

**STOCK RESALE: A MIRROR IMAGE OF REPURCHASE IN
THAILAND**



**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR
THE DEGREE OF MASTER OF MANAGEMENT
COLLEGE OF MANAGEMENT
MAHIDOL UNIVERSITY
2014**

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Thematic paper
entitled
**STOCK RESALE: A MIRROR IMAGE OF REPURCHASE IN
THAILAND**

was submitted to the College of Management, Mahidol University
for the degree of Master of Management

on
April 23, 2014



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ACKNOWLEDGEMENTS

I would like to pay my sincere and heart felt gratitude to my advisors, Ajarn Nareerat Taechapiroontong, Ajarn Chiraphol Chiyachantana and Ajarn Eakapat Manitkajornkit, who gave me a lot of valuable advises from the beginning of my research paper and selecting the topic to the completion of my research. I would also like to pay gratitude to Ajarn Tanakorn Likitapiwat who has also advised on my paper and also taught us the basics of SAS programming. I would also like to thank Mr. Thanaphol Chantanugool for providing me with the required data and also help me with my SAS programming.

In addition, I would like to thank all of my friends in 15B FM program in sharing their knowledge and information during the research.

I would also like to thank Thailand International Cooperating Agency (TICA) for sponsoring and providing me scholarship to pursue Masters in Management.

Last but not the least I would like to pay my sincere gratitude to my family for encouraging and supporting me throughout this time.

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ABSTRACT

This study examines the resale of the stocks previously repurchased. Many literatures explains that the market responds positively to the repurchase because investor takes repurchase announcements as good signal and stock as undervalued. Similarly it is anticipated that the market responds negatively to the resale announcement because of the reverse signal and taking the stock as overvalued. This paper uses signaling hypothesis and the reverse signaling hypothesis to test the motivation behind the resale, which is believed to be the mirror image of repurchases.

The result supports the reverse signaling hypothesis that the stock is overvalued before the resale announcement. It also indicate that the firms that implement repurchase without resale are not undervalued stocks whereas repurchases with resale these stocks are undervalued yet in both repurchases the market reacts positively to the announcement which supports our signaling hypothesis for repurchase. There are some reactions from investors to the resale, to repurchase with resale and to repurchase without resale announcements. We also find that investor trading do no effect the stock returns of the resale firms however we can better estimate the stock returns of the repurchase firm with resale than repurchase without resale from the investor type trading especially on the event period of repurchase announcement. We also check the market reaction to the actual resale day, however we find that market do not react to the actual resale activity as it does to the announcement.

KEY WORDS: Stock resale / Resale / Repurchase / Mirror image of repurchase

26 pages

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CHAPTER I

INTRODUCTION

This study tests whether the resale are the mirror image of the stock repurchases that the firm executed previously. A repurchase announcement is generally treated as a good signal by the investors and it is the general belief in the market that resale are theoretical opposite of the repurchases. The stocks repurchased are commonly called as treasury stocks and these treasury stocks can be resold in the form stock resale in Thailand. These are also called as one type of seasoned equity offerings in the United States and stock reissues in countries like Korea. Open Market repurchase programs in Thailand were allowed in 2001. Once a repurchase announcement is made, the firm may start repurchase the stocks within 14 days of the announcement and complete the repurchase within six months. After the completion of the repurchase program, the firm gets an interval of 6 months to decide resale program, the reselling of the previously repurchased stocks. The firm has to announce the resale announcement, the firm may start reselling the repurchased stocks within 14 days of the announcement but this time they have three years to complete the resale program according to provisions in Thailand as a blackout period.

Research program is one type sequential program where a sequence of signals occurs. This is because corporate decisions and actions do not occur in isolation anymore. Instead, today's decision forms a part of the ongoing history of the firm. The market reaction to an announcement depends on the prior announcements, during the announcements and after the announcements. While there is a large body of literature to explain such actions, these actions are considered as signals by the management of the firm to the market. In the case of open market stock repurchases the signal is that management considers the stock to be undervalued, while in open market resale the signal is considered as stock being overvalued.

This paper examine the situation where a firm first conducts an open market repurchase and subsequently conducts a stock resale that effectively reverses the repurchase. This resale provision allows the Thai firms to in reverse the previously conducted repurchase through a resale which is said as the mirror image of a repurchase with the regulations regarding the resale process are similar to the repurchase. The number of resold shares must be no greater than the number of shares previously repurchased.

Thus the objective of this paper is threefold. First, this paper empirically tests if such resale subsequent to repurchase effectively reverses the repurchases. The signaling hypothesis is suggested for repurchases and for Resale can be explained with the reverse signaling hypothesis for resale to be the mirror image of repurchase. This study is an extension of the studies made on repurchases. Signaling hypothesis suggests that market responds positively to the repurchase announcement because it signals that the value of the firm are undervalued and markets responds positively to the announcement of repurchase. This paper aims to study that resale is the mirror image of repurchase and thereby the signals is that the firm should be overvalued for the resale firm and the markets responds negatively to the announcement of resale.

Second, the study examines the effects of the signaling hypothesis on stock price is permanent or temporary. This study compares the market response to the repurchase followed by resale and repurchases without resale. Mathematically since there is decrease in outstanding shares as treasury stocks are not counted as outstanding shares; earnings per share will be increased. In this context, the effects of positive response will be temporary. The effects of positive response will be permanent if it positive response is for a longer period of time.

Third, this study examines the investor type reactions to resale announcements as well as repurchases where repurchase is divided into repurchase with resale and repurchase without resale. The paper aims to know which investor type reacts faster than the others for the resale and repurchase programs and whether the investor type trading affects the returns of the resale or the repurchase stock.

