

The Performance of CSR Mutual Funds and Investment Decision-Making

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Abstract

Nowaday, Corporate Socially Responsible (CSR) mutual funds are becoming a popular investment option for investors. However, no any research confirms whether CSR Mutual fund activity is better than market index or not. Besides, we should have one method can help con sequently investors in making the decision to select appropriate investment funds. In this study, we measure the financial performance of a sample of 15 CSR mutual funds in the world, with the monthly return over the period 2008-2013, then we propose the dession table. We first use the measures to evaluate the performance of mutual funds such as Alpha (α), Sharpe Ratio (SR), and Information Ratio (IR). And then, we use the obtained decision tableto evaluate the predictabilityby each measure. The results indicate that only 3 of the 15 CSR mutual funds achieve good performance results based on the statistical significance of the two measures Sharpe Ratio and Information Ratio. In addition, the IR is suggested to evaluate and make investment decisions in the future and it also is the best one among the three measures. The decision table suggest investors a measure forecast accuracy way.

Keywords: corporate socially responsible (CSR), the measures, evaluate the performance, mutual funds, decision table

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1. Introduction

Corporate social responsibility (CSR) has long been a mandatory assessment criterion in many developed countries. The social responsibility investment market is developing rapidly in interest and size. Europe take the outstanding place – over 60% of the market share. The most dramatic increase belongs in the number of SRI funds belongs to Belgium, France, U.K. and Switzerland -these for countries account for 72% of total SRI funds in Europe [1]. However, CSR is still a little interest in a number of developing countries. When looking at the success of a business, many people just stop looking at the tangible indicators such as sales, profits, wages paid to employees or the tax contributions to the state budget. Whereas, the intangible criterion such as the social responsibility of every business seems to be forgotten in the official documents and also hardly ever remembered by the enterprise itself.

Corporate social responsibility (CSR): According to The United Nations Global Compact (UNGC)[2], CSR embraces 10 principles of organizational behavior that address the four dimensions of human rights, labor, environment protection, and corporate governance. Corporate social responsibility has been a topic of academic study for several decades Wartick – Cochran [3], 1985; Frederich,1990 [4]; Carrol, 1997 [5]),

In fact, past studies have shown that companies implementing social responsibility are not reduced benefits but also increased. The business benefits obtained when implementing social responsibility, including reduced costs, increased revenue, brand value, reduce the rate of employee severance, increased productivity and more opportunities to access the new markets. There are a lot of different mutual funds in the investment world. Therefore, the choice of profitable mutual funds for investment is a important issue. The number of mutual funds investing in companies that meet a variety of ethical criteria, better known as ethical mutual funds or socially responsible mutual funds, is growing rapidly worldwide. The strongly growing interest in the incorporation of social, moral, environmental or any other ethical criteria in the

stock selection companies may become out of favour within the investment community when behaving unethically. The purpose of this present study is to find out the necessary facts regarding performance of selected balanced schemes, which can benefit the investors and fund managers.

The specific objectives of the study are to answer the question: If a mutual fund activities associated with social responsibility, would it have good performance and reliability for investors to chose whether invest or not?

Firstly, to evaluate the performance of 15 CSR Mutual Funds using Return Analysis, Sharpe, Information ratio and Alpha measure, we compare all the measures with the market index to distinguish and to draw comparisons.

Secondly, the best measure give the making decision ability to the CSR mutual funds help investors to consider options when making their investment decisions when using three measures Sharpe, Information ratio and Alpha .

