

Seasoned Equity Offering in Thailand

[Nareerat Taechapiroontong and Chayute Phumitanon]

Abstract— The purpose of this paper is to investigate the optimal fund raising strategy through equity issuance in Thailand. Contrary to the Pecking Order Theory suggesting raising funds from firm's retained earnings as the first source, following by debt, and lastly issuing equities, there exist more than 2,700 seasoned equity offering (SEO) events during 1999 to 2014 in Thailand; all of data used for this research is acquired from SETSMART database. Moreover, the trend has been increasing substantially in the past 5 years. Key main sectors issuing stocks are property and construction (27%), services (16%), industrials (11%) and financials (10%).

Previous researches found a negative stock return from SEO. It is therefore interesting to explore why many firms still issue stocks to raise capital. This research applies event study methodology in identifying the impact of SEO event to the abnormal return comparing with the benchmark, SET return in this case.

The empirical analysis shows a matched result with other countries, giving -0.6% abnormal return on the 1-day event window at 1% confidence level, and may drop down to -20.7% within the first year. This is consistent throughout all event windows: short-term (1 day to 1 week), intermediate term (6 months to 1 year), and long-term (> 1 year). Specifically, private placements (PPs) give a less negative return than public offerings (POs) due to the difference in level of information availability. The implication of SEO is that firms may need to raise money via SEOs in order to 1) grab the opportunities when stock prices are high, 2) secure the fund and 3) use to reduce financial distress.

Keywords— *Seasoned Equity Offering (SEO), Event Study, Private Placement (PP), Public Offering (PO), Right Offering (RO)*

I. Introduction

Funds are needed to fuel business growth. In corporate finance, the sources of funds the firm can acquire are classified into 3 pools, in the following order according to the Pecking Order Theory as described by Myers and Majluf (1984):

- A. Internal funds which come from net income portion that are kept as retained earnings,
- B. Debt or obligation that is borrowed from financial institutions, and the firm needs to pay regular interest back depended on the contract and type of debts, and
- C. Issue new equities, Seasoned Equity Offering or SEO.

Nareerat Taechapiroontong
College of Management, Mahidol University
Thailand

Chayute Phumitanon
Proctor & Gamble Trading (Thailand) Ltd.
Thailand

Three types of seasoned equity offerings include private placements, public offerings and right offerings. Private placement (PP) refers to the sales of securities to a relatively small number of selected investors, usually institutional buyers, as a way to raise capital. Public offering (PO) is the sale of equities or other financial instruments by an organization to the public i.e. there is no limitation to the group of people to buy stocks for fund raising. Right offering or right issue is an issue of rights to a company's existing shareholders who are entitled to buy additional shares directly from the company within a fixed time period.

More than 600 firms have issued more than 4,500 SEOs in Thailand since the Stock Exchange of Thailand, or SET, was opened in 1975. In addition, there is also an increasing trend for firms to use the last financial resource over the last several years. Many papers also find out that there is a negative return for firms issuing new securities.

In contrast to the Pecking Order Theory, and by knowing that there is a negative return of SEO firms in many markets, it is very interesting to understand why firms issue new stocks versus using internal sources of funds or borrowing money from financial institution.

II. Methods

An event study is a methodology, MacKinlay (1997), to study the effect of an event on a specific dependent variable, which is beyond expectation, over a study period. In other words, it is a statistical method to assess the impact of an event on the value of a firm. The basic idea is to find the abnormal return attributable to the event being studied by adjusting for the return that stems from the price variation of the entire market.

This empirical analysis, event study, is based on assumptions that the market is efficient, the event is unanticipated, and there is no confounding effect during the event period.

First of all, the event date must be defined as set as Day 0. The SEO dates, both the date of announcement and the actual date the firm allocates the securities (issuance date), are the events for this research. Second, the time period of the event study must be framed. On the timeline in Figure 1, test period is identified as the interval before and after the SEO date, $t = T_0$. This is also known as the event window, from $t = T_{-1}$ to $t = T_1$. The impact of the event on dependent variable will be examined in this event window. The estimation period ranges from, assuming, from $t = T_{-2}$ to $t = T_{-1}$. The estimation period covers a period over which the expected return of samples will be estimated. In this paper, the event windows are classified into 3 time frames: short-term (1 and 5 trading days), intermediate term (1 month, 6 months, and 1 year), and long term (3 years and 5 years).

