

A Study on Effectiveness of the “Dogs of the Dow” Strategy for the Thai Stock Investment

Kittipong Tissayakorn, Yu Song, Mingyue Qiu, and Fumio Akagi

Abstract—In stock markets, investors always seek ways to make profit or outperform benchmarks. However, this aim is not easy to achieve even for professional fund managers. In this study, we propose applying the “Dogs of the Dow” investment strategy to the Thai market. With this strategy, we buy the ten highest yielding SET50 (Stock Exchange of Thailand 50) stocks and rebalance the portfolio annually. We conduct a simulation for data from 1995 to 2012. The simulation result shows that on average, the “Dogs of the Dow” strategy outperforms the market indices. However, the superiority is not significant in a statistical sense. Simulation results also show that portfolios with fewer than ten stocks have even better performance than the original ten-stock portfolio.

Index Terms—“Dogs of the Dow” strategy, investment strategy, portfolio selection, the Stock Exchange of Thailand.

I. INTRODUCTION

Investors always seek ways to outperform benchmarks in stock markets. However, it is quite difficult even for professional investors.

In recent years, the “Dogs of the Dow” investment strategy, also known as the Dow 10 strategy, has become widely noticed for its easy maneuverability and high performance. It is a portfolio selecting strategy devoted to picking the highest dividend stocks from the Dow Jones Industrial Average (DJIA) stocks. The strategy was first proposed by J. Slatter in 1988 [1]. It involves investing equal amounts in the 10 highest yielding stocks of the DJIA stocks and rebalancing the portfolio every year. The ten stocks are called “dogs”, which means “losers”, because high yielding implies that the stocks are not approved by the market. Slatter examined the performance of the strategy for several years and found that it outperformed the DJIA index by 7.6% on an annual basis. Similar results were reported in investment books like [2] and [3]. These books highlighted the “Dogs of the Dow” strategy and prompted its increasing popularity among institutional and individual investors.

In this paper, we examine the performance of the Dogs of the Dow strategy in a different market setting and in different

time periods. In particular, our purpose is to analyze the performance of the “Dogs of the Dow” strategy in the Thai stock market to examine validity. We implement simulations for data from 1995 to 2011 and compared the performance of the “Dogs of the Dow” strategy with two popular market indices, the SET (Stock Exchange of Thailand) Index and the SET50.

The results of simulations show that the “Dogs of the Dow” strategy outperforms the market indices, though the superiority is not statistically significant, and portfolios with fewer than ten stocks have even better performance than the original ten-stock portfolio.

The remainder of this paper is organized as follows: In the next section, we review the related literature on the “Dogs of the Dow” investment strategy. In Section III we briefly introduce the simulation. Section IV compares performance of the “Dogs of the Dow” with the SET Index. Portfolios with other numbers of dogs are described in Section V. Finally, Section VI concludes the paper with remarks on the future.

II. LITERATURE REVIEW

A. Studies on the American Market

The “Dogs of the Dow” investment strategy was originally proposed by John Slater [1]. With the strategy, an investor selects the 10 highest yielding stocks from the DJIA stocks at the end of each calendar year and invests equal amounts to each stock. After 1 year, the portfolio is rebalanced and updated with equally weighted investments in the new highest yielding stocks. It was reported that from 1972 to 1987, the average annual return of such a portfolio outperformed DJIA by 7.6 percentage points. For longer time horizons, O’Higgins and Downes [3] and Knowles and Petty [2] published books to introduce further information of the “Dogs of the Dow” strategy in the American market. In [3], the authors reported that the average annual return of the “Dogs of the Dow” is 6.2 points higher than DJIA during the period 1973 to 1991. Reference [2] showed that while the “Dogs of the Dow” portfolio had an average annual return of 14.2%, the DJIA only had an average annual return of 10.4% from 1957 to 1990. They also examined an alternative version of the strategy in which the “Dogs of the Dow” portfolio consists of five highest yielding stocks. The reported average annual return for this five dog stock strategy is 15.4%.

B. Studies on Other Markets

The “Dogs of the Dow” investment strategy has been examined in many other stock markets.

Reference [4] examined the “Dogs of the Dow” strategy in

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the British stock market. The authors simulated UK data from 1985 to 1994 and applied the “Dogs of the Dow” strategy to stocks included in the FTSE100 (Financial Times Stock Exchange 100) index. The “Dogs of the Dow” portfolio was documented to outperform the market index on a risk adjusted basis in only 4 years out of 10, thereby indicating that the “Dogs of the Dow” strategy was not particularly effective in the UK.