2. Proposed Approaches

This part gives brief outline of the broad objective of the study and Hypothesis, the underlying principle of research methodology and the choice of the appropriate research method for the study. Explanations of Figure 1 are shown below

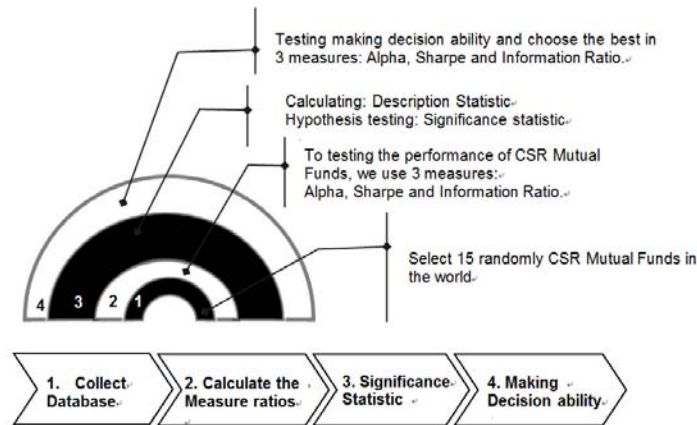


Figure 1. Producer Approach

Step 1: Collect database

The first, we select randomly 15 mutual fund corporate social responsibility funds in the world including: Taiwan, United States, Italia, France, United Kingdom, and Swiss. The data is collected on historical Return of 15 funds selected from 2008 to 2013. Secondly, we collect data on market portfolio return and the market portfolio will be selected for each mutual fund above CSR Fund and data on risk-free rate: Treasy Bill from 2008 to 2013, according to data collected monthly and are sourced from <http://finance.yahoo.com/> [6-8].

Then we use the Simple Regression Model as following:

$$Y = aX + b \tag{1}$$

Where Y is the return oyf thefund, X is return of theMarket, a and b are constant.

Calculating the expected return by the following equation:

$$R = y + R_m * x \tag{2}$$

Where R is the expected Return, R_m is return market, coefficient x,y.

Summarized from the proceeding section, corporate social responsibility could be regarded as socially responsible investment and strategic investment in a firm.

Step 2: Calculate the measure ratios

This study aims to answer the question “Are social responsibility mutual funds always achieving good performance?” Thus, we examine the return performance of CSR mutual funds by monthly. We use 3 measurements to evaluate CSR Mutual Funds Performance: Alpha, Sharpe Ratio, and Information Ratio [9] and then test the statistical significance of them.

Alpha

Alpha (α) is defined by [10] as following: the difference between the fund’s actual return and its expected return, given its level of risk as measured by beta.

$$\alpha_i = R_i - E(R_i) \quad (3)$$

Where α_i is Asset Alpha; $E(R_i)$ is Expected Asset Return; and R_i is Actual Asset Return.

When $\alpha > 0$, the fund’s actual return exceeds its expected return, in which case the manager has added value. When $\alpha < 0$, the fund manager has actually destroyed value. When $\alpha = 0$, the fund has behaved exactly as predicted by the market and its beta to the index, but the manager has not added any value.

Sharpe Ratio

In 1966 William Sharpe [11] suggested that the performance of mutual funds be analyzed by the ratio of returns to standard deviation. Sharpe Ratio (SR) is defined as the excess return on a portfolio over a risk-free asset, such as a T-bill, divided by the risk of the portfolio.

$$SR_i = \frac{R_i - R_f}{\sigma_i} \quad (4)$$

Where S_p is Sharpe’s ratio for fund i , R_i is the average return on fund i ,

R_f is the return on risk free assets, and σ_p is the standard deviation of return on fund i .

Information Ratio

Like the Sharpe Ratio, the Information Ratio (IR) also measures excess return per unit of risk [12], the IR formula is expressed as following:

$$IR_i = \frac{\bar{R}_i - \bar{R}_m}{\sigma_{ER}} \quad (5)$$

Where IR_i is denoted= Information Ratio of Asset for fund i ; \bar{R}_i is presented= Annualized Asset Return on fund i ; \bar{R}_m is symbolled Annualized Benchmark Index Return; σ_{ER} = Annualized Standard Deviation of Excess Return.

The information ratio is a risk-adjusted performance metric often utilized when evaluating mutual funds. The information ratio takes into account both the risk-free return rate and the return on the benchmark portfolio, giving investors a better understanding of the how much risk the manager took to achieve its performance.