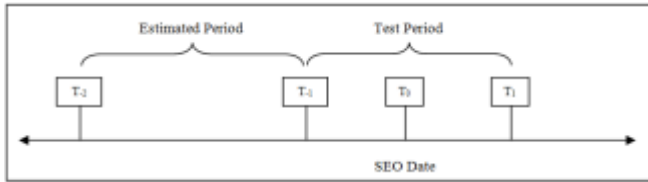


Fig. 1: Timeline of an Event Study

Third, the expected return for each sample over the estimated period is computed to be used as a benchmark. Fourth, abnormal return can then be calculated. An abnormal return for an individual case is the difference between the actual return on time t , in the event window and the expected return of the individual stock, which is shown in equation (1).

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

The cumulative abnormal return, CAR, for an individual stock is summation of all abnormal returns over the event window, which is presented in equation (2).

$$CAR_{(T_{-1}, T_1)} = \sum_{t=T_{-1}}^{T_1} AR_{i,t} \quad (2)$$

Cumulative Abnormal Returns (CAR) method is used to measure the performance of firms issuing seasoned equity. The abnormal return is then calculated as the raw return from the issuing firm minus the return on the corresponding non-issuer. Next, the average abnormal return for the day t across all SEOs is calculated as the equally weighted arithmetic average of the individual abnormal returns. Finally, the CAR from the first day after the offering until day t is calculated as the sum of the daily average abnormal returns until t .

For buy-and-hold abnormal return, BHAR, for an individual stock is the difference between the buy-and-hold return of a sample and that of the benchmark expected return, as in equation (3) below. This BHAR is based on the assumption that an investor buys a stock and holds it until the end of event period.

$$BHAR_{i,(T_{-1}, T_1)} = \prod_{t=T_{-1}}^{T_1} (1 + R_{i,t}) - \prod_{t=T_{-1}}^{T_1} (1 + E(R_{i,t})) \quad (3)$$

Finally, the average abnormal return for all samples on time (t) is just the arithmetic mean of the abnormal return, denoted in equation (4).

$$\overline{AR}_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \quad (4)$$

Fifth, the last step of event study, the abnormal return result will be tested for the significance. Most researches use T-statistics to test significance under specific assumptions like normal distribution of return. For an individual sample (i), parametric equation (5) is used to test whether the abnormal return is different from zero.

$$t_{AR} = \frac{AR_{i,t}}{S_{e_{i,t}}} \quad (5)$$

With more samples i.e. more firms included in the study, equation (6) can be applied to investigate if the average buy-and-hold abnormal returns are equal to zero, respectively.

$$t_{BHAR} = \frac{\overline{BHAR}_{i,t}}{\sigma(BHAR_{i,t})/\sqrt{n}} \quad (6)$$

In this research, the event is studied in a deeper level. First, the overall abnormal return is studied to see if the result from the Stock Exchange of Thailand (SET) is consistent with other markets; second, the data is categorized by offering types and by industries to see the effects from fund raising methods and business environment, respectively. Last, the event study is grouped by the time or manner of offers whether it is the first time after initial public offering (IPO), or the subsequent offerings after the latter.

III. Results

The paper is hypothesized to use two different event dates: 1) announcement date, as in many papers e.g. Asquith and Mullins (1986), Masulis and Korwar (1986), Mikkelsen and Partch (1986), Brous and Kini (1994) and Limpaphayom and Ngamwutikul (2004), and 2) issuance date, as studied by Marsh (1979) and Hess and Frost (1982). The SET market return of the same time interval is used as a benchmark, applying buy-and-hold abnormal return. In summary, there is a negative return of -0.6% in the short period (1-day after the event), significant at 1%. The trend is decreasing exponentially with the longer window; the stock abnormal return goes as low as -196% in the 5-year period, also significant at 1%.

All of the data here is acquired from SETSMART database, and SAS programming is written to run the models of event study. Initially, there are about 1,800 events from 1999 to 2014 for Stock Exchange of Thailand. Out of this, the two major types of offerings found are right offerings and private placements: 48% and 45%, respectively, while public offering is accounted for 7% from the data set.

3.1 Overall Results

Table 1 shows the abnormal return of using SEO announcement date as a reference of event study. It shows that the longer the period after the event, the lower the return. One-day abnormal return is -0.6%, while 5-year abnormal return is -196%, both at 1% significant level. However, this does not significant through all time intervals, as in 5-day and 1-month results, but most of the results are consistent with previous researches, SEO causes negative abnormal return. It can be summarized that there is a negative return of SEO announcement over the long run. Likewise, Table 2 shows abnormal returns of SEO issuance date, in which the results are similar to those of announcement date, -0.9% for one week, and -136.5% for five years with 1% significant level. The 0.3% return for 1-day issuance date is insignificant.