CHAPTER II

LITERATURE REVIEW

Research on stock repurchases and stock resale are relevant to this paper. The main empirical regularity in literature on stock repurchases is that market reacts positively to the announcement of a repurchase (Wiyada and Aekkachai, 2013). The most frequently mentioned explanation is that a repurchase serves as a signal to the market that the managers of the firm believe that the stock of the firm is undervalued. It is this explanation that is most relevant to our study. In contrast, the major finding in this literature concerning stock resale is that the market reacts negatively to the announcement of a stock resale and thus is a mirror image to repurchase. The most frequently given explanation to these empirical results in the equity offering literature is again based on information signaling wherein for this paper we will agree to the hypothesis put forward by Jung, Lee and John (2009). In this case the announcement that the management of the firm believes the stock is overvalued which will be the main hypothesis for this study.

Our study is a type of sequential signals study. Studies that involve sequential signals are rare. The study most suited to our study is Jung, Lee and John (2009), they studied stock repurchases followed by stock reissues in South Korea. Jung, Lee and John (2009) only takes reissues to reverse the original repurchase. Jung, Lee and John (2009) finds out that the market reaction to the announcement of a stock reissues is negative and they conclude that the stock reissues can be termed as a mirror image to repurchase. The methodology used is a typical event study methodology which has also been used by Brown and Warner (1985) and Wiyada and Aekkachai (2013) to assess the market reaction to the announcements by computing Abnormal Returns (AR%) and Cumulative Abnormal Returns (CAR%) over 151 day period (-60, 90). The sample periods covers the first ten years from 1994 to 2003 in which reissues and repurchases were allowed in Korea which resulted in about a sample of 279 reissues and 789 repurchases. They

conclude that market reacts positively to the repurchase announcement and negatively the reissue announcement. They also find that market response to the announcement of the repurchase for firms that subsequently reissue the shares is similar to the response for a control sample of firms that do not conduct subsequent reissues. Examples study like Billett and Xue (2004) who study stock repurchases followed by seasoned equity offerings in the United States find that market reaction to the announcement of a seasoned equity offering is significantly less negative when it is preceded by repurchase announcement.

Earlier studies on repurchase e.g., Wiyada and Aekkachai (2013) find that the market reacts positively to the announcement of a repurchase, a positive abnormal return of 2.23% on average at 1% significance level on the announcement date. The positive reaction is generally interpreted as it is perceived as good news by the investors which are consistent with the literature we are referring to, Wiyada and Aekkachai (2013) and many other studies like Jung, Lee and John (2009); Lin, Lin and Liu (2011). Why there is a significant positive abnormal return on repurchase announcement can be understood by the investors who interpret that the management is sending good signal that the stock is underpriced and they react to this signal positively and very fast. This result is consistent with other studies done by Billet and Xue (2004); and Tabtieng (2013) that the significant positive abnormal returns are found around the announcement period. Wiyada and Aekkachai (2013) study the market reaction only on repurchase announcement and not the sequence in the repurchase. Our study differs from Wiyada and Aekkachai (2013) in that our sample is the sequence of repurchase and will only serve as reverse of the original repurchase.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Hypothesis

This study presents two hypotheses. The first one being the reverse signaling hypothesis which explains the resale behavior of Thai firms. According to signaling hypothesis, a firm conducts a repurchase when the stock is undervalued or underpriced and as a result of repurchase announcement, the value moves up towards fair value. This paper believes that signaling hypothesis should explain in reverse for resale since the general notion is that resale is the opposite of repurchase. According to the reverse signaling hypothesis, a firm conducts a resale if the stock is overvalued and as a result of resale, the value moves down towards fair value. Signaling hypothesis suggests that market should respond positively to the repurchase announcement because it signals that the value of the assets was undervalued. Thus, it is anticipated that market responds positively to the announcement of a repurchase announcement and negatively to the announcement of a resale of the repurchased stocks. This will consider that resale is a mirror image of repurchase and that resale would validate the signaling hypothesis in reverse direction.

The second hypothesis is the window of opportunity hypothesis. The difficulty with the reverse signaling hypothesis is a mechanism that would give the firm's manager an incentive to reduce the value of overvalued stock via resale since overvalued stocks are better than undervalued or fairly valued stocks. The incentive this paper believes is the fluctuating cash needs of a firm since resale can generate such cash need. For instance, a firm conducts a repurchase to distribute excess cash but due to changes in conditions the firm requires cash. The decision then is definitely reselling the repurchased stock. The firm focuses on when is the right time to execute resale. One justification for resale therefore is that, the firm would resale if they feel that the stock is fairly valued, if

not overvalued, so there is no need to wait for further. Second, a firm with growth opportunity would repurchase with reissue placed in plan. It may be applicable when the firms anticipate substantial growth opportunities but the stock is significantly undervalued. Once the stock is close to fair value the firm resells the acquired stock through repurchase to raise cash to fund growth opportunities. And this results in decline in value.

In most cases, the signaling hypothesis alone may not explain the company's decision to resell. The signaling hypothesis can only explain the repurchases in most cases but it explain the resale in a special circumstances in which decline in stock price would benefit the firm and its manager. It needs an alternative hypothesis that can explain the most resells which then shifts to window of opportunity hypothesis. The paper believes that the stock price increase due to repurchases would be transitory in nature and not permanent. The paper would also test if the direction and magnitude of the stock price change be the same if such stock repurchase is not reversible or is not followed by resale.

Resale in general is not treated as good news and as such the stock price is expected to fall on announcement. This paper will also look the investor types' reactions to the resale announcement. The hypothesis for investor type reaction is that investors will over react to the stock resale announcement. Keeping in consideration the reverse signaling hypothesis that the stock is overvalued, investors would best try to sell at the overpriced stock before it falls down. On receiving the resale announcement, treating it as bad news investors reacts fast to sell the stocks they hold to gain from the bad news.