Step 3: Significance statistic

Alpha

This procedure, simultaneously applied across all funds, is a multiple hypothesis test (for several null hypotheses, H_{10} , and alternative hypotheses, H_{11}): The Alpha can be interpreted as a t-test for the hypothesis that they expect a return higher than the actual return as:

$$H_{10}: \alpha_i \leq 0, H_{11}: \alpha_i > 0, \text{ (with } i = 1, \dots, 15) \quad (6)$$

Sharpe Ratio (SR)

The measure to risk-adjusted performance is the Sharpe ratio (Sharpe 1966), which measures the fund’s excess return per unit of its risk. To evaluate whether the performance of a portfolio of the CSR Mutual Fund is significantly higher than those of bench Funds, the null hypothesis (H_0) and the alternative hypothesis (H_1) are established as follows, respectively: The Sharpe ratio can be interpreted as a t-test for the hypothesis that that the return on the portfolio is equal to the risk-free rate. This procedure, simultaneously applied across all funds, is

a multiple hypothesis test (for several null hypotheses, H_{20} , and alternative hypotheses, H_{21}) as:

$$H_{20}: SR_i \leq 0, H_{21}: SR_i > 0, \text{ (with } i = 1, \dots, 15) \quad (7)$$

Information Ratio (IR)

The information ratio can be interpreted as the t-test associated with the hypothesis that the returns on the portfolio do not significantly deviate from the market index. An information ratio larger than 1.96 implies that a portfolio manager has a 95% probability of beating the market index in any period. This procedure, simultaneously applied across all funds, is a multiple hypothesis test (for several null hypotheses, H_{30} , and alternative hypotheses, H_{31}) as:

$$H_{30}: IRI \leq 0, H_{31}: IRI > 0, \text{ (with } i = 1, \dots, 15) \quad (8)$$

Step 4: Making decisionability

With the numeric of Alpha, Sharpe Ratio,

Information Ratio, have just been calculated, we set up decision investment table based on the historic return. We use average and exponential smothing method to make rolling over 1 year with one by measures and make investment decisions each next 3 month in 3 years. Then we count how many cases are right decisions and how many cases are wrong decisions make the percentage.

We calculate similar indices, respectively for Alpha, Sharpe Ratio, Information Ratio, Decision table for each measurement. Then we have four cases as followed the Table 1:

Table 1. Decision Table

Prediction	Real	Decision	
Positive	Positive	Good-Good	Right
Positive	Negative	Bad- Good	Wrong
Negative	Positive	Good-Bad	Wrong
Negative	Negative	Bad-Bad	Right

Table 1 means that if the funds have both the results in prediction and in real are positive, we will make the right decision, "Good-Good"; if the funds have the positive results in predictive but negative results in real, we will make the wrong decision, "Bad-Good"; if the funds have the negative results in predictive but positive results in fact, we will make the wrong decision, "Good- Bad"; if the funds have both the results in prediction and in real are negative, we will make the right decision, "Bad- Bad".

The comparison of the percentage makes decision ability of each measurement to Right Decision, Wrong Decision. Choice of a measurement has the best ability to making investment decision.

We consider specially the rate of Right Decision, as it will bring less risks to investors. Wrong Decision will be another consideration:

Case 1: The fund activities are good performers, but the consideration is bad, and then we make a Wrong Decision, this will affect the investment decisions of investors and, if not carefully considered decision, the investor will regret, the loss of a about the profits that would have been lost if the investment is wise to continue to fund.

Case 2: In fact, the fund performs is bad, but given the consideration is good, and then we make a Wrong Decision, the investment decision to invest in this fund will cause loss of capital.

Therefore, the making decision ability should be calculated efficiently and accurately helps investors can operate at a profit, but not risking too much.

3. Results and Analysis

3.1. Descriptive Statistics

Descriptive Statistics is conducted on the sample to screen data characteristics and distributions. Descriptive statistics of all variables are displayed in Table 2.

