Mutual fund recommendations on fund flows and returns

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จุฬาลงกรณ์มหาวิทยาลัย
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ผลกระทบการแนะนำกองทุนรวมต่อกระแสเงินทุน และผลตอบแทน

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Using Thailand open-end mutual fund samples from 2017 to 2019, this study examines the impact of analysts' recommendations on mutual fund flow and return. We decide to use the analysts' recommendation from two big management companies in Thailand who publicly released their analysts' recommendation in weekly periods, SCBAM and KAsset. We hypothesize and find the recommendations have a significantly positive impact on mutual fund flows and found no significant impact on return. Our study further examines the risk-adjusted return and observe no significant excess return is generated from recommended mutual funds.

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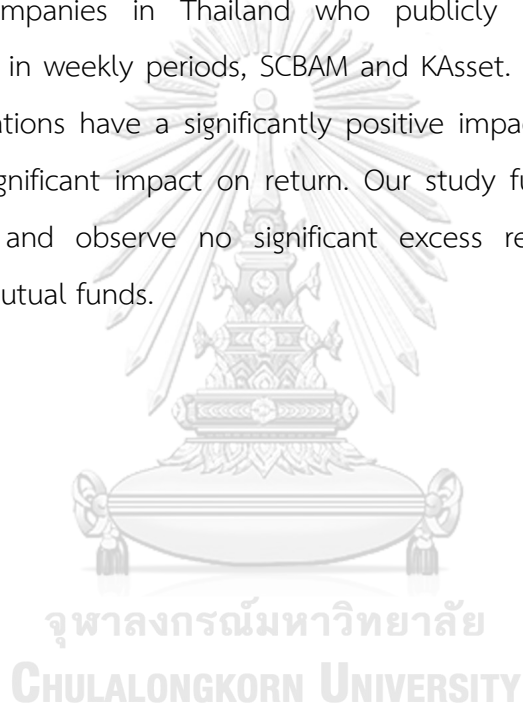
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1.   Introduction

1.1   Background

This study examines whether a recommendation from analysts in the mutual fund industry can impact the investment decision or behavior of the mutual fund investors for the samples from Thailand from 2017 to 2019. While the prior literature consistently shows the evidence in the stock markets, recommendations from the analysts have a positive impact on investment decision both sell- and buy-recommendations (Stickel, 1995; Womack,1996; Chen Su, 2019), even the study of Cowles (1993) shows that investors are not able to add value to the market when they follow analyst recommendations and the inability of the profession in finance to predict stock price movements (Colker 1963, Logue and Tuttle 1973 and Groth et al 1979). However, the recommendations are provided by financial institutions have a big role to feed the investment information to the market and improve market efficiency. As of our knowledge, most academic studies are interested in stock recommendation but no one study on the recommendation of mutual funds.

There has been tremendous growth in the mutual fund industry as increasing in the number of mutual funds and the total assets under their management in the last decade. The number of mutual funds in Thailand reach 1800 mutual funds in 2019, 700 mutual funds among the others are investing in equity from 24 management companies. To find the best fit fund for the investors among tons of

choices is the cost of searching which the investors have to experience (Sirri and Tufano, 1998). We found some of the management companies have published the name of mutual funds which the analysts suggest to invest, accompany with their opinion on current investment situations since 2017. Many studies found the analysts' recommendation can provide the information, which improving market efficiency, and also lead the investment decision of the investors, Cowles (1993), Stickel (1995) and Womack (1996), meaning that the recommendation from a professional has an impact on retail investors investment behavior. In the US, the mutual funds have to sponsor to advertise in the magazines to improve recognition to the investors, Prem C (2000) studied the effect of being advertised on the mutual fund in the US. He found the investors' trend to invest in the advertised funds even they had no clue about future performance and also cannot generate a positive return to investors after being advertised. This result leads us to develop our first hypothesis to study the impact of analysts' recommendations on mutual funds in Thailand, whether they can lead new money from investor flow into the recommended funds. We further hypothesize the positve impact of recommendations on the mutual fund return as of the new money flow into the funds can provide investment opportunities to the fund managers to increase their performance (Wermer, 2003; Lou, 2012).

Our work examines the impact of analysts' recommendations on Thai open-end equity mutual funds by using the recommendation from the two big management companies in Thailand, Siam Commercial Bank Asset Management (SCBAM) and Kasikorn Asset Management (KAsset), from 2017 to 2019. The recommendations were published in a weekly period, then our data of samples of mutual funds are collected in weekly form using the pool-crossectional OLS regression to attack our hypothesis. Two dependent variables we use in this work for detecting how recommendations affect the mutual funds are the return and the fund flow. In the mutual fund industry, the fund flow is the parameter that truly reflect the investment behavior of the investors because the investors will invest their money into the potential funds causing positive fund flow or new money flow into the fund, otherwise negative fund flow or money flow out of the funds. The return is the variable that investors seek and use as fund performance measurement. The investors can observe the past price returns and use them as the indicator for their investment decision, and use the current and future return to measure their investment performance. We use the total under asset management of the mutual funds and management companies as the explanatory variables. Sirri and Tufano (1998) argued the bigger size of funds and companies are less costly to present themselves to the investors. We also concern to use the fee is charged to the investors causing less return and fund flow in our model.

Our second main objective to test whether the funds are recommended by analysts who have professional knowledge in finance can generate an abnormal return to the investors. Colker (1963), Logue and Tuttle (1973) and others reported incorelation between analysts' forecast and stock prices. On the other hand, Stickel (1995) and Womack (1996) reported the revision in analysts' recommendations is accompanied by a significant impact return at the time of their announcements. Prem C (2000) examine the return of the advertised funds after being advertised. He found that even the mutual funds can do a good performance in the pre-advertised period, but no evidence confirm the post-advertised period, the advertised funds would consistently do a good performance.