CHAPTER IV

DATA ANALYSIS

4.1 Sample and Data

A typical event study methodology of Jung, Lee and John (2009) was used to assess the market reaction to the announcements of both resale and repurchases. Both repurchases and resale data were downloaded from SETSMART; the web-based application from the Stock Exchange of Thailand. The requirement set by the SET that the firms must disclose the resolution of the shareholders or the board of directors concerning share repurchase to SET within the date of resolution or within 9:00 AM of the next business day. Therefore the date of board of directors' meeting is set as announcement date. The same rule applies with the resale since it is the sequence of repurchase, the date of board of directors' meeting is set as announcement date for resale. The dates of board of directors' meeting are available in the news column in SETSMART. On finding all the resale announcement dates, it is then matched with repurchase to find repurchase with resale and without resale. Other data like the daily price of the stocks and investor trading are also accessed from the SETSMART. Thai firms are required to complete the repurchase and resale within a three years period separately. At the end of the three years period or at the end of the repurchase program or the resale program, the firm must disclose information about the repurchase or the resale including the number of shares actually repurchased or resold. After the completion of a repurchase program, a firm can go for resale program within six months. The estimation period for the market model was days (-30, 30). We compute Abnormal Returns (AR%) and Cumulative Abnormal Returns (CAR%) over 61 days period. Thus, in order to be included in the sample, the firms had to have daily stock return data for the period from 30 days prior to the announcement to 30 days after the announcement.

Table 4.1 Distribution of Repurchases and Resale by year

This table shows the distribution of repurchases and resale by year from 2001 when repurchase was first allowed in Thailand till 2011.

Year	Number of Repurchases	Number of Resale
2001	1	0
2002	5	0
2003	4	0
2004	5	0
2005	5	4
2006	3	3
2007	2	1
2008	33	0
2009	4	11
2010	12	8
2011	6	6
Total	80	33

The sample period covers from 2001 to 2011 in which repurchases were allowed in Thailand. This paper does not include repurchases and resale for the year 2012 and 2013 for the reason that investor type data for the said period could not be collected during this study. The sample period also deleted announcement of general offer stock repurchases for the reasons that these stock repurchases doesn't have a room for resale later on. As shown in table 4.1, these sample selection procedures resulted in a sample of 80 repurchases and 33 resale. The 80 repurchases are further divided into 33 repurchases that has resale as sequence and 47 repurchases which do not include resale in the sequence.

CHAPTER V

RESULTS

5.1 Resale Announcements

The descriptive statistics of the sample resale firms used in this study is shown in the Table 5.1. The results from the table showed that the pre event period's cumulative abnormal return is positive at 7.17% as well as significant at 1% level. The table also showed that the CARs of the event period and post event period as negative and positive respectively however the results do not correspond to any significance level. Our results thus support that the firms that execute resale are overvalued before the resale announcement.

Table 5.1 Descriptive Statistics of Resale Firms

This table reports cumulative abnormal returns (CARs) for the event period of the resale sample and its descriptive stats. The first column is the event period of the study where pre event period is 29 days (-30, -2), event period is 3 days (-1, 1) post event period is 29 days (2, 30). The third column is the mean which is the CARs of the 33 sample of the resale firms. *** indicates significance at the 1% level.

Event Period	N	Mean	Std Dev	Max	Min	T-Stat	P-Value
Pre Event Period	33	0.0717	0.1939	0.6979	-0.3282	2.12**	0.0415**
Event Period	33	-0.0072	0.0479	0.1893	-0.0920	-0.86	0.3941
Post Event Period	33	0.0146	0.0903	0.249	-0.139	0.93	0.3597

One of the reasons why this paper has not found any significant result in the event period is due to the limited sample size of 33 and it also gives indication that investors as well as market prefers repurchase to resale as for the same size of repurchase, the result are significant as indicated in the next part.

5.2 Repurchases with Resale vs. without Resale

The matching repurchases with resale with the sample of 33 and the repurchases that have concluded the repurchase program without resale with sample size of 47 is being presented with its descriptive stats in the Table 5.2. The results can be compared in two ways. First, between the results of the resale sample and the matching repurchases. The pre event period's cumulative abnormal return which is the mean in the table is positive for resale and negative for matching repurchases which indicates that the resale firms are overvalued and the matching repurchases are undervalued before their respective announcements. For the event period the CAR of resale firm is negative and for matching repurchases it is positive yet only the repurchase returns are significant at 1% level. Second, between the results of the matching repurchases and repurchases without resale. It is notable that for the pre event period for repurchases without resale is negative but not significant which can be concluded that those repurchase firms are not undervalued when they decide to repurchase. Also notable in Table 5.2 is the event period returns of both the repurchases are similar, the CARs are positive and are significant at 1% level. Our results thus support that signaling hypothesis explains the positive market responses and similarly the reverse signaling hypothesis can also explain the market responses surrounding the announcements of resale.

Table 5.2 Descriptive Statistics of Repurchase Firms with Vs. without Resale

This table reports cumulative abnormal returns (CARs) for the event period of the resale, matching repurchases and the repurchases without resale. The first column is the event period of the study where pre event period is 29 days (-30, -2), event period is 3 days (-1, 1) post event period is 29 days (2, 30). The second, fourth and the sixth column are the means which are the CARs of the respective samples. ** and *** indicates significance at the 5% and 1% level respectively.

Event Period	Matching Repurchases (N=33)			Repurchases w/o Resale (N=47)		
	Mean	Std Dev	T-Stat	Mean	Std Dev	T-Stat
Pre Event Period	-0.0979	0.2890	-1.95**	-0.0251	0.1450	-1.1900
Event Period	0.0362	0.0653	3.18***	0.0357	0.0729	3.36***
Post Event Period	-0.0339	0.1445	1.35	0.0021	0.1427	0.1000