TABLE I. ABNORMAL RETURNS OF ANNOUNCEMENT DATE

Event	Std Dev	Mean	Min	Max	t Value
1D	0.0993	-0.6%***	-0.2676	0.3074	-2.5700
5D	0.1376	-0.5%	-0.4221	0.5156	-1.4000
1M	0.2714	-0.3%	-0.8973	1.0725	-0.4400
6M	0.6170	-5.4%***	-0.9554	2.8013	-3.7100
1Y	0.8231	-20.7%***	-1.2337	3.3516	-10.6300
3Y	1.5335	-82.1%***	-2.2115	7.1428	-22.6700
5Y	2.3670	-196.0%***	-4.0079	10.0284	-35.0600

*** 1% Significant Level

TABLE II. ABNORMAL RETURNS OF ISSUANCE DATE

Event	Std Dev	Mean	Min	Max	t Value
1D	0.0976	0.3%	-0.2754	0.3308	1.2000
5D	0.1445	-0.9%***	-0.4430	0.5850	-2.7600
1M	0.2763	-0.5%	-0.8973	1.1087	-0.8200
6M	0.6190	-5.8%***	-0.9773	2.7337	-4.0000
1Y	0.8558	-20.4%***	-1.2638	3.5794	-10.0900
3Y	1.6376	-75.9%***	-2.1000	9.2924	-19.6200
5Y	2.0246	-136.5%***	-2.7945	11.6390	-28.5400

*** 1% Significant Level

The comparison of returns is visualized in Figure 2. It implies that the announcement date is more important than the date of issuance since the magnitude of negative return is more. The differences in abnormal returns diverge from 0.4% up to ~60%, from 6-month to 5-year periods. Thus, the rest of the research will focus more on the announcement date as the event.

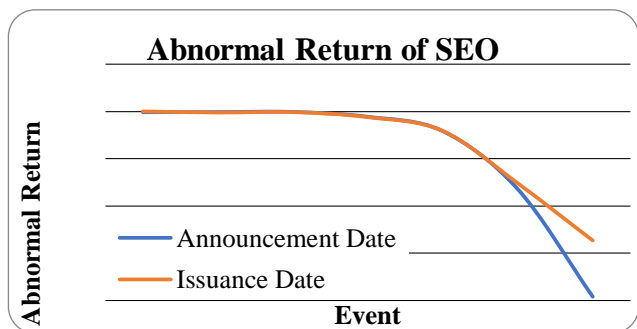


Fig. 2: Comparison of Abnormal Returns

3.2 Different SEO Offer Types

The classification of data by types of offering also gives the same output; announcement date has more impact on the stock performance with 1% significant level during the long run. For the 3-year period after the event, the differences in the stock return range from 5.6% to 7.6% between the announcement and issuance dates. The results show that public offering (PO) and the right offering with warrant (XRW) have the lowest returns, -251.6% and -229.2%, respectively, using announcement date as the event. Likewise, the numbers are consistent with the 5-year period after the event ranging from 56.1% to 69.6% differences.

The result is illustrated in Figure 3. This implies that, if firms inevitably have to issue stocks, they can choose normal right offering or private placement for the better performance of the firms in the long run.

Figure 3 shows the comparison of abnormal returns by each offering type: PO (public offering) ranges from -251.6%*** to 2.92%*, PP (private placement) ranges from -184.95%*** to -1.08%**, XRS (common stock offering) ranges from -182.66%*** to -2.45%***, and XRW (warrant offering) ranges from -229.21%*** to -12.49%***. The graph plots different windows of period after the event date, using the announcement date as the reference. Even though there are some fluctuations in the short and intermediate terms, they are not statistically significant. The number of asterisks shows the significant level, one for 10%, two for 5%, and three for 1%.

