

## **Effect of Portfolio Management Strategies on the Returns of Mutual Funds in Kenya**

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### **Abstract**

The study explored the effect of portfolio management strategies on portfolio returns of mutual funds in Kenya. The population of the study was all the mutual funds licensed by CMA as at 2018. The study concluded that portfolio management strategies have an impact on portfolio returns. In Kenya, the most preferred strategy was active portfolio strategy. Mutual funds that employed active and growth portfolio management strategy generated negative returns, although active strategy is the most preferred strategy, the costs that the strategy attracts leads to negative returns. Those that employed value and passive portfolio management strategies generated positive returns. The study recommends that mutual funds should use value and passive strategies as they produce positive returns, and this is because of the low cost incurred when using these strategies.

**Keywords:** Portfolio Management Strategies, Returns, Mutual funds, Kenya.

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## **1. Introduction**

Portfolio Management Strategies are a set of procedural guidelines for investors, whether individual or institutional, in the selection of their portfolios (Jones, 2009). How well the strategy has been applied will determine whether the investors will acquire the returns. Portfolio management strategies can be grouped in two main groups namely active and passive portfolio management strategies (Jones 2009), portfolio strategies can also be categorized as value-oriented and growth-oriented portfolio management strategies (Knopers, 2014). Depending on the portfolio management strategy employed by an investor, it will have an impact on the portfolio return and risk (Shaukat & Shazad, 2018). Nyamute, Lishenga and Oloko (2015) also support this notion, that portfolio management strategies have a relationship with portfolio return which is significant. The above shows that portfolio management strategies have a relationship with returns whether positive or negative depending on which strategy is employed.

The study was based on (Markowitz's 1952) modern portfolio theory as well as on (Fama 1970) efficient market hypothesis. The principle was formulated by (Markowitz 1952) and originated from the expected return rate on an asset portfolio and its expected risk calculation. This emphasizes how risk non-investor portfolios can help maximize expected returns at some degree of risk, emphasizing the intrinsic aspect of higher returns. The theory also notes that an efficient frontier of equilibrium portfolios can be constructed that provide the highest expected return at a given risk level. Fama (1970) Efficient Market Hypothesis disregards the idea of investing in undervalued stocks or market timing, since the new information is by this time in represented in the investment's price, making it is impossible to beat the market.

In Kenya, mutual funds started with the setting up of the CMA whose duty was to control, authorize and track market intermediaries' activities, through the incorporation of Capital Market Authorities (CMAs), it draws their powers from Section 30 of the capital markets. Mutual funds in Kenya are managed by professional fund managers who use portfolio management strategies in the management of portfolios to achieve the expected return. Passive portfolio management strategy is the most prevalent strategy in the Kenyan Mutual fund industry while value and growth strategies are moderately used; this is according to (Mwangi, 2014).

## **2. Preliminary Notes**

### **2.1 Model Summary**

Descriptive statistics and inferential statistics were used to determine the relationship between the variables. The descriptive statistics are in the form of standard deviations percentages and means. Linear regression was used to determine effect of the portfolio management strategies and determinants, on the returns of mutual funds. The model was tested for statistical significance at a 95% significance level.

The model is as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon \tag{1}$$

Where:

$\alpha$ : is the regression constant or intercept

Y: Return of Mutual Funds

$X_1$ .....  $X_4$ : Portfolio Management Strategies

$X_5$ .....  $X_8$ : Firm size, Firm Age, Management Experience, Risk

$\epsilon$ : is the random error term that represents for unexplained variations

$\beta_1$ ... $\beta_8$ : are the regression coefficients

### 3. Main Results

#### 3.1 Response rate

The study undertook a census of a population of 89 mutual funds in Kenya for the year 2018. 57 questionnaires were returned dully filled. This therefore gives a response rate of 64.04%, which is considered appropriate, comparable to a study by (Kiriimi 2012) which had a response rate of 60.9%.

#### 3.2 Descriptive Statistics

##### 3.2.1 Respondent Experience, Fund age, Fund Size and Risk

The respondent were requested to indicate for how long have they held there current position, with the results presented in Table 1 and how long the fund has been in existence presented in Table 2. Fund size and Risk were secondary data results represented in Tables 3 and 4.

As shown in Table 1 below, a large percentage of the respondents 36.8% were in their current position for 5-7 years, followed by respondents who had just been in their current position 22.8% for less than 2 years, 17.5% had experience for 2-4 years and 8-10 years and 5.3% had over 10years experience.