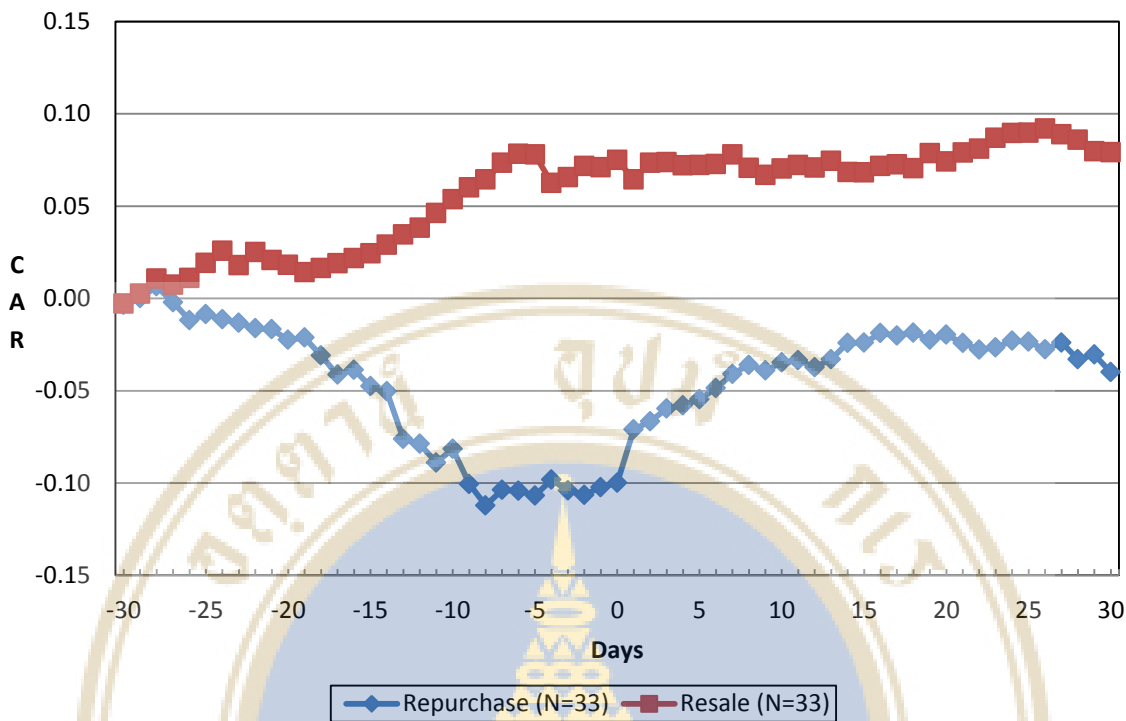


Figure 5.2 (A) CARs for Repurchases vs. Resale Firms

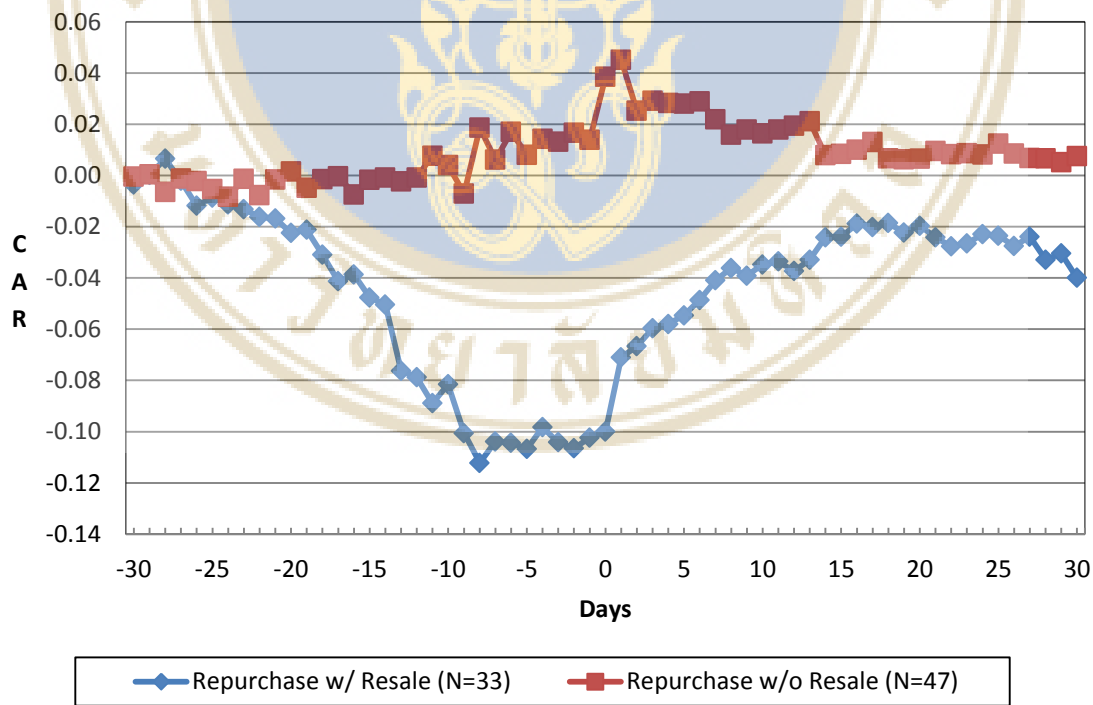


Figure 5.2 (B) CARs for Repurchases with Resale vs. Repurchases without Resale

The results from Figure 5.2 (A) for the sample period of 61 days (-30, 30) show a concave shape for resale and a convex shape for repurchases. The market response to a resale is almost a mirror image of the response to a repurchase. Returns are negative during the period before the announcement of the repurchase and positive after the announcement. Returns are positive during the period before the announcement of the resale and remain constant in the period after the announcement. We can also see from the figure that the stock for the reselling firm was overvalued prior to the announcement period which is a reverse of the repurchase firm.

The results from Figure 5.2 (B) for the sample period of 61 days (-30, 30) show that repurchases made by the firms that later reverse the repurchase by reselling, the repurchase program had helped in boosting their stock price. The CAR of the repurchase with resale sample were -10.649% during the 30-day (-30, -1) pre-purchase period but there is significant positive returns right after the announcement, the stock recovers a lot of lost ground. The result indicate that the repurchase provide a very effective means to raise the stock price for some time and can be treated as permanent effect in comparison to repurchase without resale. It is not the same for the repurchase without resale. The CARs of the repurchase without resale were 1.67% during the 30-day (-30, -1) pre-purchase period which indicate that the repurchasing firms without resale were not undervalued as comparing to the other repurchasing firms. The market reacts positively on the announcement period however the reaction is temporary only and the CARs after few days decreases close to zero.