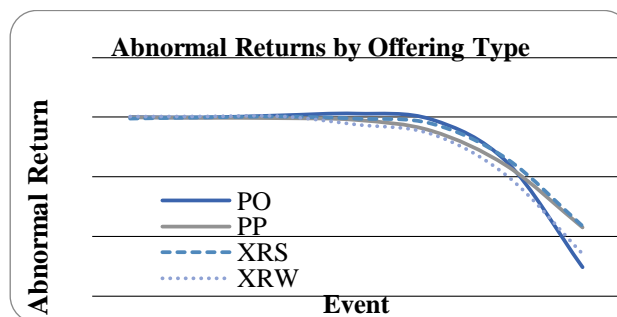


Fig. 3: Comparison of Abnormal Returns by Offering Type

These results are consistent with the previous researches by Hertz and Smith (1993) and Cronqvist and Nilsson (2005). They claim that private placement investors can engage and extract information better than normal investors in cases of public and rights offering. As a result, they can learn the true value of the firm as well as predict the firms' future cash flow.

However, the reasons that some event window of data not significant are 1) the number of samples in each subgroup is small; hence, it lowers the degree of freedom and 2) there is a different sample mix of characteristics within the group. That is, there are various types and natures of firms which might distort the data.

The data is clustered in some specific combination of industries and offering types: property and construction is the biggest industry issuing stocks for 33% of the events with more than half of the time offering PP. Services industry is the second largest (20%) with 60% of the time issuing PP. In fact, most industries issue PP as the major offering type, except consumer products and financials industries. These two industries offer XRS for most of the time, 45% and 41%, respectively. The sample disperses randomly in the rest of the combinations. Table 3 elaborates more details, an example of 5-year time period.

From sector analysis, finance and securities sector usually XRS. Property development sector offers PP, XRS and XRW. On the other hand, PP are very common for sectors like banking, construction materials, information and communication technology, media and publishing, tourism and leisure, property development, steel and construction services.

Looking at the key industries (financial, industrial and property and construction), over the long run with 1%

significant level, financial industry tends to perform better or less negative, while industrial industry performs worst after the seasoned equity offering; the magnitude ranges

from 17% - 110%. This is consistent for all offering types as in Figure 4.