**Table 1: Experience of the Respondents**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
Less than 2 years	13	22.8%	22.8%
2-4 years	10	17.5%	40.3%
5-7 years	21	36.8%	77.2%
8-10 years	10	17.5%	94.7%
Over 10 years	3	5.3%	100.0%
Total	57	100%	

Source: Author, 2020

The results collected for fund age is shown in Table 2 below. 50% of the funds have been in existence for 8-10 years and 31.6% have been in existence for more than 10 years. The funds that have been in existence for 2-4 years are 9.2 % and 5-7 years are also 9.2%. For the year 2018 were no funds that were no funds that were existence for less than 2 years.

**Table 2: Number of years Fund has been in existence**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
Less than 2 years	0	0.0%	0.0%
2-4 years	9	9.2%	9.2%
5-7 years	9	9.2%	18.4%
8-10 years	49	50.0%	68.4%
Over 10 years	31	31.6%	100.0%
Total	98	100.0%	

Source: Author, 2020

Fund size was represented by natural log of AUM and the results tabulated in Table 3 below. Fund size had a mean of 5.120 and a standard deviation of 1.941 indicating a small deviation from the mean. With a negative kurtosis of 0.732 it indicates several funds had a low amount of AUM from the mean and a positive skewness of .399 indicating a leptokurtic distribution.

Risk was represented by the standard deviation of the monthly returns of the mutual funds. Table 3 indicates the results of the risk. As shown below the mean was 0.027 with a low standard deviation of 0.027 and a positive skewness of 2.616 and a positive kurtosis of 7.841 indicating a leptokurtic distribution.

**Table 3: Fund Size and Risk**

	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>SD</b>	<b>SK</b>	<b>KU</b>
Fund Size	57	2.08	9.89	5.120	1.941	0.399	-0.732
Risk	57	0.014	0.079	0.027	0.012	2.616	7.841

Source: Author, 2020

### 3.2.2 Portfolio Management Strategies

Portfolio management strategies were operationalized by the investment style, which explains the difference styles employed by the funds considering the risk and type of securities envisioned in each strategy. The strategies chosen were active, passive, value and growth strategy.

The mutual funds engage in various strategies including passive or active strategies and value or growth-oriented strategies. The respondents were given a set of 12 questions to respond to, questions 1-3 represents active strategy, 4-6 passive strategy, 7-9 value strategy and questions 10-12 are for growth strategy. Table 4 represents the results as shown below.

Active strategy has a mean of 2.94, and a standard deviation of 0.876 indicating a small variation from the mean. Active strategy is positively skewed at 0.328 and platykurtic because of a kurtosis of -1.349. These results indicate that active strategy is the most sought out strategy by mutual funds. Passive strategy has mean of 2.65 and a standard deviation of 0.808. Passive strategy is the second most by mutual funds. It has a positive skewness of 0.337 and kurtosis of -0.937 meaning a slight platykurtic distribution, indicating that it is skewed to the right and distribution is flatter than normal.

Value strategy on the other hand has a mean of 2.57 which means it is the least used strategy out of the four strategies. It has a slightly higher deviation of 1.122, the skewness is positive at 0.603 and a platykurtic distribution because of a kurtosis of -1.170, meaning the distribution is flatter than normal.

Finally, growth strategy has a mean of 2.64, standard deviation of 1.120, skewness of 0.792 and kurtosis of -0.921. The positive skewness means the distribution is slightly asymmetrical with a longer tail to the right and the distribution is also flatter, indicating it is a platykurtic distribution.

**Table 4: Portfolio Management Strategies used by Mutual Funds in Kenya**

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>SK</b>	<b>KU</b>
The mutual fund focusses on high risk investment in the short to medium term	57	2.74	1.04	0.85	-0.59
The mutual fund has a high stock Turnover (Frequent buying and selling of stock)	57	3.04	1.00	-0.07	-1.09
The mutual fund short sell overvalued stocks	57	3.00	1.05	0.19	-0.99
The mutual fund's portfolio mimics the NSE 20 share index	57	1.88	0.91	0.84	-0.02
The mutual fund buys and holds investments for the long term	57	3.19	1.44	-0.20	-1.42
The mutual funds believe the Kenyan market is efficient.	57	2.47	0.93	0.15	-0.78
The mutual fund invests in undervalued stocks	57	2.28	1.05	0.75	0.13
The mutual fund invests in stocks that have a high price to earnings ratio	57	2.89	1.28	0.10	-1.24
The mutual fund invests in stocks that have a high dividend yield	57	2.93	1.43	0.32	-1.47
The mutual fund invests in stocks that have a low price to earnings ratio	57	2.56	1.05	0.69	-0.58
The mutual fund invests in stocks that have a low dividend yield	57	2.32	1.05	0.65	-0.44
The mutual fund invests in fast growing companies	57	2.82	1.05	0.17	-0.65

Note: N number of respondents, SD standard deviation, SK skewness and KU kurtosis

Source: Author, 2020

### 3.2.3 Portfolio Returns

Portfolio return was measured by use of Sharpe ratio. Monthly portfolio returns were used and compared with the Treasury bill rates, risk free rate, and the excess return to obtain the Sharpe ratio. The study got a negative 2.29 mean return with a standard deviation of 2.99. This indicates that the portfolio return had a low variability. The distribution was negatively skewed (-1.05) and low peaked with a kurtosis of 1.38. This implies that more mutual funds had above average returns.