Table 2. The Descriptive Statistics

	Name of CSR funds	Variables	Mean	Median	SD	Max	Min
1	Fubon Taiwan CSR B	Mutal fund	0.4767	2.2541	7.06	10.00	-25.16
		Market Index	-0.2401	0.8428	6.06	12.44	-15.81
2	Ariel Appreciation Fund (CAAPX)	Mutal fund	0.0481	1.2586	7.46	19.66	-33.33
		Market Index	-0.1424	0.7019	0.0523	8.59	-20.40
3	Ariel Focus Fund (ARFFX)	Mutal fund	-0.0033	1.9060	5.73	10.98	-24.04
		Market Index	-0.1424	0.7019	5.23	8.59	-20.40
4	Ariel Funs (ARGFX)	Mutal fund	-0.4186	0.9113	10.40	27.43	-36.42
		Market Index	-0.1424	0.7019	5.23	8.59	-20.40
5	Domini Social Equity Fund (DSEFX)	Mutal fund	0.0008	1.5045	5.57	7.89	-25.29
		Market Index	-0.1987	1.4068	7.49	10.76	-30.34
6	Pax World Balanced Fund (PAXWX)	Mutal fund	0.1681	2.1175	6.44	15.11	-18.11
		Market Index	0.2823	1.1719	3.74	9.07	-9.69
7	Pax World Global Environmental Markets Fund (PGRNX)	Mutal fund	-0.18	1.69	7.68	13.81	-34.68
		Market Index	0.3050	0.2938	5.76	16.79	-10.18
8	Pax World Growth Fund (PXWGX)	Mutal fund	0.1192	1.5152	6.08	11.69	-26.93
		Market Index	0.1566	1.2037	3.16	10.05	-21.27
9	Pax World International Fund (PXINX)	Mutal fund	-0.5807	0.0000	7.14	12.61	-27.26
		Market Index	-0.3764	0.2713	6.95	11.64	-26.34
10	Pax World Small Cap Fund (PXCSX)	Mutal fund	0.2267	1.7958	7.70	11.87	-30.09
		Market Index	-0.0289	1.7668	6.90	13.33	-26.52
11	Vanguard FTSE Social Index Fund (VFTNX)	Mutal fund	-0.1880	1.1848	6.34	12.19	-23.90
		Market Index	-0.1810	0.3779	4.77	7.79	-14.97
12	Natixis Impact Aggregate Euro I Inc (NATOEMD)	Mutal fund	-0.2174	-0.1339	1.13	3.05	-3.00
		Market Index	-0.9295	-0.8267	7.91	33.94	-29.42
13	Pioneer Funds-Global Ecology(Italy)	Mutal fund	-0.4968	0.0797	5.80	9.20	-27.09
		Market Index	-1.6011	-1.5692	7.20	17.22	-19.48
14	Asia Pacific Sustainability Fund-First State Investments SCVC(UK)	Mutal fund	0.8444	1.5716	4.38	9.69	-17.81
		Market Index	-0.1810	0.3779	4.77	7.79	-14.97
15	Sustainable Healthy Living Fund-Julius Baer Multipartner Robeco SAM(Swiss)	Mutal fund	0.0806	0.9406	5.04	10.42	-19.33
		Market Index	-0.4961	0.2288	0.17	9.19	-12.78

Table 2 also shows the mean, median, and standard deviation, max, min of CSR mutual funds' return and Market return.

We use first analytical methods (mean, median, standard deviation, Max, Min) 15 CSR for mutual of 6 countries around the world then we analyze each country with one fund evidence.

3.2. Hypothesis Testing

As mentioned earlier, to test statistical significance of the measures Alpha, Sharpe Ratio, Information Ratio we apply method of one-sided and pair wise t-statistic testing. The results are exhibited in Table 3.