To examine the second hypothesis, we use the portfolio approach to observe the abnormal return. The recommended fund will be used to construct the portfolio, then we use the three-factor model (Fama and French, 1993) to examine the generated abnormal return.

In general, the analysts' recommendations which are interested in the academic field limit on a stock recommendation. Cowles (1963) concludes from his evidence that analysts' recommendation has no impact on stock prices. Davies and Canes (1978), Groth et al. (1979), and Black (1973) concluded that an increase in stock price is the result of either price pressure or information content contain in the analysts' recommendation but abnormal return from analysts' will be reversed

within 15 days of the announcement (Schlumpf et al., 2008). Chen Su (2019) find that downgraded stock significantly generates negative abnormal return net transaction but cannot found significantly on an upgraded recommendation that consists of Barber et al. (2001). Barber and Loeffler (1993) concluded that increase (or decrease) in prices resulted from content available in the recommendation. In this study, we will extend the research about analysts' recommendations into the mutual fund industry to examine whether they can generate value to the industry and is the first light shade into the mutual fund recommendations field.

1.2   Objective and Conceptual framework

In this study, we study the impact of analysts' recommendations in Thailand's mutual fund market by using the recommendation which publicly releases from mutual fund management companies (SCBAM and KAsset) and open-end equity fund in Thailand with weekly frequency mutual fund samples.

Our first objective is to test whether recommendations have an impact on the behavior of mutual fund investors. In this objective, we using a dummy approach to capture the impact of recommendation with the pool-crossectional OLS regression follow Prem C (2000). The samples we use are the open-end equity mutual funds in Thailand. We also subsample to the domestic investment mutual funds, foreign investment mutual funds, active mutual funds and passive mutual funds according

to differences in investment policies also require differences in the level of knowledge and investment information from the investors. We use the fund flow and fund return as the dependent variables. To track the recommended fund each week, we use the recommendations dummy variable which equal one when these funds are recommended at beginning of the current week or end of last week, otherwise is zero. The explanatory variables are including the past fund flow and past return (Prem C, 2000; Edelen, 2001; Xuan Feng, 2014). The total asset under management of each mutual fund and management companies are using in logarithm form as the proxy of searching cost (Sirri and Tufano, 1998). The reported maximum expense ratio in the prospectus is using as a proxy of fees that charge to the investors. We expect to observe a significant positive impact of the recommendation on mutual fund flow according to the recommendations provide the investment view to the investors and also suggest the direction to invest. The new money flows into the fund due to recommendations are expected to provide investment opportunities to the manager to increase the fund return, therefore, we also expect the recommendation might have a significantly positive impact on the mutual fund return.

Our second objective is to test the ability to generate an abnormal return by following the recommendations from the analysts. We will construct the portfolio that consists of all recommended funds and rebalancing every week, ignoring the

rebalancing costs. The abnormal return is being measured by the three-factor model described by Fama and French, 1993. Differently from the retail investors, the profession in finance could compare the investment performance by risk-adjusted abnormal return instead of the price return of the assets. We expect to found a significant positive abnormal return from the recommended funds portfolio that be consisted of the analysts' investment perspectives.

1.3   Contribution

In the academic side, we can found literature which mentions about analysts' recommendation to the stock market (eg. Colk S., 1963; Groth, 1979; Chen Su, 2019) but to the best of our knowledge, no one study in the effect of the recommendations in the mutual fund industry. In this study, we will be the first light that shade on mutual fund recommendations as of knowledge.

The analysts' recommendations are the financial instrument to provide professional analysis and perspective to the market and improve market efficiency. Understanding the effect of the recommendation on fund behavior is paramount for mutual fund asset management companies or fund families. Fund flows determine the asset under management; hence their fees increase in the percentage of assets under management increase. Moreover, to provide the recommendations are increasing marketing cost, therefore, it would be better to understand the potential of things we paid for.

2.   Literatures Review

2.1 Stock recommendation

The recommendation from the analysts is studied through stock recommendation. The stock recommendations have been widely used by investors in their investment decision. Whether analysts' recommendations can truly create

investment value and promote the efficiency of the market has been of great interest to the academics study. The first wave of the academics research, back to the study of Cowles (1933), which shows that as following the analysts' recommendation, investors are not able to add value to the market. The inability to forecast the stock price movements is confirmed by Colker (1963), Logue and Tuttle (1973), and Groth et al. (1979). The recent period of stock recommendation studies, the recommendation revision, upgrades, or downgrades, has a significant impact on the stock price at the time of their announcement (Stickel, 1995; Womack, 1996). Barber et al. (2001) prove the existence of profitable investment strategies based on publicly analysts' recommendations, challenging to the semi-strong form of the efficient market hypothesis (EMH). The study about analysts' recommendation in the UK is confirmed that recommendation revision has the potential to create the impact of stock price return before transaction costs (Chen, 2019)

Almost the century that financial academics shed the light on the stock recommendation from many angles. The evidence shows the recommendation has an impact on investment decision of investors and their investment behavior which reflect on stock price movements.

2.2 The advertisement and searching cost of investment

Different from the stock, the investment behavior of the investors on mutual funds reflects on the fund flows. The fund flows are defined as the new money from investors put into the funds that they believe these mutual funds have the potential to grow. Among many mutual funds, investors have to find the mutual fund that shows good performance with favorable investment policies. The time consumed and effort to find the right funds are the costs to the investors as well as the fees that charge from the mutual funds to the investors. Sirri and Tufano (1998) argue that the investment decisions in mutual funds do not only depend on the performance or policies but rely on the searching costs that the investors experience. The fund size and company size are chosen as poxy of the potential to receive the attention of the investor, as the bigger size has a lower cost to advertise themselves or being well known in public. Along with the searching cost assumption, Prem C (2000) proposes an instrument that can reduce the searching costs to investors. The advertisement on Barron's and Money magazine report the name that they advertise with the past performance of those mutual funds. He provides the pieces of evidence that the advertisement on the magazine can lead the new money from investors flow into the mutual funds even no clue of future performance.

