

Examining the January Effect in Thailand's Stock Market: A 48-year Journey Since Its Inception

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Abstract

This research aims to conduct a fundamental test to determine whether the January Effect occurs in the Thai stock market. The January Effect refers to a calendar anomaly occasionally witnessed in the market, where stock prices exhibit a tendency to rise more during the month of January compared to other months throughout the year. This calendar effect would create an opportunity for investors to buy stocks for lower prices before January and sell them after their value increases. The study covers a comprehensive and extensive time frame, spanning approximately 48 years, starting from the first trading day in 1975 to 2023. The data used in this study was the Thailand's stock index (SET index). The study compared the average (mean) index level during the month of January with the average index level in the preceding December. In this study, descriptive and inferential statistical analysis using t-test was employed to test the significance of this effect. The research findings reveal that the January Effect occurred in the Thai stock market with a high probability of 62.5 percent (30 years out of 48 years). On average, the index level in January was higher than that of December in the previous year by 2.86 percent. Additionally, in the 30 years where the January Effect occurred, the SET index showed an average increase of 6.08 percent in January. Regardless, it has been observed that the occurrence of this phenomenon was decreasing. In the most recent decade, there was only a 50 percent chance of it happening. Therefore, for practical purposes, it should not be expected with certainty that the January effect will consistently occur.

Keywords: January effect, Thailand stock market, market anomaly

Introduction

The January effect is a phenomenon observed in financial markets where there tends to be a consistent pattern of stock prices experiencing a rally or an increase in value during the month of January. It is often attributed to several factors. One possible explanation is that investors engage in year-end tax planning by selling stocks that have incurred losses to offset capital gains and reduce their tax liability. This selling pressure on underperforming stocks in December can lead to lower prices. As the new year begins, investors may reinvest their funds, resulting in a rise in stock prices. Additionally, investor psychology and market sentiment play a role, with positive expectations for the new year leading to increased buying activity, particularly in undervalued or overlooked stocks from the previous year.

The research questions are as follows: (1) Does the January effect actually occur? (2) Is the occurrence of the January effect consistent and does it exhibit a certain trend? Answering these questions will aid investors in making informed decisions regarding buying or adjusting investment portfolios based on the research findings.

Review of Literatures

The earliest academic mention of the observed seasonality is credited to Wachtel (1942). However, empirical evidence supporting the January effect didn't emerge until three decades later. Researchers Rozeff and Kinney (1976) were responsible for the first empirical discovery, highlighting that between 1904 and 1974, shares on the New York Stock Exchange (NYSE) showed an average return of 3.48% in January, compared to average monthly returns of 0.42% in the other months of the year.

The existence of the January effect has been supported by other researchers, such as Roll (1983) and Reinganum (1983), who emphasize its significance in small companies. Building upon this finding, Branch and Chang (1990) suggested that the effect was particularly pronounced in small companies with low-priced shares. Additionally, DeBondt and Thaler (1985, 1987) assert that the effect's importance is higher in small companies that have underperformed compared to their counterparts in the past. Within the literature exploring the January effect, two prominent hypotheses emerge as explanations: the tax-loss selling hypothesis by Wachtel (1942) and the window dressing hypothesis by Lakonishok and Smidt (1988).

The January effect in Thailand refers to the recurring pattern observed in the Thai stock market where stock prices tend to rise or show positive performance during the month of January. From the investigation, it was found that there were research studies both supporting and not supporting the occurrence of the January effect. Boumen and Jacobsen (2002) discovered that the January effect led to an average monthly return of 6 percent specifically in the month of January, covering the years 1988 to 1998. In contrast, the average annual return during that period was 0.0 percent. Their analysis led them to the conclusion that the SET index, which measures the performance of the Stock Exchange of Thailand, exhibited slightly higher average monthly returns from November to April compared to other months. This phenomenon was attributed to the combined influence of the Halloween Effect and the January Effect. A separate investigation was carried out by Friday and Bo in 2015, focusing on the seasonality in stock returns for the Stock exchange of Thailand (SET) by considering the monthly returns of the SET index between 1975 and 2013. Their findings supported the observations made by Boumen and Jacobsen, as they observed that stock returns were relatively higher in December and January during the study period. The literatures described above were similar to the findings of the recent study conducted by Wuthisatian (2022), which presents compelling evidence of a recurring pattern of seasonality in the Thai stock market using daily stock returns from March 2014 to March 2019. The study reveals that January returns exhibited a positive trend and were significantly higher compared to the returns observed in other months of the year.