As shown in Table3, most of the hypotheses testing the significance of Alpha, Sharpe Ratio, Information Ratio of 15 CSR mutual funds are rejected. This means that there are not significant. However, Table 3 indicates that the t-statistics of CSR mutual fund relative to the Sharpe Ratio and Information ratio in:

H11: H11-2 is 0.7517 (p-value <0.05); H11-3 is 3.4503 (p-value<0.01), H14: H14-2 is 3.4103 (p-value <0.01); H14-3 is 10.6339 (p-value< 0.01) and H15: H15-2 is 1.7307 (p-value <0.05); H15-3 is 5.4579 (p-value<0.01), respectively. Thus rejecting the null hypothesis and accepting the alternative hypothesis. This means that Vanguard FTSE Social Index Fund (VFTNX),Asia Pacific Sustainability Fund-First State Investments SCVC(UK) and Sustainable Healthy Living Fund-Julius Baer Multipartner Robeco SAM(Swiss) mutual funds have a Sharpe Ratio and Information ratio greater than 0.

Table 3. The results of Hypothesis testing

Hypothesis	Sub- Hypothesis	t-Statistic	p Value
H1	H1-1	0.2029	0.4200
	H1-2	0.1251	0.4506
	H1-3	2.7314	0.0100 ***
H2	H2-1	0.0000	0.5000
	H2-2	-0.4886	0.3135
	H2-3	3.0758	0.0016 ***
H3	H3-1	0.0000	0.5000
	H3-2	-0.0090	0.4964
	H3-3	-0.5521	0.2914
H4	H4-1	-0.0338	0.4866
	H4-2	-1.5718	0.9393
	H4-3	-5.4570	0.9999
H5	H5-1	0.0000	0.5000
	H5-2	-0.1348	0.4466
	H5-3	0.5181	0.3230
H6	H6-1	0.0000	0.5000
	H6-2	-0.2016	0.4204
	H6-3	-2.5908	0.9440
H7	H7-1	0.0000	0.5000
	H7-2	1.0018	0.1608
	H7-3	0.8156	0.2090
H8	H8-1	0.0000	0.5000
	H8-2	-0.6608	0.2556
	H8-3	-0.9112	0.1829
H9	H9-1	0.0000	0.5000
	H9-2	0.3270	0.3725
	H9-3	0.0181	0.4928
H10	H10-1	0.0000	0.5000
	H10-2	-3.6216	0.9108
	H10-3	3.5486	0.4468
H11	H11-1	4.2784	0.5000
	H11-2	0.7517	0.0476 **
	H11-3	3.4503	0.0005 ***
H12	H12-1	0.0000	0.5000
	H12-2	-3.6216	0.9997
	H12-3	3.5468	0.0004 ***
H13	H13-1	0.0000	0.5000
	H13-2	0.5107	0.3059
	H13-3	7.9281	0.0000 ***
H14	H14-1	0.0000	0.5000
	H14-2	3.4103	0.0006 ***
	H14-3	10.6339	0.0000 ***
H15	H15-1	0.0000	0.5000
	H15-2	1.7307	0.0449 **
	H15-3	5.4579	0.0000 ***

Note: ***p<0.01; **p<0.05; *p<0.1

Mutual fund performance of both 3 funds above is better than their market index. The performance of a portfolio of the CSR Mutual Fund is significantly higher than those of bench Funds, the return on the portfolio is greater than the risk free rate. The returns on the portfolio significantly deviate from the market index.

When comparing the Alphas, Sharpe ratio, and Information ratio of the CSR funds with those of matched conventional funds, the CSR returns are lower than those of conventional funds, but there is little statistically significant evidence that CSR funds underperform. The main reason why CSR investors may be willing to pay such a price for ethics or social responsibility is based on aversion to corporate behavior which is deemed unethical or social. Investors of CSR funds may thus explicitly deviate from the economically rational goal of wealth-maximizing by pursuing social objectives.