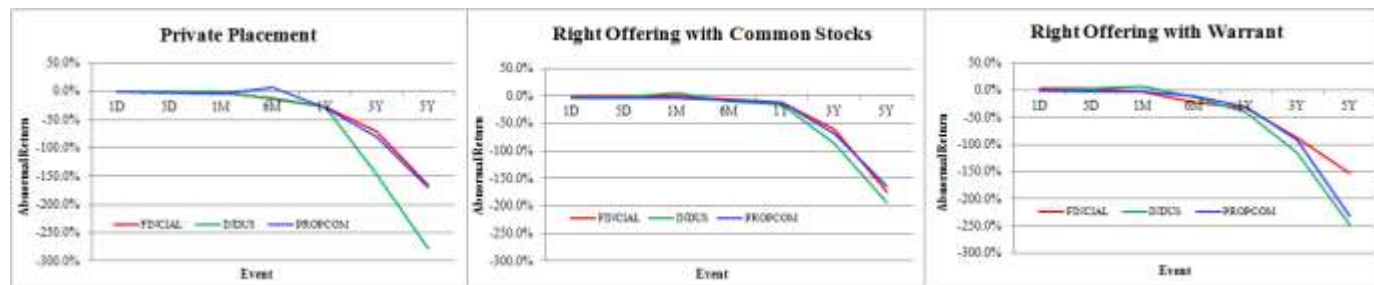


Fig. 4: Abnormal Returns of Key Industries by Different Offering Types

TABLE III. 5-YEAR ABNORMAL RETURN BY INDUSTRY AND OFFERING TYPE COMBINATION

Offering Type	Industry	N	Std Dev	Mean	Min	Max
Public Offering	Other	1	.	-0.8177	-0.8177	-0.8177
	AGRO	5	1.6285	-2.8196**	-4.0079	-0.9415
	COMSUMP	1	.	-2.1818	-2.1818	-2.1818
	FINCIAL	17	2.0612	-2.5317***	-4.0079	0.3533
	INDUS	4	0.4790	-0.6181*	-1.0359	0.0721
	PROPCON	13	1.7020	-2.7507***	-4.0079	-0.3588
	RESOURC	5	1.7282	-3.2350***	-4.0079	-0.1435
	SERVICE	7	1.5675	-3.1028***	-4.0079	-0.3883
	TECH	4	2.2458	-0.9883	-4.0079	1.4257
	Private Placement	Other	13	1.0163	-1.5002***	-4.0079
AGRO		34	3.1618	-0.0883	-4.0079	9.5107
COMSUMP		16	2.1835	-1.3944**	-4.0079	4.1503
FINCIAL		67	2.0410	-1.6579***	-4.0079	2.8416
INDUS		120	2.3862	-2.7660***	-4.0079	10.0284
PROPCON		274	2.4087	-1.6937***	-4.0079	10.0284
RESOURC		25	2.1487	-1.3108***	-4.0079	3.7127
SERVICE		198	2.2121	-1.6663***	-4.0079	10.0284
TECH		74	1.8658	-1.5080***	-4.0079	4.7639
Right Offering (Unidentified Security)	Other	1	.	-4.0079	-4.0079	-4.0079
	AGRO	2	3.5491	2.1556	-0.3540	4.6652
	FINCIAL	2	1.9440	-2.6333	-4.0079	-1.2587
	INDUS	5	2.7998	-2.7558	-4.0079	2.2526
	PROPCON	3	2.8423	-2.3669	-4.0079	0.9152
	TECH	1	.	-4.0079	-4.0079	-4.0079
Right Offering With Common Stocks	Other	7	0.3127	-1.2118***	-1.5733	-0.7587
	AGRO	24	2.4542	-1.4912***	-4.0079	6.2529
	COMSUMP	22	1.6851	-1.8209***	-4.0079	0.3646
	FINCIAL	81	2.6528	-1.7449***	-4.0079	10.0284
	INDUS	42	2.2733	-1.9330***	-4.0079	4.5465
	PROPCON	131	3.0146	-1.6329***	-4.0079	10.0284
	RESOURC	12	2.4977	-1.8913**	-4.0079	3.7127
	SERVICE	60	3.3907	-1.2324***	-4.0079	10.0284

Right Offering with Warrant	TECH	30	2.3080	-2.0284***	-4.0079	3.1474
	Other	8	1.4942	-1.8469***	-4.0079	0.0992
	AGRO	20	1.9110	-1.6851***	-4.0079	1.9685
	COMSUMP	10	1.8404	-2.5923***	-4.0079	0.0764
	FINCIAL	34	1.5392	-1.5243***	-4.0079	1.5440
	INDUS	32	1.5120	-2.4847***	-4.0079	-0.1279
	PROPCON	99	2.1951	-2.3156***	-4.0079	7.9013
	RESOURC	21	2.4424	-2.0833***	-4.0079	3.7127
	SERVICE	54	2.4934	-2.0121***	-4.0079	10.0284
	TECH	21	2.1635	-1.7109***	-4.0079	2.5980

*** 1% Significant Level, ** 5% Significant Level, * 10% Significant Level

3.3 Primary vs. Secondary Seasoned Equity Offerings

It is defined that primary SEO is the issuance of security after the initial public offering (IPO), while secondary SEOs are the following SEOs after the primary SEO. The results for XRS and PO insignificantly reveal that the abnormal return of secondary (or subsequent) SEO is higher, or less negative, than that of the primary SEO. Opposite trend is observed for XRW and PP. This is elaborated in Table 4 and Figure 5.

TABLE IV. ABNORMAL RETURNS OF PRIMARY AND SECONDARY SEASONED EQUITY OFFERINGS

Offering Type	Issue	# of Samples	1D	5D	1M	6M	1Y	3Y	5Y
Public Offering	Secondary	51	0.0015	-0.0100	0.0280	0.0655	-0.0712	-0.7982**	-2.3761***
	Primary	10	-0.0023	0.0217	0.0353	0.0281	0.1233	0.5553	3.2298***
Private Placement	Secondary	804	-0.0048	0.0116**	0.0165*	0.0445**	0.2330***	0.8435***	1.9081***
	Primary	92	0.0122	-0.0040	0.0232	0.0709	0.2152***	0.6230***	1.3372***
Stock Offering	Secondary	371	0.0274***	-0.0036	0.0116	0.0177	0.1124**	0.6589***	1.8159***
	Primary	82	-0.0114	-0.0063	0.0031	-0.0577	-0.1003	0.9012***	1.8748***
Warrant Offering	Secondary	276	0.0084	0.0098	0.0095	-0.1178	-0.2575	-1.0161	-2.3532