Andre and Silva studied its performance in Latin American stock markets from 1994 to 1999. They found that the “Dogs of the Dow” slightly outperformed the market indices in Argentina, Chile, Colombia, Mexico, Peru and Venezuela, while the strategy seemed to underperform relative to market index in Brazil. Moreover, they conclude that the result lacks statistical significance, probably because of the short test period [5].

Effectiveness of the “Dogs of the Dow” strategy in the Canadian stock market was focused on the Toronto35 index from 1988-1997 and reported an average annual excess return of 6.6% for the “Dogs of the Dow” portfolio. More importantly, the study showed that the “Dogs of the Dow” strategy produced significantly higher risk adjusted return than the Toronto35 and TSE300 (Toronto Stock Exchange 300) indices and the reported excess return was also high enough to compensate for the higher taxes and transaction costs [6].

In Japan, Song and Hagio proposed to apply the “Dogs of the Dow” strategy to the Tokyo Stock Price Index 30 (TOPIX30) and NIKKEI 225 [7]. They showed that for data from 2002 to 2006, the “Dogs of the Dow” strategy is only slightly superior to the benchmark, while the performance is much better when applied to the NIKKEI 225. Therefore they concluded that the strategy should be applied to the NIKKEI 225 in the Japanese market. For a longer period (1981 – 2010), Qiu, Song and Hasama investigated the strategy, and showed that it outperformed the NIKKEI 225 and the result is statistically significant [8].

In [9], Rinne and Vahamaa summarized the performance of the “Dogs of the Dow” investment strategy in Aktiebolaget Optionsm äklarna / Helsinki Stock Exchange (OMX25) index from 1998 to 2008. They can be successfully replicated in different types of markets and in different market conditions. Their result reported an annual abnormal return of 4.5% and the outperformance of the strategy appeared particularly pronounced during a stock market downturn.

Qiu, Yan and Song focused on the Hong Kong stock market from 2001 to 2011 [10]. Based on the result of simulation, they found that the “Dogs of the Dow” strategy outperformed the Hang Seng Index. However, the result was not statistically significant. They also found that the portfolios with fewer than 10 dogs outperformed the benchmark. Thus, they concluded that the “Dogs of the Dow” strategy was effective in in the Hong Kong stock market.

III. APPLICATION TO THE THAI STOCK MARKET

A. Market Indices in the Thai Stock Market

In this paper, we propose applying the “Dogs of the Dow”

investment strategy to the Stock Exchange of Thailand (SET), which is the only stock exchange in the country. As of 31 December 2012, the SET had about 600 listed securities.

The most popular market index for the Thai stock market is the SET Index, which is calculated from the prices of all common stocks (including unit trusts of property funds) on the main board of the SET, except for stocks that have been suspended for more than one year. The index is a market capitalization-weighted price index, which compares the current market value of all listed common shares with its value on the base date of April 30, 1975, when the SET Index was established and set at 100 points. Besides the SET Index, the SET also provides other indices to investors that include the Market for Alternative Investment index (mai index), industry group and sectorial indices, SET50 index and SET100 index.

Here we apply the “Dogs of the Dow” strategy to the SET50 index, which is “calculated from the stock prices of the top 50 listed companies on SET in terms of large market capitalization, high liquidity and compliance with requirements regarding the distribution of shares to minor shareholders” [11]. It is also a capitalization-weighted index, and was calculated from August 1995 with a base value of 1000 points. The component stocks in the SET50 Index are reviewed every six months in order to adjust for any changes that have occurred in the stock market, such as new listings or public offerings.

B. Simulation

We implemented the simulation of the “Dogs of the Dow” strategy in the following steps.

Step 1. Collect data of all the 50 companies of the SET50 on 30 September, and then select the 10 highest dividend yield stocks, invest in the 10 stocks with equal amounts on 1st October.

Step 2. Hold these stocks for 1 year, and then sell them out on 30th September in the next year. After updating the list of the SET 50, invest in the new top 10 stocks with equal weighting.

Step 3. Repeat the above process every year.

In this study, we conducted the simulation for the 1995–2011 data. We searched for the price of the stocks from the Internet and obtained the dividend data from the SET. October 1st was chosen as the investment date because it is the beginning of the fiscal year for most Thai companies.

IV. COMPARISON OF PERFORMANCE

In this section, we compare the performance of the “Dogs of the Dow” strategy with the SET Index from various points of view.