On the other hand, Nuntasomboon et al. (2021) investigated the January effect in the Thai stock market by employing the contrarian investment strategy and the momentum investment strategy. The sample period spanned from January 2008 to January 2018. The findings indicated that there was no significant difference in profitability between the contrarian and momentum investment strategies in January compared to non-January months. Consequently, the researchers concluded that the January Effect was not observed in the market.

When considering the overall picture, most historical analyses and research indicate the presence of the January effect in Thailand. It is commonly observed that January has been a comparatively favorable month for stock returns in the market. However, it was reported that the strength and consistency of the effect can vary from year to year and may be influenced by factors such as market conditions, investor behavior, and specific economic

circumstances. Previous research studies on the January effect in Thailand have commonly relied on relatively short observation periods, usually spanning around 5 to 10 years. However, given the nearly five-decade-long history of the stock market, such short time spans may not provide a thoroughly understanding of the phenomenon. Therefore, the primary contribution of this research is to investigate this phenomenon over the longest possible time span, starting from the inception of the market in 1975 to the present time in 2023 (48 years). By comparing the findings of this study with the historical research on the topic, a comprehensive analysis and discussion of the January effect in Thailand will be provided in the latter section.

Objectives and Scopes

The main objective of this research is to test whether the January effect occurs in the Thai stock market or not. If it indeed occurs, the research aims to determine the frequency and magnitude of its incidence when considering 48-year data from the first inception of the market on April 30, 1975, until the first month of 2023. This data represents the longest available time span ever reported for such analysis in this country. It is based on the SET Index, which is the main stock market index in Thailand and encompasses all securities traded in the market. The January effect test utilized both descriptive and inferential statistics. The hypothesis was designed to examine whether the positive SET index return in January of any given year was significant compared to the returns in the previous December. The analysis was also conducted by dividing the time period into sub-intervals of 10 years to investigate the development of this phenomenon, whether it has increased or decreased. Conclusions and recommendations for future research were drawn accordingly.

Methodology

The research began by aggregating the daily values of the SET Index, starting from April 30, 1975, which was the base date with an index value of 100. Data was collected until the end of January 2023, which was the latest month tested for the January effect. After that, the data was selected in pairs, using the SET Index data from December and January of the following year. In total, there are 49 pairs of data or 48 years in the overall comparison. This was followed by studying the frequency and then probability of the occurrence of the January effect. The analyses utilized descriptive and inferential statistics.

The analysis using descriptive statistics began by calculating the arithmetic mean of the index level in each pair, and then comparing them to determine if the SET Index in January is higher than the previous December. The January return with respect to December can be calculated as follows:

$$\text{January Return (\%)} = \left(\frac{\text{SET}_{\text{JAN}} - \text{SET}_{\text{DEC}}}{\text{SET}_{\text{DEC}}} \right) \times 100 \quad (1)$$

where SET_{JAN} refers to the average SET index level of all trading days in January, and SET_{DEC} represents the average SET index level of all trading days in December of the previous year.

An example of this calculation can be illustrated by comparing the average SET Index for December 1991, which was 690.14 points (over 19 trading days), with the average SET Index for January 1992, which amounted to 750.34 points (over 22 trading days). By performing the calculation, it was determined that the index in January is 8.72 percent higher than December. However, before drawing conclusions regarding the occurrence of the January Effect, it is essential to conduct hypothesis testing using inferential statistics. The null and the alternative hypotheses are described as follows:

$$H_0: \mu_{\text{JAN}} = \mu_{\text{DEC}} \quad (2)$$

$$H_1: \mu_{\text{JAN}} \neq \mu_{\text{DEC}} \quad (3)$$

where μ_{JAN} refers to the average value of the SET index in the month of January, while μ_{DEC} refers to the average value of the SET index in the month of December of the previous year. The test statistic for a two-sample independent t-test was employed by testing the difference between the two sample arithmetic means. The acceptance criteria for determining whether the January effect occurs were based on a significance level of 0.05.