**Table 5: Descriptive Statistics for Portfolio Returns**

Portfolio Returns	N	Max.	Min.	Mean	SD	KU	SK
	57	-12.91	2.58	-2.29	2.999	-1.050	1.381

Note: Max. is maximum and Min. is minimum.

Source: Author, 2020

### 3.3 Correlation Analysis

Pearson correlation was used to determine the relationship between portfolio return and Portfolio management strategies, management experience, fund age, size, risk. Table 6 shows there is a positive relation between portfolio return and passive, value strategies and risk which is statistically significant (P values<.05). Active and Growth strategies have a positive relationship with portfolio return which is statistically significant (P values<.05). Management Experience and fund size have a positive relationship with portfolio return which is not significant, while fund age has a negative relationship with portfolio return, which is also not significant p values>.05.

**Table 6: Correlations between Portfolio return Determinants and Portfolio Return**

	Portfolio Return	Active Strategy	Passive Strategy	Value Strategy	Growth Strategy	Mgt Exp	Fund Age	Fund Size	Risk
Portfolio Return	1	-0.564 P=0.000	0.437 P=0.001	0.353 P=0.007	-0.465 P=0.000	0.014 P=0.914	-0.245 P=0.065	0.080 P=0.552	0.279 P=0.035
Active Strategy		1	-0.442 P=0.001	-0.431 P=0.001	0.182 P=0.175	0.063 P=0.641	0.136 P=0.314	-0.130 P=0.335	-0.228 P=0.088
Passive Strategy			1	0.294 P=0.027	-0.31 P=0.019	-0.019 P=0.891	-0.058 P=0.666	-0.155 P=0.250	-0.088 P=0.513
Value Strategy				1	-0.285 P=0.032	-0.195 P=0.146	0.095 P=0.482	0.275 P=0.038	0.214 P=0.110
Growth Strategy					1	0.012 P=0.927	0.177 P=0.189	-0.081 P=0.550	-0.241 P=0.071
Mgt Exp						1	-0.099 P=0.461	0.002 P=0.988	-0.148 P=0.273
Fund Age							1	0.079 P=0.561	-0.228 P=0.089
Fund Size								1	0.210 P=0.117
Risk									1

Note: Where mgt is management

Source: Author, 2020

### 3.4 Diagnostic Tests

Autocorrelation was tested using Durbin Watson test and the result was 2.487, this indicates that there is no autocorrelation. Field (2009) suggests that values less than 1 or more than 3 are indicates existence of autocorrelation.

Variance Inflation Factor (VIF) was used to test for multicollinearity between the independent variable, Table 7 below, displays the results.

**Table 7: Multicollinearity test**

Model	Collinearity Statistics	
	Tolerance	VIF
Active Strategy	0.643	1.555
Passive Strategy	0.637	1.570
Growth Strategy	0.656	1.525
Value Strategy	0.782	1.278
Risk	0.927	1.079
Management Experience	0.857	1.167
Fund Age	0.827	1.210
Fund Size	0.762	1.312

Source: Author, 2020

VIF values of less than 3 shows nonexistence of multicollinearity between the independent variables. As per Table 7, all the independent variables have a VIF of less than three thus indicating no presence of multicollinearity.

### 3.5 Regression Analysis

The model summary was determined as shown.

**Table 8: Model Summary**

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.705 <sup>a</sup>	0.497	0.414	2.29669
a. Predictors: (Constant), Size, Risk, Passive Strategy, Growth Strategy, Management Experience, Fund Age, Active Strategy, Value Strategy b. Dependent Variable: Portfolio Return				

The results shown in Table 8 indicate an R value of 70.5% which means that the dependent variable and the predictor variables have a strong relationship. The adjusted R square shows that portfolio management strategies, fund size, fund age and Management experience can explain 41.4% of the variations of Portfolio return, while the other 58.6% variations are brought by other variables not factored in the model.

### 3.5.1 ANOVA

**Table 9: ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	250.591	8	31.324	5.938	.000 <sup>b</sup>
Residual	253.189	48	5.275		
Total	503.780	56			

a. Predictors: (Constant), Size, Risk, Passive Strategy, Growth Strategy, Management Experience, Fund Age, Active Strategy, Value Strategy  
b. Dependent Variable: Portfolio Return

The results as per Table 9 show that the multiple regression model is statistically significant at  $F=5.938$ ,  $p\text{-value}<.05$ . It indicates that portfolio management strategies and the control variables (fund size, fund age, risk and management experience) can reliably predict portfolio returns at a 5% significance level.