The conclusion from the comparison between repurchase with resale and without resale is that the firms with resale in plan do much better than the firms without resale in plan. With resale the reactions to the repurchase is permanent, the positive returns seems to last for a long period of time and recovers a lot of lost ground whereas without resale the positive return is significant only for the event period and not after that; the impact of the repurchase announcement is short run for the these type of repurchases. This is in contrary to the literature of Jung, Lee and John (2009) where they find that the repurchases with reissues have temporary effect and repurchase without reissues has permanent effects after announcement.

5.3 Resale Announcements vs. Resale Actual Day

The descriptive statistics of the sample resale firms as per announcement date and as per the first resale date used in this study are shown in the Table 5.3. As notable in the table that the pre event period's cumulative abnormal return of the resale firms as per actual resale day is negative and not significant. Since the actual resale happens on the announcement date or within 14 days of the announcement date, by then market has already reacted to the announcement and is not overvalued anymore. All the results for the actual resale period showing negative, positive and positive CARs for the pre event, event period and post event period is not significant. Our results thus support that the market reacts quickly and very fast to the announcement.

Table 5.3 Descriptive Statistics of Resale Announcement Vs. Actual Resale

This table reports cumulative abnormal returns (CARs) for the event period of the resale sample on announcement and on the first resale day. The first column is the event period of the study where pre event period is 29 days (-30, -2), event period is 3 days (-1, 1) post event period is 29 days (2, 30). The second, third and fourth column is the descriptive stats of the resale announcement where mean is the CARs of the 33 sample of resale firms. Similarly fifth, sixth and seventh column is the descriptive stats of the resale actual day as per the first transaction of the resale program where mean is CARs of the same 33 resale firms. ** indicates significance at the 5% level.

Event Period	Resale Announcement (N=33)			Resale Actual Day (N=33)		
	Mean	Std Dev	T-Stat	Mean	Std Dev	T-Stat
Pre Event Period	0.0717	0.1939	2.12**	-0.0058	0.1110	-0.30
Event Period	-0.0072	0.0479	-0.86	0.0040	0.0432	0.53
Post Event Period	0.0146	0.0903	0.93	0.0026	0.0958	0.15

It can also be interpreted in a way where we can understand that now market reacts very fast to news and announcements that when it comes to the actual transaction or the market activity, the impact is already dissolved. It also appears from a lot of literatures as well as from this paper, though it is not compulsory for a firm to resale the stocks after the announcement; they implement the resale or the repurchase program.

5.4 Investor Type Reaction on Resale Announcements

The descriptive statistics of the investor type reaction to the resale announcement is shown in the Table 5.4. The results from the table showed that the Local Institutions are the only significant trader at 10% level in the pre event period where the mean of investor trading imbalance is -1.0155 which can be concluded that Local Institutions sell more than they buy the stock since they know that it is overvalued before the announcement. In the event period, the Proprietary Traders are the only significant seller with trading imbalance of -0.4116 at 5% level; they tend to react to the resale announcement of the overvalued stock. However for the post event period, no investor trades significantly. Our results thus support that the firms that execute resale are overvalued before and during the resale announcement and investors reacts to the announcement very fast.

Table 5.4 Investor Types Reaction on Resale Announcement

This table reports investor type reactions to the sample of 33 resale announcements. The first column is the event period of the study where pre event period is 29 days (-30, -2), event period is 3 days (-1, 1) post event period is 29 days (2, 30). The four types of investors are the variables in the third column which are TV_C for Local Individuals, TV_F for Foreign Investors, TV_M for Local Institutions and TV_P for Proprietary Trading. Mean in the fourth column is the average of the trading imbalance in volume for the number of observation of resale. Trading imbalance for each investor type is calculated as in

$$\text{Trading Imbalance} = \frac{(\text{Buy}_{vol} - \text{Sell}_{vol})}{(\text{Buy}_{vol} + \text{Sell}_{vol})}$$

* and ** indicates significance at the 10% and 5% level respectively.

Event Period	N	Variable	Mean	Std Dev	T-Stat	P-Value
Pre Event Period	33	TV_C	0.8840	3.0284	1.68	0.1033
Pre Event Period		TV_F	-0.1437	3.8885	-0.21	0.8332
Pre Event Period		TV_M	-1.0155	3.4378	-1.70*	0.0994*
Pre Event Period		TV_P	-0.4172	4.0516	-0.59	0.5583
Event Period	33	TV_C	0.2312	0.8676	1.53	0.1356
Event Period		TV_F	0.0985	0.9988	0.57	0.5751
Event Period		TV_M	0.0068	0.7506	0.05	0.9587
Event Period		TV_P	-0.4116	1.0726	-2.20**	0.0348**

Table 5.4 Investor Types Reaction on Resale Announcement (*continues*)

Table 5.4 Investor Types Reaction on Resale Announcement (*continued*)

Post Event Period	TV_C	0.1895	3.3695	0.32	0.7487
Post Event Period	TV_F	-0.2934	2.9495	-0.57	0.5717
Post Event Period	TV_M	-0.7679	4.1238	-1.07	0.2928
Post Event Period	TV_P	0.1419	5.6041	0.15	0.8853

5.5 Investor Types Reaction on Repurchase with vs. without Resale

The descriptive statistics of the investor type reaction to the repurchase announcement which is divided into repurchase followed by resale and repurchase without resale are shown in the Table 5.5. For the repurchase announcement with resale, the results from the table showed that the Foreign Investors are the only significant trader at 1% level in the pre event period where the mean of investor trading imbalance is 2.9376 which can be concluded that Foreign Investor buy more than they sell the stock since they know that it is undervalued. In the event period, the Proprietary Traders does the buying as indicated with the trading imbalance of 0.3343 significant at 5% level and the Local Institutions sells the stocks as indicated with the trading imbalance of -0.2315 significant at 10% level. For the post period, the Foreign Investors does the buying as indicated with the trading imbalance of 1.6725 significant at 5% level and the Proprietary Traders sells the stocks as indicated with the trading imbalance of -1.2484 significant at 5% level. The results indicate that investors react quickly to the repurchase announcement and takes advantage of its undervalued stock.