3.3. The Level Making Decision Ability by Time

3.3.1. Making Decision Ability with Alpha by Time

Table 4 indicates the results of testing and Making decision ability with Alpha in 36 months, specific data as following:

Table 4. The results of Making decision ability with Alpha by time

Time	Right Decision (%)			Wrong Decision (%)		
	Good-Good	Bad-Bad	Sum	Good-Bad	Bad-Good	Sum
3 months	30.52	16.73	47.3	29.45	23.29	52.74
6 months	29.97	18.18	48.2	27.41	24.43	51.84
9 months	29.57	16	45.6	27.89	26.52	54.41
12 months	29.95	14.56	44.5	27.17	28.31	55.48
15 months	28.62	14.5	43.1	27.14	29.74	56.88
18 months	26.42	12.17	38.6	29.28	32.13	61.41
21 months	30.18	10.27	40.5	28.13	31.42	59.55
24 months	26.09	11.9	38	32.26	29.75	62.01
27 months	27.54	13.1	40.6	32.89	26.47	59.36
30 months	23.18	16.2	39.4	31.84	28.77	60.61
33 months	26.71	14.33	41	35.83	23.13	58.96
36 months	14.23	15.77	30	44.23	25.77	70

Then the tests were calculated, we see trends based newspaper based on Alpha index clearly changes over time; the longer the period, the rate of making wrong decision ability increases with high level. However observed data was calculated and Figure sees that in the short period of time (3 months), the rate of making right decision ability with of the Alpha also has a very low 48% (less than 50%) while the proportion of making wrong decision ability with is very high at 52%.

We consider 3 month period, 12 month period, 24 month period and 36 month period, with different levels of time as a result of using the alpha test to predict that the predictive accuracy rate : 47.3% - 44.5% - 38% - 30%, the percentage of inaccurate decision ability to : 52.74% - 55.47% - 62.01% - 70%. Alpha's investment decision ability in the short term as well as long-term is less. Therefore, to help investors making decision ability with more bases in the investment process, we carried out the calculations and tests similar to the Sharpe Ratio.

3.3.2. Making Decision Ability with Sharpe Ratio

Use these steps and calculate way similar to Alpha, we also have tables of test results of the Sharpe Ratio indices consider making decision ability in each period of 3 months and a period of 3 years as show in Table 5:

Using the Sharpe Ratio to measure the effectiveness of the portfolio, to help investors know portfolio, investment funds bring how much profit (in excess of risk-free assets) of 1 unit of risk. Thus, if investors do not accurately predict SR, this will make the investment risks of high specific investment choices are wrong with the funds that it is not profitable enough to offset the risks.

In Table 5, Sharpe Ratio's making decision ability also tends to decrease the rate of accurate Making decision ability with rate and vice inaccurate decision ability tend to increase accretion in a long time.

Table 5. The results of Making decision ability with Sharpe Ratio by time

Time	Right Decision			Wrong Decision		
	Good-Good	Bad-Bad	Sum	Good-Bad	Bad-Good	Sum
3 months	32.91	14.31	47.22	29.72	23.06	52.78
6 months	30.08	11.61	41.69	32.58	25.73	58.31
9 months	34.45	11.23	45.68	29.96	24.36	54.32
12 months	34.36	9.67	44.03	28.81	27.16	55.97
15 months	44.49	6.35	50.84	23.96	25.2	49.16
18 months	40.61	12.94	53.55	23.35	23.1	46.45
21 months	45.83	13.09	58.92	22.91	18.17	41.08
24 months	51.01	13.51	64.52	24.66	10.82	35.48
27 months	44.04	13.49	57.53	32.14	10.33	42.47
30 months	41.63	13.87	55.5	36.84	7.66	44.5
33 months	34.64	13.4	48.04	48.04	3.92	51.96
36 months	20.95	20	40.95	57.14	1.91	59.05

In general, SR has the level right decision ability is low in short-term, specific SR is only reached 47.22% (<50%) in 3 months time. However, the making right decision rate has increased over a period of moderate and somehow suddenly plummeted. Specifically, the making right decision of SR in 3, 12, 24, 36 month period, respectively, as follows: 47.22%, 44.03%, 66.52%, 40.95% is not going to change this trend also as a rule specific. So investors meet many difficulties in predicting exactly, to get the appropriate investment decisions. Thus, in this case again we have concluded that the SR has no ability to make the right decision and if you want to use this index for making decision investment it should only be used in a short period of time to assess the effectiveness of investment funds. We continue with the Information Ratio.