Results and Discussions

Table 1 presents findings obtained from the descriptive statistics accompanied with distribution chart of the January returns. As explained earlier, it can be observed that the percentage values for each year, if positive, may indicate the occurrence of the January effect in that particular year. This is because the average index level in January was higher than the average level in the preceding December. In the overall picture of 48 years, the average SET

Index in January was found to increase by 2.86 percent compared to December. Over the course of the same timeframe, it was noted that in 35 out of 48 years, which amounts to 72.9 percent, there has been an upward trend in the average January index levels compared to the preceding month. This was initially considered a very high probability. The information presented in Table 1 was also visualized in Figure 1.

Table 2 displays the frequency distribution of different return ranges in January. It illustrates the frequency of instances where the SET Index level increases or decreases in January, categorized into 5 percent intervals. From the data collected over 48 years, it was found that the SET Index in January had an increase of less than 5% in 16 instances, or 33.3 percent. Similarly, there were 16 instances where the increase ranged between 5-10%. However, there were only 3 instances where the increase exceeded 10%. When considering the 35 years with positive returns, it was found that the index in January increased on average by 5.29 percent. In contrast, during the remaining 13 years with negative returns, the index experienced an average decrease of 3.69 percent. Figure 2 provided a visual representation of the data presented in Table 2.

Conversely, when looking at the opposite direction, it was found that the SET Index in January decreased by less than 5% in 9 instances, decreased between 5-10% in 4 instances, but never decreased by more than 10%. When considering the 13 years without the January effect, it was found that the index in January decreased on average by 3.69 percent. Overall, when considering both sides of the directions, it is apparent that the SET Index exhibits a positive bias in terms of frequency and magnitude. All of the above research findings provide strong evidence for the occurrence of the January effect.

Upon closer examination, it was observed that despite the 72.9 percent chance of the January effect occurring, there were some years where the January positive return were not noticeably high. For example, in the year 2020, the average SET index value in the month of January was only 0.09 percent higher than the preceding month of December. Therefore, the utilization of inferential statistics becomes necessary in order to make informed decisions. Based on the hypothesis testing described earlier, it was found in Table 3 that, out of the 35 years with a positive return in January, 30 years exhibited statistical significance by rejecting the null hypothesis (H_0) at the significance level of 0.05. Among the 30 years exhibiting the January effect, the average increase in the index during January amounted to 6.08 percent. It is noted that the years with a positive return in January, but without statistical significance,

were 1979, 1986, 1994, 2015, and 2020, with average increases of 0.93 percent, 0.36 percent, 0.59 percent, 0.77 percent, and 0.09 percent, respectively. Therefore, these years were not considered to exhibit the January effect.

Results shown in Table 3 also present the frequency distribution of the January effect from the inception of the market 48 years ago. From this table, it is evident that when considering each decade retrospectively, the probability of the January effect occurring remains relatively consistent in early adjacent decades. In particular, when examining the previous periods between year 1984-1993, 1994-2003, and 2004-2013, the probability values were stable at 70 percent. However, the decrease in probability over the recent decade (2014-2023) was observed at 50 percent chance. Also shown in Table 1, the peak magnitude of the index increase in the subsequent periods has noticeably decreased. For example, in the years 1988 and 2001, the SET Index drastically increased by 15.48 percent and 15.20 percent, respectively. However, during the recent 15-year period (2009-2023), the January index did not exhibit an increase of greater than 6 percent. To be more specific, during the first 33 years, the average increase in the SET Index in years with the January effect was 7.23 percent. The top three positive returns reached impressive levels of 15.48 percent, 15.20 percent, and 10.03 percent, respectively. However, over the following 15 years, the average increase noticeably weakened to just 3.40 percent. The highest three positive returns recorded during these years amounted to only 5.32 percent, 5.22 percent, and 3.83 percent, respectively. The results implied a diminishing strength of the phenomenon.