2.3 Flow – performance relationship

Numerous papers study how flow depends on past performance (Ippolito, 1992; Sirri and Tufano, 1998; Miguel, 2012). Most concur that flows are highly dependent on past performance and that the investors are the winner chasers (Goetzmann and Peles, 1997). Investors tend to buy the past winner and not sell the past losers because management companies tend to advertise funds that have recently outperform rather than drawing attention to poorly performing funds (Sirri and Tufano, 1998; Prem C, 2000). On contrary, Gruber (1996) and Zheng (1999) provide evidence that mutual fund flow positively predicts subsequent fund performance. Both studies attribute this relation to the smart – money effect, as the ability of mutual fund investors to pick the short-term outperform mutual funds. Although Wermer (2003), Sapp and Tiwari (2004), and Lou (2012) present the evidence that the result of the relation between past funds flow and subsequent fund performance is driven by stock return momentum causing from the new money flows into the funds provide the investment opportunities to fund managers. Miguel (2012) provide evidence about different in flow – performance relationship cross the countries, the relationship has been changed according to the financial knowledge, the economy, and investment policies. In contrast, Berk and Green (2004) present the negative impact of fund flow on the fund performance, they argue the inability

to handle the large flow in of new money after the peak of their performance drag

their performance down and risk-adjusted return become zero

3. Data and Sample

3.1 Recommendation Samples

The mutual funds' recommendation samples are from the website of SCBAM

and KAsset. They have weekly public released since 2017. In this study, we use the

weekly data from 2017 to 2019 to follow the period that management companies

release their analysts' recommendations. The recommendations provide the

economic situations in Thailand and the main economy of the world, eg. USA,

China, and Europe, and they also suggest their view of other opportunity countries,

eg. Japan, Korea, India, and Vietnam.

In this study, we will use the name of funds that they recommended to buy

as of recommended funds, otherwise either hold or sell are not recommended and

classify the same as other funds that are not mentioned in the recommendations.

Chart 1 presents the frequency of being recommended fund of mutual funds from KAsset during 2017 to 2019

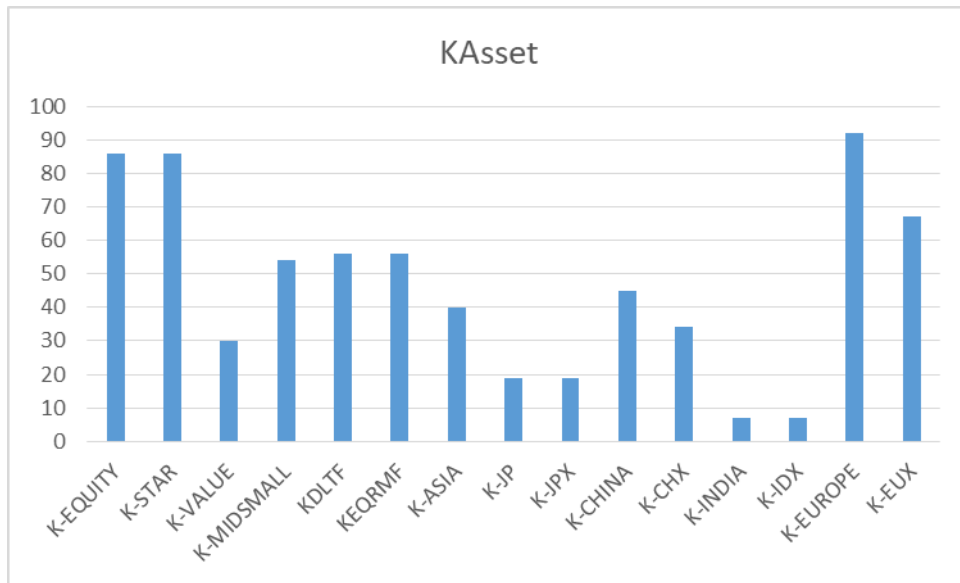Chart 2 presents the frequency of being recommended fund of mutual funds from SCBAM during 2017 to 2019
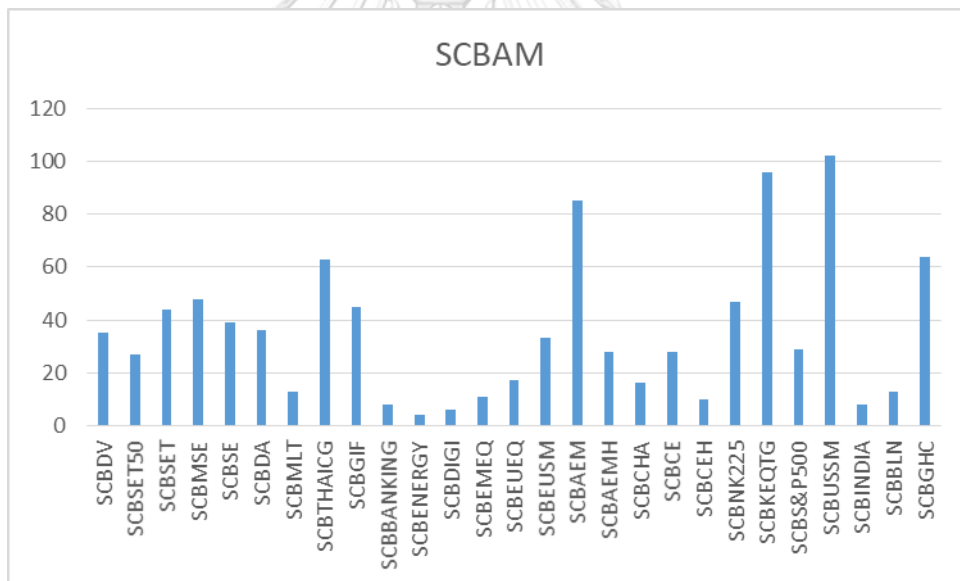
Chart 1 and 2 present the frequency of being recommended funds from KAsset and SCBAM, representatively. From 2017 to 2019, KAsset recommended 15 funds to the investors, they mostly recommended K-Equity and K-Star (total 86 weeks) for Thai equity and 92 weeks for K-Europe as the foreign investment funds.