### 3.5.2 Regression coefficient

**Table 10 Regression Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta	Std. Error	Beta		
Constant	0.588	3.393		0.173	0.863
Active Strategy	-1.282	0.437	-0.374	-2.934	0.005
Passive Strategy	0.642	0.476	0.173	1.348	0.004
Value Strategy	0.156	0.338	0.058	0.461	0.047
Growth Strategy	-0.752	0.310	-0.281	-2.429	0.019
Risk	26.976	28.171	0.112	0.958	0.043
Management Exp.	0.158	0.272	0.062	0.582	0.563
Fund Age	-0.281	0.285	-0.109	-0.986	0.329
Fund Size	0.007	0.174	0.005	0.040	0.968

As shown in Table 10, the analytical model was derived as shown below.

$$Y=0.588-1.282X_1+0.642X_2+0.156X_3-0.752X_4+0.007X_5-0.281X_6+0.158X_7+26.976X_8 \quad (2)$$

The results indicate that Active strategy ( $\beta=-1.282$ ,  $p\text{ value}<.05$ ) and Growth Strategy ( $\beta=-0.752$ ,  $p\text{-value}<.05$ ), had a negative relationship with portfolio returns which was statistically significant. Passive Strategy ( $\beta=0.642$ ,  $p\text{-value}<.05$ ) and Value strategy ( $\beta=0.156$ ,  $p\text{-value}<.05$ ) had a positive relationship which was statistically significant with portfolio returns. In terms of control variables, management experience and fund size have a positive relationship with portfolio returns which was not statistically significant because  $p\text{-values}>0.05$ . Risk has a



positive relationship with portfolio return which is significant  $p\text{-value} < 0.05$ . Fund age has a negative relationship with portfolio returns which was not statistically significant because  $p\text{-value} > 0.05$ .

### **3.6 Discussions of Findings**

The objective of the study was to evaluate the relationship between portfolio returns of mutual funds in Kenya and portfolio management strategies. The results depicted that portfolio management strategies and the control variables (risk, management experience, fund age and fund size) reliably predict portfolio returns. Active and growth strategies are negatively and significantly related with portfolio returns. However, passive and value strategies showed a positive and significant relationship with portfolio returns. Similar results were obtained by (Kirumba 2012) where it was concluded that passive approach has a favorable and important relationship to CIS success in assessing the impact of CIS's investment strategy on financial results in Kenya. In terms of control variables, fund size depicted a positive but insignificant relationship with portfolio returns. Contrary results were obtained by (Osano 2013) where a study on the effect of investment strategies on financial performance of mutual funds in Kenya found that fund size had a statistically significant and positive relationship with portfolio performance. The study evidenced that risk and portfolio returns had a positive and significant relationship. Similar results were obtained by (Amunga 2015), where a unit increase in risk increased the portfolio returns.

## **4. Conclusion and Recommendations**

### **4.1 Conclusion**

The study therefore concludes that portfolio management strategies have impact on portfolio returns of mutual funds in Kenya. The most employed strategy is active strategy, but mutual funds that used active strategy earned negative returns. This implies that although active strategy is preferred the costs are high and they erode any returns gained causing negative returns. The mutual funds that employed passive and value strategy had positive returns, although value strategy been the least used strategy by mutual funds in Kenya. Mutual funds can employ passive and value strategies because they attract less costs and thus, they able to earn higher returns than active and growth managed funds.

Mutual funds that retained managers for a longer tenure produced positive results, this is because fund managers that have gained experience are knowledgeable of the market and have a bit monopoly of information and thus able to utilize this to create portfolios that generate positive returns. While funds that have large assets under management also produced positive results, due to their large size they can gain competitive advantage, leading to high returns. The funds that invested in risky assets had high positive returns because assets that attract high risk normally generate high returns.

Finally, the study determined portfolio management strategies influences portfolio

returns of mutual of funds, considering fund characteristics which include Risk, fund size, fund age and management experience.

#### **4.2 Recommendations**

Mutual funds should use passive and value strategies as they produce positive results, and this is associated with the low cost they incur while utilizing these strategies. Active and growth strategies earn negative returns; the study recommends fund managers that use these strategies to reduce the costs incurred to increase the returns.

Large mutual funds can utilize of economies of scale and thus maximize resource in achieving of positive results. This means that small funds can utilize mergers and acquisitions to increase their assets under management and take advantage of economies of scale to gain a competitive advantage and increase their returns.

The mutual funds should retain their managers for longer periods, because the managers can utilize their experience in attaining positive high portfolio returns. Mutual fund managers should also consider investing in risky assets, because high risk investments produce high returns.

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