For the repurchase announcements without resale, the results indicate that investors do not react as much as it reacted to the repurchase with resale. The Local Individuals are the only significant trader at 5% level in the pre event period with investor trading imbalance of 0.7309, local individuals buy more than they sell the stock as believes they repurchase is a good news. In the event period, Foreign Investor trades and purchase at trading imbalance of 0.2382 at 10% level. For the post period, the Local Individuals and the Foreign Investors does the buying as indicated with their trading

imbalances of 1.0695 at 1% significance level and 1.3579 at 5% significance level respectively. The Local Institutions and the Proprietary Traders does the selling as indicated with their trading imbalances of -1.2306 at 5% level and -0.7050 at 5% level respectively. The results indicate that investors react after the repurchase announcements especially with regard to the repurchases that do not have resale in plan.

Table 5.5 Investor Types Reaction on Repurchase with and without Resale

This table reports investor type reaction to the sample of 80 repurchase announcements which are further divided into the sample of 33 repurchases with resale in part A and 47 repurchases without resale in part B. The first column is the event period of the study where pre event period is 29 days (-30, -2), event period is 3 days (-1, 1) post event period is 29 days (2, 30). The four types of investors are the variables in the third column which are TV_C for Local Individuals, TV_F for Foreign Investors, TV_M for Local Institutions and TV_P for Proprietary Trading. Mean in the fourth column is the average of the trading imbalance in volume for the number of observation of resale. Trading imbalance for each investor type is calculated as in;

$$\text{Trading Imbalance} = \frac{(\text{BuyVol} - \text{SellVol})}{(\text{BuyVol} + \text{SellVol})}$$

*, ** and *** indicates significance at the 10%, 5% and 1% level respectively.

A. Investor Types Reaction on Repurchase with Resale

Event Period	N	Variable	Mean	Std Dev	T-Stat	P-Value
Pre Event Period		TV_C	0.5256	2.5550	1.18	0.2460
Pre Event Period	33	TV_F	2.9376	5.3102	3.18***	0.0033***
Pre Event Period		TV_M	-0.6725	3.0582	-1.26	0.2156
Pre Event Period		TV_P	-0.3219	2.5162	-0.73	0.4677
Event Period		TV_C	0.1954	0.7002	1.60	0.1187
Event Period	33	TV_F	0.2711	1.2118	1.29	0.2080
Event Period		TV_M	-0.2315	0.6730	-1.98*	0.0568*
Event Period		TV_P	0.3343	0.7041	-2.73**	0.0103**
Post Event Period		TV_C	0.4382	2.1675	1.16	0.2541
Post Event Period	33	TV_F	1.6725	4.5240	2.12**	0.0415**
Post Event Period		TV_M	0.5720	2.9654	1.11	0.2761
Post Event Period		TV_P	-1.2484	2.7010	-2.66**	0.0123**

Table 5.5 Investor Types Reaction on Repurchase with and without Resale (*continues*)

Table 5.5 Investor Types Reaction on Repurchase with and without Resale (*continued*)

B. Investor Types Reaction on Repurchase without Resale						
Event Period	N	Variable	Mean	Std Dev	T-Stat	P-Value
Pre Event Period		TV_C	0.7309	2.7768	1.80**	0.0777**
Pre Event Period	47	TV_F	0.4146	3.8163	0.74	0.4602
Pre Event Period		TV_M	-0.2085	4.1505	-0.34	0.7321
Pre Event Period		TV_P	-0.6038	2.7680	-1.5	0.1416
Event Period		TV_C	-0.0812	0.5326	-1.04	0.3017
Event Period	47	TV_F	0.2382	0.9336	1.75*	0.0869*
Event Period		TV_M	0.0089	0.9057	0.07	0.9464
Event Period		TV_P	0.0474	0.5666	-0.57	0.5689
Post Event Period		TV_C	1.0695	2.6896	2.73***	0.0090***
Post Event Period	47	TV_F	1.3579	4.5253	2.06**	0.0454**
Post Event Period		TV_M	-1.2306	3.9613	-2.13**	0.0386**
Post Event Period		TV_P	-0.7050	2.3028	-2.10**	0.0413**

5.6 Regression Analysis between Return and Investor Types for Resale

To investigate the variation of investor trading on stock returns, we estimate a regression in the following form:

$$\text{Returns} = \alpha_0 + \alpha_1 TV_C + \alpha_2 TV_F + \alpha_3 TV_M + \alpha_4 TV_P + \text{error}$$

According to the reverse signaling hypothesis, resale announcement is the reverse of repurchase and thereby is a bad news. If resale announcement is being treated as bad news then the coefficients of TV_C, TV_F, TV_M and TV_P should be negative. Part A of the table, which is the pre event regression analysis indicate that only intercept is significant with positive coefficient at 1% level. Part B of the table, which is the event period regression analysis not even the intercept is significant. Part C of the table, which is the post event regression analysis indicate that only intercept is significant with positive coefficient at 5% level. The results from the table indicates that a resale firm is overvalued

since the intercept is positively significant in pre event and post event, yet investors trading do not have any variation on the returns as in all the three event periods none of the trading imbalances of any of the traders was significant. The R square of pre event, event period and post event however are 6.68%, 3.22% and 8.52%.