Table 1 Average SET Index Returns between January and Previous December

Year	% Change	Year	% Change	Year	% Change	Year	% Change
1976	-4.37	1988*	15.48	2000*	6.37	2012*	2.23
1977*	5.21	1989*	10.03	2001*	15.20	2013*	5.32
1978*	7.56	1990*	6.75	2002*	8.24	2014	-5.31
1979	0.93	1991	-0.25	2003*	2.94	2015	0.77
1980	-8.43	1992*	8.72	2004*	8.97	2016	-2.87
1981*	0.80	1993*	9.54	2005*	5.64	2017*	3.52
1982	-0.66	1994	0.59	2006*	8.33	2018*	5.22
1983*	1.89	1995	-4.79	2007	-8.50	2019	-0.64
1984*	0.34	1996*	8.45	2008	-5.71	2020	0.09

Table 1 (continued)

Year	% Change	Year	% Change	Year	% Change	Year	% Change
1985	-0.96	1997	-3.90	2009*	3.78	2021*	3.83
1986	0.36	1998*	6.09	2010*	1.62	2022*	1.99
1987*	5.25	1999*	9.94	2011	-1.60	2023*	3.12
(*) designates the January Effect				48-year Average		2.86%	

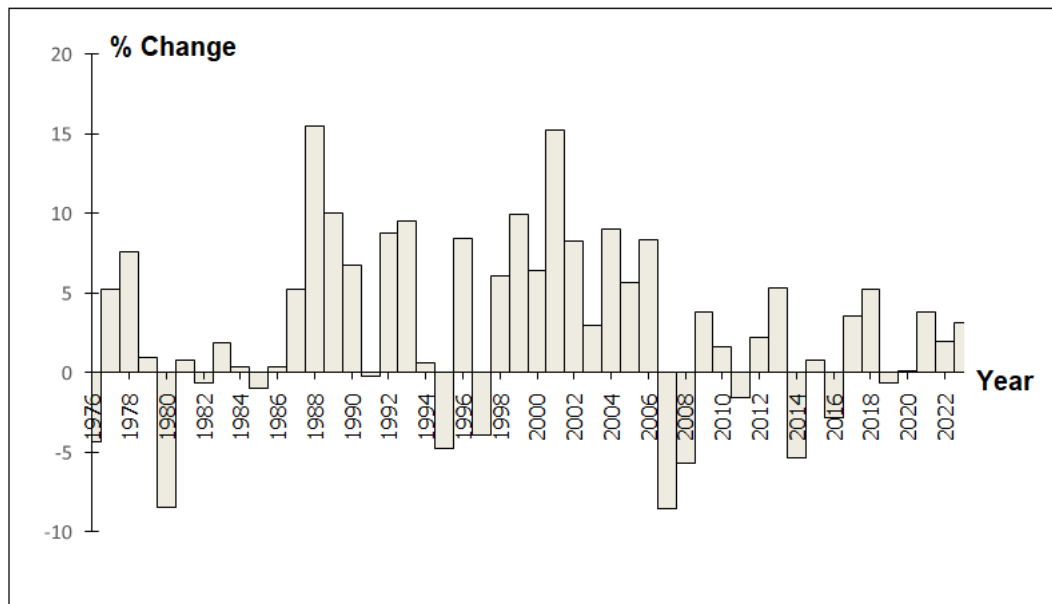


Figure 1 Average SET Index Returns between January and Previous December

Table 2 Distribution of Returns of the SET Index in January

% Change January vs. December			Frequency (years)	Chance of Occurrence (%)	Average Return
10.00	-	14.99	3	6.25	5.29%
5.00	-	9.99	16	33.33	
0.01	-	4.99	16	33.33	
0.00	-	-4.99	9	18.75	-3.69%
-5.00	-	-9.99	4	8.33	
-10.00	-	-14.99	0	0.00	
Total			48	100.00	2.86%