A. Difference between Annual Return

Fig. 1 plots the difference of annual return between the “Dogs of the Dow” strategy and SET Index portfolios for each of the 17 years. A positive difference indicates that the “Dogs of the Dow” strategy outperformed the SET Index portfolio.

From Fig. 1, we can see that the “Dogs of the Dow” strategy portfolio outperforms 11 times more than the SET Index from 1995 to 2011. Especially in 1999, the “Dogs of

the Dow” strategy was 86.15 percentage points greater than the SET Index. In 2003, the “Dogs of the Dow” strategy was 85.87 percentage points higher than the SET Index. However, the performance of the “Dogs of the Dow” strategy was poor in several years. The worst performance was in 2008, where the difference between the two strategies was -60.19 percent points.

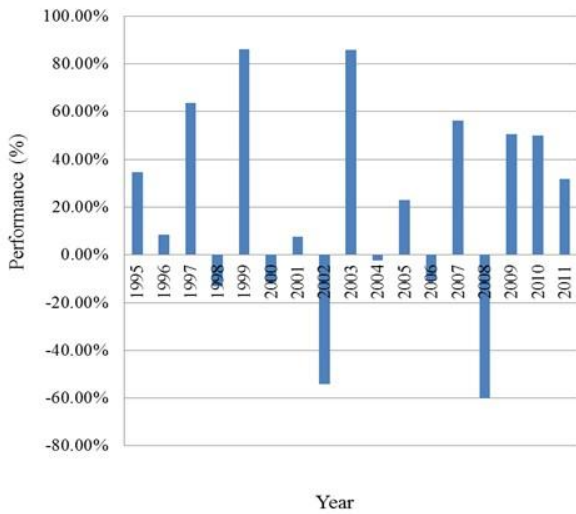


Fig. 1. Annual difference in return between the Dogs of the Dow strategy and SET Index.

B. Average Return

Table I shows the average return and deviation of the “Dogs of the Dow” strategy and the SET Index. We can see that the “Dogs of the Dow” strategy had an average return of 23.68% and a standard deviation of 35.45%, while the SET Index portfolio had a lower mean return and deviation of 3.32% and 33.03%, respectively. Table I also shows data on the difference between the two portfolios. The “Dogs of the Dow” strategy had a 20.36 percentage points higher return on average, and the difference of the standard division was 2.42 percentage points.

From the result, we can see the “Dogs of the Dow” strategy outperformed the SET Index in the 17 years on average. To check the statistical significance of the result, we conducted a T-test at a 5% significant level, and the result was $p = 0.10258084 > 0.05$. Therefore the difference of 20.36 percentage points is not statistically significant.

TABLE I: ANNUAL RETURN SUMMARY STATISTICS (1995 TO 2011)

Portfolio	Average annual return	Standard deviation
Dogs of the Dow	23.68%	35.45%
SET Index	3.32%	33.03%
Difference	20.36%	2.42%

C. Accumulated Performance

Fig. 2 shows the accumulated performance of the “Dogs of

the Dow” strategy, the SET Index and the SET50. From 1995 through 2011, the “Dogs of the Dow” strategy always had a higher accumulated return than the SET Index and the SET50. By contrast, the SET Index and the SET lines in the lower part of the graph show a steady trend.

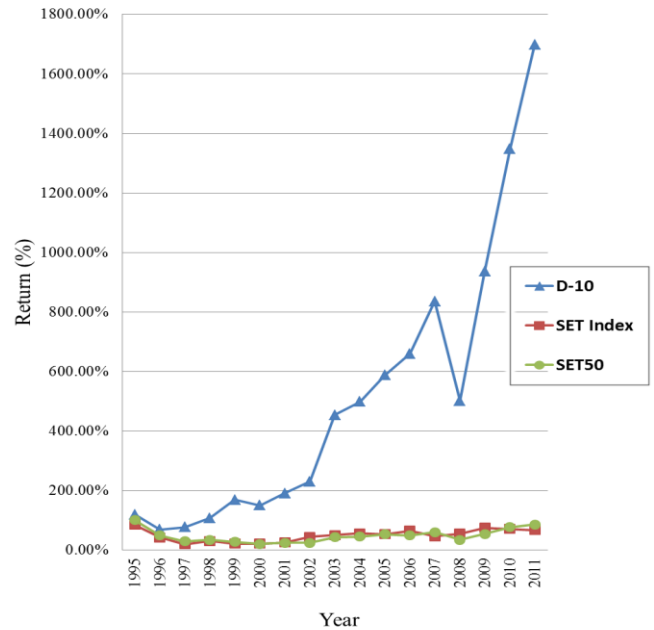


Fig. 2. Accumulated performances.