SCBAM recommended 27 mutual funds to the investors among these 2 years. The most interesting funds in the analysts' views are SCBUSSM as the foreign investment funds and SCBTHAICG as the domestic investment funds.

3.2 Mutual Funds

We collected the samples of equity funds in Thailand from *Morningstar Direct* in a weekly period between 2017 and 2019, consist of 794 open-end equity mutual funds. In our study, we subsample by investment locations, domestic or foreign countries, and investment styles, active investment, or passive investment.

Table 1 presents the summary statistics for full samples of open-end equity funds and four different investment policies as documented by Morningstar. 390 are domestic investment funds, 404 are foreign investment funds, 739 are active funds and 55 are passive funds. Mutual fund return is used as total return which comprises with price return and dividend, calculate as the following equation

$$R_{i,t} = \ln(\frac{NAV_{i,t}+D_{i,t}}{NAV_{i,t-1}}) \tag{1}$$

Where $NAV_{i,t}$ represents the net asset value of fund i at the end of period t, and $NAV_{i,t-1}$ represents the net asset value of fund i at the end of the prior-period for t-1. $D_{i,t}$ represents the dividend of fund i at the end of period t.

Table 1. The summary statistic of Thailand open-end equity mutual funds. The data is providing by Morningstar Inc. The total return and flow are the weekly data. The TNA and FIRM are the size of the mutual fund management companies in logarithm form using as measurement of searching cost (Sirr and Tufanoi, 1998). The fee is the total expense ration which is the directly cost of investment for the investors.

	Full Sample	Subsamples			
		Domestic	Foreign	Active	Passive
Return					
Mean	0.08%	0.03%	0.14%	0.08%	0.10%
SD	1.59%	1.41%	1.78%	1.60%	1.53%
Flow					
Mean	0.07%	0.22%	-0.11%	0.05%	0.55%
SD	1.76%	1.47%	2.04%	1.72%	2.33%
TNA					
Mean	19.7755	20.0057	19.5037	19.7500	20.2525
SD	1.8451	1.9798	1.6309	1.8408	1.8596
FIRM					
Mean	25.4294	25.3661	25.5042	25.3828	26.3048
SD	1.5230	1.5802	1.4491	1.5247	1.1889
FEE					
Mean	1.7470%	1.8046%	1.6791%	1.7995%	0.7618%
SD	0.6405%	0.5870%	0.6923%	0.6099%	0.3230%
Number of fund	794	390	404	739	55

From 2017 to 2019, equity funds in Thailand have 0.08% weekly return (4.16% pa) with 1.76% in standard deviation (11.47% pa). Most of the return in the market is generated by foreign investment funds both active and passive funds.

The fund flow is defined as the new money growth rate in the total net asset (TNA), not due to return from the investment. To calculate the fund flow we have to less the asset growth from investment and add the dividend payment back to the mutual funds then we can measure the percentage of new money get into the funds

$$\text{Flow}_{i,t} = \frac{\text{TNA}_{i,t} - (\text{TNA}_{i,t-1} \times (1 + R_{i,t}))}{\text{TNA}_{i,t-1}} \tag{2}$$

Where $\text{Flow}_{i,t}$ is fund flow of mutual fund i in time t, $\text{TNA}_{i,t}$ is the total net asset of fund i at the end of period t, $\text{TNA}_{i,t-1}$ is the total net asset of fund i at the end of prior-period and $R_{i,t}$ is fund i's total return in period t.

As table 1, we found the asset under management of all equity funds is growth 0.07% a week (3.64% pa) on average, which mostly flows into domestic funds and passive funds.

Refer to the prior study, Sirri and Tufano (1998). They used the size of the mutual funds and size of the management companies as the parameter to control the effect of the economy of scale in terms of presenting themselves to the investors and operate the fund with cheaper costs as large of the size of assets under management. We use the asset under management of mutual funds and management companies in logarithm form as the explanatory variable both of fund flow and fund return. In table 1, TNA presents the logarithm number of assets under management of mutual funds, and we use FIRM presenting the logarithm number of assets under management of management companies. Both are reported in *Morningstar Direct* in terms of Thai Baht every day, we choose to collect them at the end of each week to represent the size of mutual funds and management companies in consequence week.

We also get the total expense ratio which is reported in the prospectus that *Morningstar Direct* gathered in their database as the proxy of fees that mutual funds

charge to investors. Our limitation is we cannot get the exact fees they charge in each day, week, or year, causing us to use the reported number in the prospectus as the poxy instead. Most of the funds set up their maximum expense ratio at the same rate, except the passive funds that declare the lowest number to the investors.

3.3 Recommended portfolio

In this section, we use the recommended mutual funds each week to construct a weekly recommended mutual fund portfolio by equally-weight. The portfolio return is calculated to follow equation (3)

$$R_{p,t} = \frac{\sum_{i=1}^{n_{t-1}} R_{i,t}}{n_{t-1}} \tag{3}$$

Where $R_{p,t}$ is portfolio p's return in week t which calculate from an equally-weighted raw return from each fund in portfolio p, $R_{i,t}$ is fund return in week t, n_{t-1} represents the number of mutual funds in portfolio p which are recommended at the ending of the prior week or beginning of the current week.