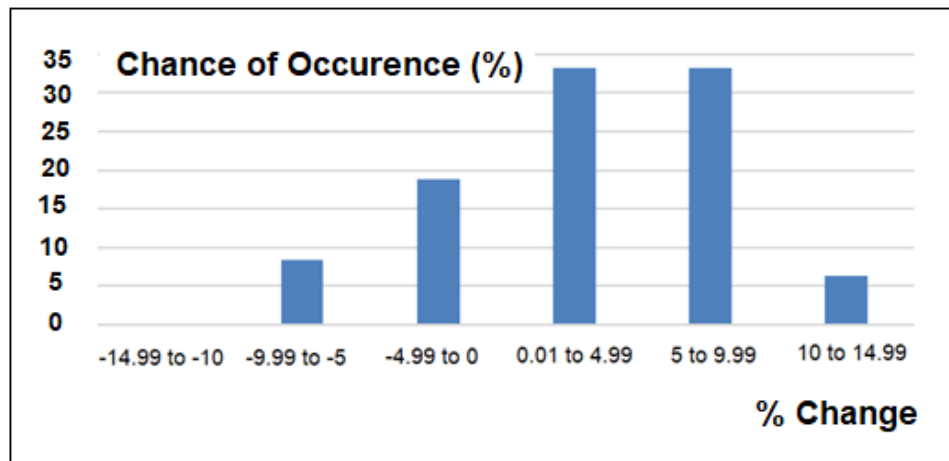


Figure 2 Distribution of Returns of the SET Index in January

Table 3 Frequency of the January Effect Occurrence

Duration		Duration 10(years)	January Positive Return (years)	January Effect Reject H_0 (years)	Chance of Occurrence (%)
from	to				
1976	1983	8	5	4	50
1984	1993	10	8	7	70
1994	2003	10	8	7	70
2005	2013	10	7	7	70
2014	2023	10	7	5	50
Total		48	35	30	62.5
Average Return			5.29 %	6.08%	

Conclusions and Recommendations

Based on data collected over a 48-year period since the inception of the Thai stock market, the research findings can be summarized into two parts. The first part confirms the presence of the January effect. Specifically, it was observed that the SET index increased in January for 35 years with an average positive return of 5.29 percent, whereas the remaining 13 years with negative return, the index decreased by an average of 3.69 percent. After conducting the inferential statistical analysis, it was confirmed that 30 of these positive-return years exhibited the January effect. Among the 30 years characterized by the January effect, there was a notable average increase in the index during January, reaching as high as 6.08 percent. When examining the frequency of the January effect, it was observed that one

third of the 48-year period showed an increase in the index of less than 5 percent, and another one third showed an increase between 5-10 percent. The findings of this study corroborate the research conducted by Ullah and Ullah (2016), which noted that the highest returns take place during the month of January for the Karachi stock market from 2004 to 2014.

The second part of the research findings suggests a diminishing influence of the January effect in terms of both frequency and magnitude during the later period. When reflecting on the past four decades, it becomes evident that each of the first three decades consistently displayed a stable 70 percent chance of the January effect occurring. However, in the most recent decade (2014-2023), the probability dwindled down to 50 percent. Out of the total 48 years in the market's history, during the first 33 years, the average increase in the SET Index during years exhibiting the January effect was 7.23 percent. However, in the subsequent 15 years, the average increase noticeably weakened, reaching only 3.40 percent. This may imply that the stock market is likely to be more efficient than in the past.

Recommendations for future research on this topic include investigating the causes of the January effect within the context of Thailand. This could involve examining changes in market dynamics, investor behavior, or economic conditions. Analysis of sector-specific effects may be conducted so as to examine whether the January effect varies across different sectors or industries within the stock market. This will help to identify sector-specific patterns and shed light on the underlying causes. A recommendation is also made for incorporating additional market variables, such as trading volume, market liquidity, or investor sentiment, to gain deeper insights into the dynamics of the January effect. By pursuing these recommendations, future research can contribute to a more comprehensive understanding of the January effect and its implications in financial markets.

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