In 2011, the “Dogs of the Dow” strategy had an accumulated value of 1698.60%, which is about 17 times the value in 1995. On the contrary, the value of the SET Index in 2011 was only 94.28%, which is about the same level with the data of 1995, and the accumulated value of the SET50 Index was quite similar with that of the SET Index.

Therefore, we conclude that in the long term, the “Dogs of the Dow” strategy is very powerful for making profit and beating the benchmarks.

D. Subperiod Analysis

Table II reports a 5-year subperiod analysis about the mean return and nominal difference between the “Dogs of the Dow” strategy and the SET Index. From Table II we can conclude that the “Dogs of the Dow” strategy outperformed the SET Index in all the 5-year subperiods. From 1995-1999, the “Dogs of the Dow” strategy had a very large difference with that of the SET Index, the difference being 35.99 percent. During the periods 2000-2004, 2005-2009, and 1995-2011, the difference of the return was 5.15, 11.73, and 20.36 percentage points, respectively. As a result, the “Dogs of the Dow” strategy is useful in making profit in the medium term. However, the standard deviation of the “Dogs of the Dow” strategy was greater than the SET Index.

TABLE II: SUBPERIOD ANALYSIS

5 years Subperiod	Mean Return		The Standard Deviations		Nominal Difference
	“Dogs of the Dow”	SET Index	Dogs of the Dow	SET Index	
1995-1999	17.13%	-18.86%	33.72%	38.81%	35.99%
2000-2004	28.70%	23.54%	36.70%	26.26%	5.15%
2005-2009	20.71%	8.97%	40.35%	23.39%	11.73%
1995-2011	23.68%	3.32%	35.45%	33.03%	20.36%

V. PORTFOLIOS WITH OTHER NUMBERS OF DOGS

In this section, we test other portfolios with fewer Dogs and compared the performance of each portfolio using the “Dogs of the Dow” strategy with the SET Index and SET50. We named the portfolio with the top N stocks as Dow N strategy. The simulation of this strategy was conducted in a manner similar to that of the “Dogs of the Dow” strategy but by using the top N stocks instead of the top-10 stocks.

From Fig. 3, we can conclude that all portfolios of the “Dogs of the Dow” investment strategy outperformed the SET Index during the 1995–2011 periods. The Dow 3 portfolio had the highest average annual return. The Dow 10 strategy, which is the original “Dogs of the Dow” strategy, had the ninth highest return, with a value of 23.68%. The return of the SET Index and SET50, however, were as low as 3.32% and 4.93%, respectively.

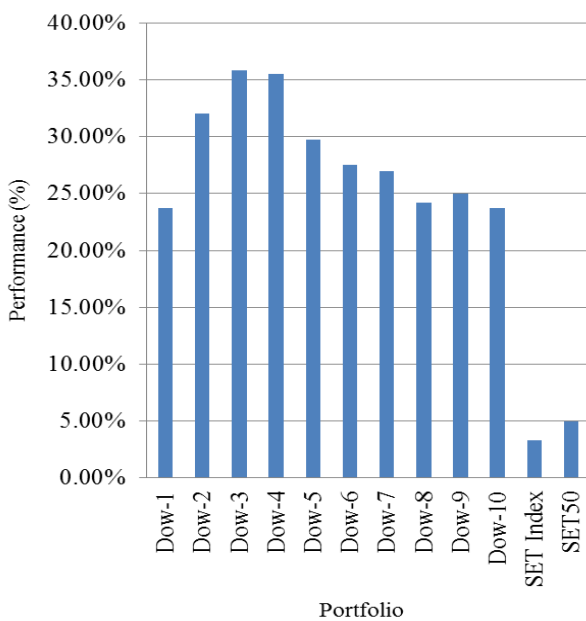


Fig. 3. Average annual returns of other numbers of dogs, SET Index and SET50.

VI. CONCLUSION

In this study, we proposed applying the “Dogs of the Dow” investment strategy for the Thai stock market and compared the performance of the “Dogs of the Dow” strategy with benchmarks on the basis of the results of a simulation. We found that although the “Dogs of the Dow” strategy performed poorly for a few years, on average it outperformed the SET Index and the SET50 Index in the Thai stock market. However, the result is not statistically significant. We found that the portfolios with fewer than ten dogs outperformed. Therefore, we can conclude that in the long term, the “Dogs

of the Dow” strategy is effective in Thai stock investment to make profit and outperform the benchmarks.

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