Table 2. The summary statistic in weekly average for 156 weeks. The portfolio return is the average return of our portfolio Rf is the 10-year Thailand government bond using as the proxy of risk free rate. Rm is the weekly return of SET index. R* is the term of portfolio return less risk-free. The market risk, SMB and HML are the risk-adjusted follow three-factor model decribed by Fama and French (1993).

Variable	Obs	Mean	Std. Dev.	Min	Max
Return	156	0.06%	1.36%	-5.63%	3.44%
Rf	156	0.05%	0.01%	0.03%	0.06%
Rm	156	0.07%	1.31%	-4.17%	3.20%
R	156	0.01%	1.36%	-5.68%	3.38%
Market-Risk Premium	156	0.02%	1.31%	-4.22%	3.14%
SMB	156	-0.65%	1.77%	-6.47%	3.28%
HML	156	-0.04%	2.06%	-8.94%	8.42%

From 2017 to 2019, the recommended portfolio can generate a return of 0.06% weekly average (3.12% pa), while the risk-free rate, 10-year Thai government bond, has yield 0.05% weekly average (2.6% pa) and Stock Exchange of Thailand (SET index) return is 0.07% weekly average (3.64% pa). In table 2, R represents the portfolio return less than the risk-free rate and Rm represents the market risk.

3.4 Value and Size portfolio

To measure the performance of recommended funds in our second object by using the three-factor model, Fama and French (1993). The first factor is the market risk which we mention in the previous section using the SET index as a benchmark. The second factor we use the size factor which is proxied by small minus big

companies' size portfolio (SMB) and use the high minus low book to market portfolio (HML) to proxy the value factor.

The companies in the stock market are separated by market capital. The top 10 percentages are classified as big companies and the last 10 percentages are classified as small companies.

The value of companies is measured by the book-to-market of the companies. The top 30 percentages are value companies, the next 40 percentages are the medium value, and the last 30 percentages are low-value companies or growth companies.

Table 2 reports the weekly average return between 2017 and 2019 of SMB and HML portfolio. Mean value of SMB portfolio is -0.65% (-33.80% pa) and HML is -0.04% (-2.08% pa). The negative values are contrasted with the Fama and French approach back to 1993 which small firm could generate a higher return than big firm and value firm could better perform than growth firm, but in the recent years could found the inverse case that big firm and growth firm are better to perform than small firm and value firm. These negative results are reported in French's data library for the US market but still do not have the paper study these phenomena, as of our knowledge.

4. Methodology

  4.1 Impact on mutual fund flow

  The first objective is separated into two hypotheses. The first hypothesis is to test the impact on mutual fund flow and the second hypothesis, we test the impact on mutual fund return.

  To study the impact of analysts' recommendations on mutual fund, we use the dummy approach borrows Prem C (2000) concept to tackle our hypothesis, the recommendations have an impact on the mutual fund flow and mutual fund return. We develop the model as follow

$$\text{Flow}_{i,t} = a_0 + a_1 \text{Rec}_{i,t-1} + \sum_{n=1}^{n=4} b_n \text{Flow}_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 \text{TNA}_{i,t-1} + d_2 \text{FIRM}_{i,t-1} + e_1 \text{FEE}_i + \varepsilon \qquad (4)$$

  Where $\text{Rec}_{i,t-1}$ is equal to one if mutual fund i is on the recommendation in week t-1, $\text{Flow}_{i,t-n}$ when n equal 1 to 4 represent fund flow in prior 1 to 4 weeks, $R_{i,t-n}$ when n equal 1 to 4 represent raw return in prior 1 to 4 weeks, $\text{TNA}_{i,t-1}$ represents total net asset under management of fund i in prior week which is measured in logarithm form, $\text{FIRM}_{i,t-1}$ represents total net asset under management of fund family i in prior week which is measured in logarithm form and FEE_i represent the total net expense of fund i

  The fund flow is described as the new money flow into the funds from the mutual fund investors. To lead the new money, reducing the cost of searching for

the best fit vehicle with the investment information providing by the analysts could impact the investment decision of investors (Prem C, 2000; and, Sirri and Tufano, 1998). The coefficient a_1 capture the impact of the recommendation on mutual fund flows, the positive value means the recommendation, provided from analysts, can lead the investors to invest their money in the recommended mutual funds.

The study extends to examine the different impacts on different investment policies by applying equation (4) on 4 types of investment policies, domestic investment funds, foreign investment funds, active funds, and passive funds.

4.2 Impact on mutual fund return

Another hypothesis we test whether the recommendation which we expect to lead the new money flow into the mutual funds can impact the mutual fund performance in the next period. We use the dummy variable approach to capture the impact of the recommendations, the coefficient a_1 in the model (5) capture the impact of the recommendation to the mutual fund return in the consequence period.

$$R_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} +$$
$$d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon \tag{5}$$

Where $Rec_{i,t-1}$ is equal to one if mutual fund i is on the recommendation in week t-1, $Flow_{i,t-n}$ when n equal 1 to 4 represent fund flow in prior 1 to 4 weeks,

$R_{i,t-n}$ when n equal 1 to 4 represent raw return in prior 1 to 4 weeks, $TNA_{i,t-1}$ represents total net asset under management of fund i in prior week which is measured in logarithm form, $FIRM_{i,t-1}$ represents total net asset under management of fund family i in prior week which is measured in logarithm form and FEE_i represent the total net expense of fund i

The positive value of a_1 can be interpreted that is recommended by the analysts, the recommended mutual funds could improve their return.

In this hypothesis, we also examine our subsample as well as examine on mutual funds.