						***	***	***	***
Primary	91	0.0092	0.0156	0.0276	0.1466	0.3693	0.8966	2.1065	-

*** 1% Significant Level, ** 5% Significant Level, * 10% Significant Level

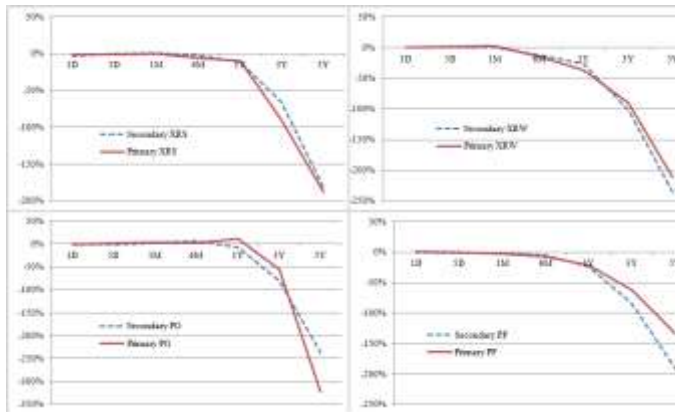


Fig. 5: Abnormal Returns of Primary vs. Secondary SEOs

Graphically, it can be observed clearly that the abnormal returns of the secondary SEOs and that of primary SEOs cannot be concluded. This depends on the type of offerings. It is quite difficult to distinguish the returns during the short and intermediate-term; however, the graphs diverge vividly 6 months after SEOs.

Statistically, paired t-test is applied to see if there is a significant difference in the mean of two independent groups. Regardless of offering type, Table 5 shows that the variances of 1-day abnormal return between primary and secondary SEOs are not equal at 5% significant level, while the means are not equal at 10% significant level.

TABLE V. PAIRED T-TEST OF 1-DAY ABNORMAL RETURN BETWEEN PRIMARY AND SECONDARY SEOs

Variable	SEO	N	Mean	Std Dev	Std Err	Min	Max
AR1D1	Secondary	1512	-0.0080	0.0977	0.0025	-0.2680	0.3074
AR1D1	Primary	280	0.0044	0.1067	0.0064	-0.2680	0.3074
AR1D1	Diff (1-2)		-0.0120	0.0992	0.0065		
T-Tests							
Variable	Method	Variances	DF	t Value	Pr > t		
AR1D1	Pooled	Equal	1790	-1.9100	0.0559		
AR1D1	Satterthwaite	Unequal	371	-1.8000	0.0724		
Equality of Variances							
Variable	Method	Num DF	Den DF	F Value	Pr > F		
AR1D1	Folded F	279	1511	1.1900	0.0498		

Table 5 is just an example to statistically check the equality of variance and whether there is enough evidence to conclude that the means are equal only. Similar test running is applied to all time windows, separated by offering type; the results are summarized in Table 6.

TABLE VI. PAIRED T-TEST SUMMARY BETWEEN ABNORMAL RETURNS OF PRIMARY AND SECONDARY SEOs

Event	Equality of Variance				T-Test for the Means			
	PO	PP	XRS	XRW	PO	PP	XRS	XRW
1D	-	-	-	-	-	10%	-	-
5D	-	1%	10%	-	-	-	-	-
1M	-	-	-	-	-	-	-	-
6M	1%	-	1%	-	-	-	-	-
1Y	-	-	5%	10%	-	-	-	-
3Y	1%	10%	1%	-	-	-	-	-
5Y	-	-	1%	-	-	5%	-	-

With the results from Table 6, the dash means that there is not enough evidence to reject the null hypotheses. This makes the inequality of variances and means becomes insignificant. Thus, it cannot be concluded that the secondary SEOs have higher abnormal return than that of primary SEOs for all offering types. The result in Thailand is not consistent with previous findings, Michaely and Shaw (1994) and Bessler and Thies (2006). The percentages in the table represent the significant level where there is sufficient data to conclude the inequality of variances and means.

The reasons that SET does not follow other markets might be, first, when breaking down into offering types, there might not be enough sample to assure the significant level. Second, Thai people perceive the primary and secondary SEOs indifferently. This is possible because SET is quite volatile and reacts proactively with news. No matter the offering is primary or secondary SEOs, investors still see this as a negative signal. However, there is a sign to have significant difference in the means from private placement, starting to observe in 5-year post event at 5% significance level. It is very interesting to observe more data in the future study to look for longer term or with a greater number of samples.

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About Author (s):



[Nareerat Taechapiroontong, Ph.D.
Assistant Professor at College of
Management, Mahidol University.
Thailand
Area of Interests: Corporate Finance,
Investment and Market Microstructure]