate and dividend continuation rate and dividend yield for low book asset listed companies

$$Initiate_t = \frac{New\ Payers_t}{Nonpayers_{t-1} - Delist\ Nonpayers_t}$$

$$Continue_t = \frac{Old\ Payers_t}{Payers_{t-1} - Delist\ Payers_t}$$

where, $Payerst = New\ Payerst + Old\ Payerst + List\ Payerst$, and

$$Old\ Payerst = Payerst-1 - New\ Nonpayerst - Delist\ Payerst$$

$Payers$ is the total number of payers, $New\ Payers$ is the number of initiators among last year's nonpayers, $Old\ Payers$ is the number of payers that also paid last year, $List\ Payers$ is the number of payers this year that were not in the sample last year, $New\ Nonpayers$ is the number of omitters among last year's payers, and $Delist\ Payers$ is the number of last year's payers not in the sample this year.

Year	Payers				Nonpayers				Initiate Rate	Dividend Yield
	Total	New	List	Delist	Total	New	List	Delist		
1996	176				51			1		
1997	152	11	2	0	60	23	1	1	22.00%	15.10%
1998	73	0	1	4	125	76	0	12	0.00%	3.20%
1999	72	19	0	2	106	11	0	15	17.27%	3.40%
2000	80	15	1	1	92	4	0	10	15.63%	4.65%
2001	86	14	0	1	86	4	5	5	16.09%	3.86%
2002	93	13	3	0	87	4	15	6	16.25%	3.31%
2003	112	21	4	1	84	4	14	0	24.14%	2.46%
2004	120	20	5	2	96	6	33	4	25.00%	3.18%
2005	146	37	10	2	94	10	25	2	39.36%	3.85%

Dividend premiums for year 1997 to 2005 for low book asset listed companies

A firm is defined as a dividend payer if it has positive dividends by the ex date. The market to book ratio is the ratio of the market value to book value. Market value is equal to market equity at calendar year end plus liability. Market equity is equal to stock price at the calendar year end multiply by number of shares at the end of calendar year. Book value is book asset minus liability. The market-to-book ratio is equal-weighted (EW) and value-weighted by book asset (VW) across dividend payers and nonpayers. The dividend premium P^{D-ND} is the difference between the logs of the dividend payers and nonpayers market-to-book ratios.

Year	Payer		Nonpayer		Dividend Premium	
	EW M/B	VW M/B	EW M/B	VW M/B	EW M/B	VW M/B
1997	1.45	1.35	1.40	1.36	1.52%	-0.32%
1998	1.54	1.51	1.17	1.12	11.93%	12.98%
1999	1.89	1.81	1.57	1.63	8.06%	4.55%
2000	1.41	1.45	1.37	1.23	1.25%	7.15%
2001	1.60	1.41	1.93	1.38	-8.14%	0.93%
2002	1.78	1.64	1.76	1.46	0.49%	5.05%
2003	2.43	2.45	4.63	2.57	-28.00%	-2.08%
2004	1.53	1.43	2.18	1.71	-15.38%	-7.77%
2005	6.07	4.19	3.56	3.41	23.17%	8.95%

Appendix 3

Number of payers, nonpayers, dividend initiation rate and dividend continuation rate and dividend yield for high book asset listed companies

$$Initiate_t = \frac{New\ Payers_t}{Nonpayers_{t-1} - Delist\ Nonpayers_t}$$

$$Continue_t = \frac{Old\ Payers_t}{Payers_{t-1} - Delist\ Payers_t}$$

where, $Payerst = New\ Payerst + Old\ Payerst + List\ Payerst$, and

$$Old\ Payerst = Payerst-1 - New\ Nonpayerst - Delist\ Payerst$$

$Payers$ is the total number of payers, $New\ Payers$ is the number of initiators among last year's nonpayers, $Old\ Payers$ is the number of payers that also paid last year, $List\ Payers$ is the number of payers this year that were not in the sample last year, $New\ Nonpayers$ is the number of omitters among last year's payers, and $Delist\ Payers$ is the number of last year's payers not in the sample this year.

Year	Payers				Nonpayers				Initiate	Dividend
	Total	New	List	Yield	Total	New	List	Delist	Rate%	Yield
1996	183			0	44			0		
1997	144	7	0	0	67	34	2	0	15.91%	17.01%
1998	36	1	0	10	160	100	0	6	1.64%	1.15%
1999	43	11	0	0	134	12	0	25	8.15%	1.44%
2000	52	9	0	2	118	2	1	9	7.20%	2.27%
2001	67	15	1	2	104	2	6	7	13.51%	2.56%
2002	89	15	0	1	89	1	20	7	15.46%	2.75%
2003	119	30	1	1	76	0	22	2	34.48%	2.34%
2004	145	24	1	1	70	5	43	5	33.80%	3.25%
2005	175	27	3	1	63	7	37	3	40.30%	4.05%

Dividend premiums for year 1997 to 2005 for high book asset listed companies

A firm is defined as a dividend payer if it has positive dividends by the ex date. The market to book ratio is the ratio of the market value to book value. Market value is equal to market equity at calendar year end plus liability. Market equity is equal to stock price at the calendar year end multiply by number of shares at the end of calendar year. Book value is book asset minus liability. The market-to-book ratio is equal-weighted (EW) and value-weighted by book asset (VW) across dividend payers and nonpayers. The dividend premium P^{D-ND} is the difference between the logs of the dividend payers and nonpayers market-to-book ratios.

Year	Payer		Nonpayer		Dividend Premium	
	EW M/B	VW M/B	EW M/B	VW M/B	EW M/B	VW M/B
1997	1.06	1.01	1.02	1.02	1.67%	-0.43%
1998	1.11	0.99	1.08	1.01	1.19%	-0.87%
1999	1.11	1.07	1.2	1.09	-3.39%	-0.80%
2000	1.03	1.03	1.06	1.02	-1.25%	0.42%
2001	1.51	1.4	1.13	1.03	12.59%	13.33%
2002	2.08	1.61	1.15	1.01	25.74%	20.25%
2003	2.99	1.54	1.5	1.12	29.96%	13.83%
2004	1.35	1.27	1.26	1.09	3.00%	6.64%
2005	2.34	1.14	1.93	1.1	8.37%	1.55%