4.3 Performance of the recommended mutual funds

In the second objective, we expect the recommended mutual funds, which are recommended by analysts, might generate the excess return from the market for investors. We examine whether the recommended mutual fund can generate the excess return, alpha by using a portfolio with a three-factor model (Fama and French, 1993).

The recommended mutual fund portfolio will be constructed by equally weighted on every recommended fund at the beginning of the week and we will rebalance the portfolio every week from 2017 to 2019. The portfolio return, risk-free

rate, market return, size, and value portfolio return will be collected in a weekly period, then we use the pool-crossectional regression on a model (6) for observing the average excess return that this portfolio can generate during 2 years.

$$R_{p,t} - R_{f,t} = \alpha_p + \beta_p(R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \epsilon \qquad (6)$$

Where $R_{p,t}$ is portfolio p's return in week t which calculate from the equally-weighted raw return from each fund in portfolio p, $R_{f,t}$ is the risk-free rate in week t, $R_{m,t}$ represents market return in week t, SMB_t and HML_t represent the weekly return of size and value portfolio, representatively. α_p is the weekly average excess return that this portfolio can generate among these 2 years.

5.   Empirical Result

5.1 The analyst leading the mutual fund investors: evidence based on full samples

Table 3 present the results from the regression model to explain return and fund flow on weekly basis. The first regression is similar to the one used by Prem C (2000) and, Sirri and Tufano (1998). In the regression, we use five control variables (prior-period fund flows given by $Flow_{i,t-n}$, prior-period returns given by $R_{i,t-n}$, the mutual fund size in logarithm form given by $TNA_{i,t-1}$, mutual fund management company's size in logarithm form given by $FIRM_{i,t-1}$, and fees are given by FEE_i).

The coefficient to the dummy variable captures the impact of analysts' recommendation on fund flow, and it takes a value of 0.0014 with a 1% significant level. We found all five coefficients are statistically significant in fund flow. The regression result explains that the popular funds, smaller funds, bigger companies, and lower fees tend to have higher new money flow into the funds. The investors react to the return different way between a prior week and prior month return, the investors tend to invest more money that has a positive return on last month and/or negative return on the previous week. This reports that after controlling for the effect of five control variables, the recommended funds experience significantly larger fund flows, and/or the analysts can lead the mutual fund investors to invest in the funds they suggested.

The coefficient of the control variable from the regression model for the mutual fund return is not all statistically significant. We found only bigger companies and lower fees result in better performance but cannot found the significant impact of the fund size. The coefficient of the dummy variable results in no significant value,-.0004 with t-statistic -0.861, meaning that we cannot conclude the recommended funds from analysts' suggestions will better perform than others.

Table 3 presents the impact of analysts' recommendations on Equity open-end mutual funds in Thailand using the pool-crossectional approach on $R_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$ and $Flow_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$. $Rec_{i,t-1}$ is equal to one if mutual fund i is on the recommendation in week t-1, $Flow_{i,t-n}$ when n equal 1 to 4 represent fund flow in prior 1 to 4 weeks, $R_{i,t-n}$ when n equal 1 to 4 represent raw return in prior 1 to 4 weeks, $TNA_{i,t-1}$ represents total net asset under management of fund i in prior week which is measured in logarithm form, $FIRM_{i,t-1}$ represents total net asset under management of fund family i in prior week which is measured in logarithm form and FEE_i represent the total net expense of fund i. In the parentheses report the t-statistic value and * mention the significant level of coefficient follow *** p<0.01, ** p<0.05, * p<0.1

	Equity Mutual Funds	
VARIABLES	R	Flow
REC	-0.0004	0.0014***
	(-0.861)	(2.907)
R1	0.0216***	-0.1080***
	(6.169)	(-29.759)
R2	-0.0056	-0.0269***
	(-1.595)	(-7.402)
R3	0.0237***	0.0009
	(6.722)	(0.241)
R4	-0.0177***	0.0105***
	(-5.050)	(2.885)
Flow1	-0.0021	0.2126***
	(-0.629)	(61.362)
Flow2	-0.0032	0.1041***
	(-0.932)	(29.666)
Flow3	0.0061*	0.0873***
	(1.863)	(25.679)
Flow4	0.0074**	0.0573***
	(2.484)	(18.676)
TNA	-0.0000	-0.0003***
	(-1.109)	(-7.284)
FIRM	0.0001*	0.0003***
	(1.848)	(7.288)
FEE	-0.0004***	-0.0005***
	(-4.689)	(-5.503)
Constant	0.0002	-0.0019*
	(0.235)	(-1.712)
Observations	81,345	81,345
R-squared	0.002	0.124

Berk and Green (2004) reported the evidence the fund manager who cannot handle the large fund flows will burden by enormous money drag the fund performance down. Another argument, the analysts' recommendation for mutual funds only suggests the asset class that suits for current investment situation to the investors, their recommendation does not affect any change in mutual funds' assets of their portfolio.

5.2 Domestic and foreign investment

In this section, we examine the impact of recommendation to the two different investment policies, one is domestic investment funds which invest in Thailand equity in Stock exchange of Thailand (SET) and foreign investment funds which are the feeder fund feed the money under their management to master funds aboard. We hypothesize that the recommendation from the analyst would affect the foreign investment much more significantly than the domestic investment due to lack of investment information aboard of investor and home bias investing.

In Table 4, the analysts' recommendation provides the profession's opinion to the market situation and which investments are favor or not favor to invest, the positive coefficient of recommendation dummy, take a value 0.0021 with 1% significant level for domestic investment funds, and 0.0013 with 10% significant level for foreign investment funds, explain the analysts' recommendation can lead the

new money flow into both domestic and foreign investment funds which corresponds with full samples result.