3.3.3. Decision-making Ability with Information Ratio

It is the method of scrolling in the first year and gradually moves to the next month, we can calculate the data on the Information Ratio in Table 6 below.

Table 6. the results of making decision ability with Information Ratio by time

Time	Right Decision			Wrong Decision		
	Good-Good	Bad-Bad	Sum	Good-Bad	Bad-Good	Sum
3 months	43.08	22.94	66.02	14.53	19.45	33.98
6 months	43.41	24.03	67.44	13.36	19.2	32.56
9 months	42.57	21.89	64.46	15.05	20.49	35.54
12 months	40.91	18.83	59.74	19.26	21	40.26
15 months	40.48	17.07	57.55	20.24	22.21	42.45
18 months	38.82	13.96	52.78	22.9	24.32	47.22
21 months	41	10.09	51.09	25.24	23.67	48.91
24 months	32.82	10.04	42.86	26.25	30.89	57.14
27 months	37.15	10.09	47.24	25.22	27.54	52.76
30 months	33.69	9.09	42.78	31.02	26.2	57.22
33 months	33.11	14.19	47.3	39.19	13.51	52.7
36 months	25.23	19.62	44.85	44.86	10.29	55.15

Table 6 indicates the results of testing and Making decision ability with Information Ratios in 36 months, specific data as follows:

The main characteristics of the information ratio are as follows:

The information ratio estimates after the fact value added and relates this to before the event opportunity available in the future. The residual frontier that describes the opportunities accessible to the active manager is identified by the information ratio. The level of aggressiveness for each manager is decided by his/her information ratio. Occasionally, intuition can give a good clue about the information ratio and residual risk aversion. Value added depends on the managers' prospects and aggressiveness.

The results show that, with the level of Information Ratio's accuracy right decision ability 66.02% is quite high (> 50%) and double the rate wrong decision ability and in the subsequent periods, respectively 6,9,12,15,18.21 months, the rate of accurate Making right decision ability with of IR is still over 50% (greater than the rate of wrong decision ability).

4. Conclusion

There are 3 CSR Mutual funds performance are better than their market indexed. The performance of the portfolio of CSR Mutual Fund is significantly higher than those of benchmark Funds, the return on the portfolio is greater than the risk-free rate. The returns on the portfolio significantly deviate from the market index.

To help Investor make the correct investment decision, we should answer the question. "How can an investor evaluate the performance of a fund?" One of the simplest ways is to look at the historical analysis of the returns. For this, one can either consider point-to-point returns or rolling returns. Let's look at what these terms mean, and which one is a better measuring tool.

Using the decision table give the results for 3 measures Alpha, Sharpe Ratio, and Information Ratio respectively, following: the Information Ratio able to predict the best in the given 3 criteria for evaluation (Alpha ratio, Sharpe Ratio). Through this result, investors may consider use IR to predict and assess the performance of investment funds in the short term. Since then investors have helped to make the decision and the right choice to bring good results in the future investment

The study still has own limitations such as: the database does not provide sufficient information, so the data are only collected from 15 CSR mutual funds for 5 years, while total CSR mutual funds listed in the world are about over 250 funds, the larger sample size gives more comprehensive and more general results of our research. The study only used three measures Alpha, Sharpe Ratio, Information Ratio considered to be a very important measure of Mutual fund performance in other literature while there many ways to measure it such as gross operating profit, stock return, return... different measures provide distinct perspectives which help us have a deeper conclusion about the association about CSR Mutual fund performance.

Therefore, the future research should fill this research gap by generalizing findings using a larger sample size in order to have more general, imperative vision as well as solutions for CSR Mutual. More measures of firm performance as well as asset management components should be applied in future researches have a better evaluation and helping the investor can make the right investment decision.

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