Table 5.6 Regression Analysis Between Return and Investor Types

This table reports the regression analysis of investor types on stock return. The dependent variable is the daily stock return of the resale firm. The table is divided into three parts; pre event regression, event period regression and post event regression. Including the constant the intercept, there are five variables. TV_C, TV_F, TV_M and TV_P are the trading imbalance of Local Individuals, Foreign Investors, Local Institutions and Proprietary Traders respectively. The event period of the study are 29 days (-30, -2) for pre event period, 3 days (-1, 1) for event period and 29 days (2, 30) for post event period. The number of sample is the 33 resale announcements and the table provides R-Square, Adjusted R-Square and F Value for each event periods. ** and *** indicates significance at the 5% and 1% level.

A. Pre Event Regression Model

<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Pr > F</u>
Model	4	0.0813	0.0203	0.5	0.7351
Error	28	1.1353	0.0406	R-Square	0.0668
Corrected Total	32	1.2166		Adj R-Sq	-0.0665
<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>Std Error</u>	<u>T Stat</u>	<u>P Value</u>
Intercept	1	0.1102	0.0388	2.84***	0.0084***
TV_C	1	0.0073	0.0172	0.43	0.6730
TV_F	1	0.0071	0.0115	0.61	0.5440
TV_M	1	0.0037	0.0105	0.35	0.7271
TV_P	1	0.0149	0.0119	1.26	0.2183

B. Event Period Regression Model

<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Pr > F</u>
Model	4	0.0007	0.0002	0.23	0.9174
Error	28	0.0224	0.0008	R-Square	0.0322
Corrected Total	32	0.0232		Adj R-Sq	-0.1060
<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>Std Error</u>	<u>T Stat</u>	<u>P Value</u>
Intercept	1	0.0023	0.0050	0.45	0.6566
TV_C	1	-0.0049	0.0175	-0.28	0.7823
TV_F	1	0.0071	0.0088	0.80	0.4305
TV_M	1	0.0070	0.0182	0.38	0.7035
TV_P	1	-0.0054	0.0151	-0.36	0.7243

Table 5.6 Regression Analysis Between Return and Investor Types (*continues*)

Table 5.6 Regression Analysis Between Return and Investor Types (*continued*)

<u>C. Post Event Regression Model</u>					
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Pr > F</u>
Model	4	0.0376	0.0094	0.65	0.63
Error	28	0.4036	0.0144	R-Square	0.0852
Corrected Total	32	0.4413		Adj R-Sq	-0.0454
<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>Std Error</u>	<u>T Stat</u>	<u>P Value</u>
Intercept	1	0.0535	0.0215	2.49**	0.0188**
TV_C	1	-0.0054	0.0112	-0.48	0.6349
TV_F	1	-0.0018	0.0090	-0.20	0.8419
TV_M	1	0.0069	0.0054	1.28	0.2112
TV_P	1	-0.0045	0.0070	-0.64	0.5265

5.7 Regression Analysis between Return and Investor Types for Repurchase with Resale and Repurchase without Resale

The methodology for the regression is the same as 5.6 earlier where to investigate the variation of investor trading on stock returns, this study estimate a regression in the following form:

$$\text{Returns} = \alpha_0 + \alpha_1 TV_C + \alpha_2 TV_F + \alpha_3 TV_M + \alpha_4 TV_P + \text{error}$$

According to the signaling hypothesis, repurchase announcement is good news. If repurchase is good then the coefficients of TV_C, TV_F, TV_M and TV_P should be positive. Table 5.7 is divided into two parts, repurchase with resale and repurchase without resale. Part A and E of the table, which is the pre event regression analysis of the two repurchases, indicate that none of the variables are significant. Similarly for the post event analysis, none of the variables produce significant result as shown in Part C and G. Part F too for the event period for repurchase without resale does not have any significant result. Only Part B which is the event period regression analysis for repurchase with resale indicate negative coefficients of TV_C, TV_F and TV_P which are -0.0562, -0.0280 and -0.0704 respectively; all are significant at 10% level. The coefficient on TV_C is -0.0562 and significant at 10% level suggesting that investor trading of retailer reduces the stock returns of the repurchasing firm. Similarly the coefficient of TV_F and TV_P,

significant at 10% level also indicate the same. The results indicate that returns of a repurchase firm with resale in plan can be better estimated than the repurchase without resale in plan. The R-square of the repurchase with resale model for the event period is 19%.

Table 5.7 Regression Analysis Between Return and Investor Types on Repurchase

Repurchase announcement is divided into repurchase with resale and repurchase without resale. This table reports the regression analysis of investor types on stock return for both the repurchases. The dependent variable is the daily stock return of the resale firm. The table is divided into six parts; pre event regression, event period regression and post event regression for each of the repurchase with resale and repurchase without resale. Repurchase with resale is left sided and repurchase without resale is right sided. Including the constant the intercept, there are five variables. TV_C, TV_F, TV_M and TV_P are the trading imbalance of Local Individuals, Foreign Investors, Local Institutions and Proprietary Traders respectively. The event period of the study are 29 days (-30, -2) for pre event period, 3 days (-1, 1) for event period and 29 days (2, 30) for post event period. The number of sample is the 33 for repurchase with resale and 47 for repurchase without resale. The table provides R-Square, Adjusted R-Square and F Value for each event periods. * indicate significance at the 10% level.