The regression model on return for domestic investment funds shows that their managers' performance in the prior-period is a highly significant impact on current performance. The impact of fund flow on fund performance, Gruber (1996) and Zheng (1999) interpret as the ability to pick the funds of the investors. Foreign investment funds are slightly different behavior from domestic investment funds. The prior-return and flow, also fund size and fees are not impact the current fund return. This phenomenon might happen because foreign investment funds in Thailand are the feeder fund in which the performance relates to master funds in other countries (mostly in the US). As the expectation, the funds were recommended by analysts cannot be done significantly different from other funds even in the analysts' recommendation report the market opinion from analysts.

VARIABLES	Domestic Investment		Foreign Investment	
	R	Flow	R	Flow
REC	-0.0007	0.0021***	-0.0004	0.0013*
	(-1.238)	(3.573)	(-0.605)	(1.743)
R1	0.0716***	-0.1051***	-0.0146***	-0.1081***
	(15.058)	(-22.697)	(-2.826)	(-19.339)
R2	-0.0272***	-0.0048	0.0044	-0.0417***
	(-5.694)	(-1.030)	(0.849)	(-7.453)
R3	0.0491***	0.0110**	0.0062	-0.0075
	(10.246)	(2.358)	(1.178)	(-1.329)
R4	-0.0373***	0.0218***	-0.0078	0.0033
	(-7.785)	(4.677)	(-1.508)	(0.590)
Flow1	0.0161***	0.2152***	-0.0089*	0.2038***
	(3.365)	(46.087)	(-1.862)	(39.606)
Flow2	-0.0105**	0.1019***	0.0026	0.1007***
	(-2.184)	(21.718)	(0.528)	(19.256)
Flow3	0.0001	0.0870***	0.0133***	0.0831***
	(0.031)	(19.069)	(2.852)	(16.465)
Flow4	0.0253***	0.0616***	-0.0026	0.0513***
	(5.975)	(14.964)	(-0.622)	(11.268)
TNA	0.0001**	-0.0002***	-0.0000	-0.0006***
	(2.105)	(-6.225)	(-0.385)	(-8.652)
FIRM	-0.0001	0.0003***	0.0002***	0.0005***
	(-1.548)	(6.239)	(2.595)	(6.289)
FEE	-0.0004***	-0.0007***	-0.0002	-0.0007***
	(-3.710)	(-6.255)	(-1.100)	(-4.336)
Constant	0.0013	-0.0006	-0.0028	-0.0010
	(1.118)	(-0.512)	(-1.372)	(-0.453)
Observations	44,039	44,039	37,306	37,306
R-squared	0.010	0.130	0.001	0.114

Table 4 presents the impact of analysts' recommendations on subsample between Domestic investment and Foreign Investment using the pool-crossectional approach on $R_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$ and $Flow_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$. $Rec_{i,t-1}$ is equal to one if mutual fund i is on the recommendation in week t-1, $Flow_{i,t-n}$ when n equal 1 to 4 represent fund flow in prior 1 to 4 weeks, $R_{i,t-n}$ when n equal 1 to 4 represent raw return in prior 1 to 4 weeks, $TNA_{i,t-1}$ represents total net asset under management of fund i in prior week which is measured in logarithm form, $FIRM_{i,t-1}$ represents total net asset under management of fund family i in prior week which is measured in logarithm form and FEE_i represent the total net expense of fund i. In the parentheses report the t-statistic value and * mention the significant level of coefficient follow *** p<0.01, ** p<0.05, * p<0.1

5.3 Active funds and Passive funds

Table 5 presents the regression result in explaining the return and fund flow of active funds and passive funds. Obviously result, the fees do not affect fund flow and return of passive funds because their fees are clearly lower than other types of funds. The explanatory variables which have a positive impact on the fund flow of passive funds are the firm size and past fund flows. We cannot found the impact of the past return and the recommendation from analysts on fund flow since passive funds are the investment vehicles that offer diversified and low-fee portfolios tracking the index (Vladysalv and Turner, 2018). The investors who invest in passive strategy might continuously invest in the funds they invest from the big firm and high potential to advertise themselves (Sirri and Tufano, 1998). The return of passive funds is more clearly that cannot be explained from any variables except the past return as the momentum and contrarian effect.

The active funds are completely in contrast with passive funds. The active funds are the prize seekers who try to beat the market. To choose the winner and trustful funds who can generate an excess return to them from a ton of funds, the investors need to choose wisely. The coefficient to the recommendation dummy variable reports the strongly positive significance, take value 0.0015 with t-statistic 2.997 (1% significant level). The same as other subsamples, the recommendation from the analysts do not give the name of the winner in the next period. In table 5

shown the active fund return has only an impact from their past return and a

negative impact from the fees, they charge to the investors and fund expenses.

VARIABLES	Active funds		Passive funds	
	R	Flow	R	Flow
REC	-0.0002	0.0015***	-0.0020	0.0005
	(-0.417)	(2.997)	(-1.559)	(0.272)
R1	0.0209***	-0.1008***	0.0391**	-0.2631***
	(5.816)	(-27.811)	(2.484)	(-11.390)
R2	-0.0037	-0.0286***	-0.0487***	-0.0093
	(-1.019)	(-7.874)	(-3.040)	(-0.394)
R3	0.0232***	-0.0013	0.0347**	0.0344
	(6.425)	(-0.369)	(2.153)	(1.460)
R4	-0.0166***	0.0105***	-0.0383**	0.0046
	(-4.636)	(2.899)	(-2.401)	(0.198)
Flow1	-0.0040	0.2184***	0.0157	0.1268***
	(-1.125)	(61.429)	(1.479)	(8.132)
Flow2	-0.0009	0.1065***	-0.0221**	0.0716***
	(-0.265)	(29.533)	(-2.084)	(4.607)
Flow3	0.0059*	0.0837***	0.0118	0.1010***
	(1.692)	(23.968)	(1.153)	(6.718)
Flow4	0.0054*	0.0621***	0.0265***	0.0010
	(1.741)	(19.740)	(2.862)	(0.075)
TNA	-0.0000	-0.0002***	0.0001	-0.0007***
	(-1.230)	(-6.511)	(0.509)	(-3.679)
FIRM	0.0001*	0.0003***	0.0001	0.0011***
	(1.855)	(6.321)	(0.365)	(3.308)
FEE	-0.0005***	-0.0002**	-0.0005	-0.0014
	(-4.807)	(-2.327)	(-0.629)	(-1.179)
Constant	0.0004	-0.0019*	-0.0023	-0.0088
	(0.366)	(-1.748)	(-0.386)	(-1.005)
Observations	77,228	77,228	4,117	4,117
R-squared	0.002	0.127	0.011	0.089

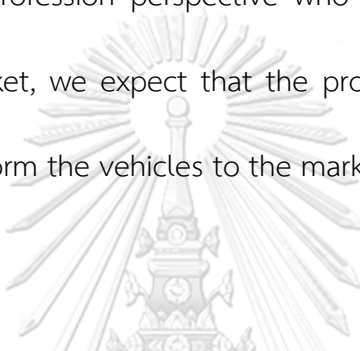**Table 5** presents the regreesion results on subsample Active funds and Passive funds by using the pool-crossectional approach on

$R_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$ and $Flow_{i,t} = a_0 + a_1 Rec_{i,t-1} + \sum_{n=1}^{n=4} b_n Flow_{i,t-n} + \sum_{n=1}^{n=4} c_n R_{i,t-n} + d_1 TNA_{i,t-1} + d_2 FIRM_{i,t-1} + e_1 FEE_i + \varepsilon$. In the parentheses report the t-statistic value and * mention the significant level of coefficient follow *** p<0.01, ** p<0.05, * p<0.1

5.4 The performance of the recommended funds

In general, to choose the investment vehicles by the retail investors who do not have a profession in finance, they might observe the raw return instead of risk-adjusted return. In the previous section, we found in the next period after being recommended the recommended fund does not perform significantly different from the others but in the profession perspective who give the professional advise or recommend to the market, we expect that the professional in finance suppose to recommend the outperform the vehicles to the market.

Table 6 presents the regreesion results on recommended fund portfolio with three-factor model, Fama and French 1993. In the parentheses report the t-statistic value and * mention the significant level of coefficient follow *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	R
Market-Risk Premium	0.8244***
	(16.237)
SMB	-0.0144
	(-0.308)
HML	-0.0422
	(-1.051)
Constant	-0.0002
	(-0.267)
Observations	156
R-squared	0.641

Using the three-factor model (Fama and French, 1993) on equally weighted recommended fund portfolios which are weekly rebalancing and ignore the cost of rebalancing. Table 6 present the regression result in pool-cross sectional samples. We found the coefficient of market risk, beta, and equal to 0.8263 with a 1% significant level. Our portfolio is constructed by using both domestic and foreign investment funds, and both active and passive funds which result in a beta less than 1. The constant term represents the excess return that this portfolio can generate which the result showed no significant value from the regression, meaning that the recommended funds from analysts cannot give the excess return to their investors, this result corresponding with Prem C (2000), reported the post-advertised period, the advertised funds cannot be found the risk-adjusted excess return even they can outperform the market in the pre-advertised period

6.   Conclusion

In this work, we examine the impact of the recommendation from the analysts on mutual fund performance and mutual fund flow to open-end equity funds in Thailand. The recommendations are from Siam Commercial Asset Management Company (SCBAM) and Kasikorn Asset Management Company (KAsset). The main advantage of the recommended fund is to be supported by professional opinion on the current investment situation. This work extends the study of

recommendation from the stock recommendation field to the mutual fund market. Prem C (2000) report the advertisement on Barron's or Money magazine had an impact on new money flow into the fund even no sight of future performance which is different from the analysts' recommendation that put the analysts' view into the suggestion. We also interest in the fund performance both raw return and risk-adjusted return of the mutual funds in the period after being recommended as Prem C (2000)'s experiment.

To understand the mutual fund flow and performance, we use the past flow and past performance as control variables follow Prem C (2000), Miguel (2012), and George J (2017). Mututal funds' sizes and management companies' sizes using as a proxy for searching cost, Sirri and Tufano (1998), for explaining the fund flow. The size of funds and companies also explains the fund performance, as the bigger size can complete the smaller by reducing the expense ratio they charge to the funds, Jeffrey A. (2014). The last explanatory variable is fees which are the direct cost of investment to investors.

In the first objective, we found the recommendation can lead new money flow into the fund with the positive value of the coefficient to the dummy variable except on passive funds. This result has shown the efficiency of recommendation in terms of feeding the professional opinion into the market for improving the market

efficiency, but it no need for the passive fund which the investors clearly know that these types of funds will go along with the index.

Moreover the fund flow, we study the impact on the total return of funds which general retail investors can observe. We found that the funds are recommended in the prior-period cannot generate a significantly different total return to other funds. From this result of the regression, we can conclude that even invest in the funds follow the analysts' opinion, the investors still cannot get the different total return to who not follow the analysts in the short-run, consist to Berk and Green (2004), a large amount of fund flow in cause the fund manager cannot well manage and drag the return down to zero.

Our second objective, we observe whether the recommended fund can generate an excess return to the investors on average. We use an equally-weighted average portfolio with the three-factor model (Fama and French, 1993) to approach this hypothesis.

From the regression result, we found no significant abnormal return generate from this portfolio, lead us to conclude the opinion from analysts also cannot let the investor beat the market on average.

In summary, we found the recommendations that written from asset management companies are successfully in commercial approach to lead the

investors to invest in their fund, even in short-run the investors cannot found different result from their suggested funds.

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