		<u>Repurchase with Resale</u>				<u>Repurchase without Resale</u>			
		<u>A. Pre Event Regression Model</u>				<u>E. Pre Event Regression Model</u>			
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>	
Model	4	0.1667	0.32	0.8615	4	0.0976	0.6	0.6617	
Error	28	3.63589	R-Square	0.0438	42	1.6951	R-Square	0.0544	
Corrected Total	32	3.80259	Adj R-Sq	-0.0928	46	1.7926	Adj R-Sq	-0.0356	
<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>	
Intercept	1	-0.1337	-1.63	0.1135	1	-0.0443	-1.43	0.1591	
TV_C	1	-0.0147	-0.40	0.6899	1	-0.0161	-1.14	0.2599	
TV_F	1	-0.0106	-0.72	0.4779	1	-0.0140	-1.44	0.1570	
TV_M	1	0.0159	0.76	0.4563	1	-0.0032	-0.45	0.6583	
TV_P	1	-0.0011	-0.03	0.9734	1	-0.0100	-0.7	0.4882	
		<u>B. Event Period Regression Model</u>				<u>F. Event Period Regression Model</u>			
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>	
Model	4	0.00847	1.64	0.1915	4	0.0005	0.12	0.9765	
Error	28	0.03611	R-Square	0.1900	42	0.0448	R-Square	0.0108	
Corrected Total	32	0.04458	Adj R-Sq	0.0743	46	0.0453	Adj R-Sq	-0.0834	

Table 5.7 Regression Analysis Between Return and Investor Types on Repurchase (continues)

Table 5.7 Regression Analysis Between Return and Investor Types on Repurchase (*continued*)

<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>
Intercept	1	-0.0023	-0.34	0.7376	1	0.0004	0.08	0.9337
TV_C	1	-0.0562	-1.75*	0.0903*	1	-0.0085	-0.32	0.7499
TV_F	1	-0.0280	-1.89*	0.0690*	1	0.0004	0.04	0.9673
TV_M	1	-0.0244	-1.04	0.3071	1	-0.0032	-0.22	0.8308
TV_P	1	-0.0704	-2.39*	0.0240*	1	0.0025	0.09	0.9314

<u>C. Post Event Regression Model</u>					<u>G. Post Event Regression Model</u>			
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>F Value</u>	<u>Pr > F</u>
Model	4	0.08452	0.91	0.4696	4	0.0425	0.37	0.8305
Error	28	0.64742	R-Square	0.1155	42	1.2134	R-Square	0.0338
Corrected Total	32	0.73194	Adj R-Sq	-0.0109	46	1.2559	Adj R-Sq	-0.0582
<u>Variable</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>	<u>DF</u>	<u>Coeff.</u>	<u>T Value</u>	<u>P Value</u>
Intercept	1	0.0084	0.24	0.8094	1	0.0018	0.06	0.9524
TV_C	1	-0.0257	-1.63	0.1152	1	0.0039	0.33	0.7425
TV_F	1	-0.0087	-1.26	0.2186	1	0.0034	0.49	0.6247
TV_M	1	-0.0086	-0.84	0.4091	1	0.0011	0.16	0.8768
TV_P	1	-0.0019	-0.15	0.8800	1	-0.0101	-0.85	0.4025

As can be understood from the Table 5.7 the only regression that is significant is the event period model for repurchase with resale. The model has a R square of 19%. Comparing with the pre event or the post event, it can be understood that it is easier to estimate or predict the return of a repurchasing stock during the event period. It is also easier to estimate or predict in comparison with a repurchase which does not have a resale in plan.

CHAPTER VI

CONCLUSION

Thai firms can first conduct an open market repurchase and then after a waiting period for a maximum of 6 months on completion of the repurchase program, can conduct a stock resale that effectively reverses the repurchase. Thai firms are required to publicly announce an open market repurchase and complete the repurchase within a three year period. At the end of the three year period or after the completion of the repurchase program, the firm must disclose detailed information including the number of shares actually repurchased to the SET. Thai firms may also conduct a resale that effectively reverses some or all of the repurchase. The regulations regarding the resale process are similar to the process of repurchase. The resale must also be public announced and the time for the resale program is within three years. Again at the end of the resale period of three years or end of the resale program, the firm must disclose information about the resale.

The regulatory structure imposed by the SET allows us to accurately identify a sample of firms that announce the repurchase. These same firms then announce and conduct a resale that essentially reverses the repurchase. A repurchase is generally considered to be a positive signal to the market, while the resale is generally considered to be a negative signal. Thus we examine a sample of firms that are sending opposing signals to the market.

This paper finds that the market reactions to the resale announcements are essentially the mirror image of the reactions to the repurchase announcements. Market reacts positively to the repurchase announcement and negatively to the resale announcement. The market reacts to both signals in a reverse manner consistent with the existing literature. We also find that the market response to the announcement of the repurchase for firms that subsequently resale the shares is similar to the response for a

general view of repurchase announcement, a repurchase firm being undervalued. Those repurchase firm that do not have resale in plan nor execute any resale, such repurchasing firms are not undervalued firm. But both the group of repurchase group; Repurchases with resale and repurchase without resale responds positively to the announcement. Thus, we have some supports for the H2 representing the difference in market responses between repurchases followed by resale and repurchases without resale.

The paper further made a search for market reactions on announcement and the actual trading day of resale. Though we don't find any significant result on the event day of the resale announcement, we do find that the firm is overvalued before the announcement. However when it comes to actual resale day, then firm is no more overvalued and there is no market reaction to the first resale day. We thereby conclude that market reacts fast and reacts to the announcements and not to the actual transaction that take place.

It was also studied to see the reactions of investor types to the resale announcements. The Local Institutions takes advantage of the overvalued stock and sells the stock before the announcement whereas the Proprietary traders reacts and sells during the event period reacting fast to the announcement. For the reactions of the investors to the two groups of repurchases, this paper finds that investors reacts quiet similar to each other except that the investors reacts to the announcement during the event is more for the repurchase with resale. For the repurchase without resale, the investor trading is significant all for the post event period.

The paper concludes that the stock market returns of the resale announced firms is not depended on any of the investor types trading but have a positive intercept pre event and post event which means that the firm is worthwhile to invest in itself. For the stock market returns of the repurchases group, returns are not depended on any of the investor types trading before or after the announcement but are depended on the announcement. This is true for repurchase with resale in plan, here the stock returns of the repurchasing firm trading of Local Institution, Foreign Investors and Proprietary Traders. To conclude it is expected that a firm repurchasing their own stock will do better with resale in plan and also can estimate the market reactions than without having resale in plan.

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