Be Wary Investors: Foremost Factors in Asset Performance in East Africa: A Case of Collective Investment Schemes in Kenya

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Abstract

Alternative investment schemes are one of financial intermediaries through which funds are pooled together for the purpose of investment in various financial assets which are normally managed by professional managers. One such avenue in Kenya is investing through a unit trust fund. It is therefore important for an investor utilizing one of these managers to evaluate how well the fund has done relative to other funds and that of the benchmark. However, these performances were affected by numerous factors. It was on the above footing that the research is focused on evaluating the importance of key factors that affect its performance. The research employed descriptive research design mainly cross sectional and longitudinal research to achieve the objectives. The target population was all the eleven unit trust funds in Kenya. The study used both primary and secondary data. As a source of primary data, structured questionnaires and scheduled interview were used. The key factors were analyzed using factor analysis and multiple regressions to establish the importance of these factors in determining funds' performance. The finding was that the factors that affect performance of funds in Kenya were classified into five categories namely foreign investment participation, online trading, experience, age and equity risk. The main factors affecting equity funds performance were experience, age and online trading only while none of these factors were significant in influencing the blended funds' performance. The prospective investors must therefore be mindful about these factors while weighing their investment proposals.

Keywords

unit trust, equity funds, blended funds

1. Introduction

Commonly, good returns are central to every investment made. This can only be achieved if Companies employ proficient finance managers who can maximize shareholders' value by investing idle cash in gainful ventures which could be costly for individual investors if they invest on their own as correctly stated by Johnstone and Carnes (2010) who found that several potential problems may arise for individual investors in their pursuit to invest, namely; limited knowledge of stock and bonds, limited amount of investable funds making the investor to purchase few issues. Again, this requires knowledge

as each subsequent investment may require revaluations of holding to ensure an appropriate mix. In order to counter such problems, an investment company offers viable solutions.

One such solution is to invest in alternative investment which included such products as unit trust. Individual investors seeking liquidity, portfolio diversification and investment expertise are therefore increasingly choosing unit trust funds as their investment vehicle. However, these investors differ in their preferences based on their risk threshold, liquidity needs and their needs to comply with various regulatory bodies.

In order to attract more investors, professional fund managers should be able to earn above average returns through successful securities analysis. However, there is a challenge to pick mispriced securities into the portfolio in order to earn excess return for the investors. The excess return is earned when the individual portfolio has higher return than that of the aggregate market which acts as a benchmark. However, such returns are affected by numerous factors as ability of market timing, performance persistence, managerial skills, marketability, liquidity, time horizon, risk, global issues, populations and fund expenses.

The researches of these factors on performance focused on individual factors than in totality. Sondhi (2006) on market timing; Ruckman (2003) on expense ratio; Ramasamy and Yeung (2003) on management style and tenure; Grinblatt and Titman (1993) on time horizon, risk and investment policies pursued by fund managers; Huhman and Bhattacharyya (2005) on advertisement and Strench (2008) and Smith (2006) on Security Exchange Commission (SEC) regulations and reform initiative respectively. Again, each of the factors identified will change the magnitude of the returns differently. However, it was not known which of these factors are more important than others in affecting the fund performance.

1.1 Literature Review

Scores of empirical evidence exists on the effect of individual factors on mutual funds' performance. Droms and Walker (2001) examined the long-run relationship between risk-adjusted performance of equity mutual funds and asset size, expense ratios, portfolio turnover, and load/no-load status. Their database consists of investment results of 151 US equity Mutual funds in continual operation over the 20-year period from 1971 to 1990. They found that investment performance was not related to asset size, turnover rate, or load/no-load status, and higher expenses are associated with higher returns.

Indro, Jiang, Hu and Lee (1999) looked at the effects of fund size (net assets under management) on performance. According to them, mutual funds must attain a minimum fund size in order to achieve sufficient returns to justify their costs of acquiring and trading on information. They used a sample of 683 non-indexed U.S. equity funds over the 1993-1995 periods, and found that 20 percent of the mutual funds were smaller than the breakeven-cost fund size. They also found that 10 percent of the largest funds over invested in information acquisition and trading. In addition, they found that value funds and blend funds have more to gain than growth funds from these information activities. Further, they found that the likelihood that a fund is style consistent depends on its investment style. That is, value funds were more style consistent than growth funds; blend funds were the least style consistent. Furthermore, the

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proportion of style-inconsistent funds was relatively smaller for funds in size.

Chevalier et al. (1999) examined whether mutual fund performance is related to characteristics of fund managers that may indicate ability, knowledge, or effort. In particular, their study was on the relationship between performance and the manager's age, the average composite SAT score at the manager's undergraduate institution, and whether the manager has an MBA. Although the raw data suggest striking return differences between managers with different characteristics, most of these were explained by behavioral differences between managers and by selection biases. After adjusting for these, some performance differences remain. In particular, managers who attended higher-SAT undergraduate institutions have systematically higher risk-adjusted excess returns.

Similar findings were also made in Gottesman and Morey (2006) that mean GMAT score of fund manager during their MBA programme is positively related to fund performance. Managers with MBAs from highly ranked programmes display superior performance to both managers without MBA degrees and those holding MBAs from unranked programmes. This study also found that other education variables, for example, whether the manager held a CFA designation or a non-MBA masters-level graduate degree or PhD, were generally not related to mutual fund performance.

These findings were consistent with those of Philpot and Peterson (2006) on managers' characteristics and real estate mutual fund returns, risk and fees. They sampled a total of 63 real estate mutual funds over the period 2001-2003 and regressing, alternatively, risk-adjusted return, market risk and management fees on a series of fund variables and manager characteristics. These included the manager's tenure, whether the fund manager holds a professional certification, whether the manager has specific real estate experience, and whether the fund is team-managed. Evidence was that team-managed funds have lower risk-adjusted returns than solo-managed funds. Managers with longer tenure tend to pursue higher market risk levels, and there is no relation between manager characteristics and management fees.

Jain and Shuang (2000) examined a sample of 294 mutual funds that were advertised in Barron's or Money magazine. The pre-advertisement performance of these funds is significantly higher than that of the benchmarks. They test whether the sponsors select funds to signal continued superior performance or they use the past superior performance to attract more money into the funds. Their finding was that there is no superior performance in the post-advertisement period. Thus, advertised funds attract significantly more money in comparison with a group of control funds.

Davis (2001) analyzed the relationship between equity mutual fund performance and manager style and found that none of the styles earned positive abnormal returns during the 1965-1998 sample period, and value funds realized negative abnormal returns of about 2.75 percentage points a year.

Dennis (2003) studied the liquidity changes of mutual funds. His findings were that there is improved liquidity for small trades and a wider effective bid/ask spread. However, the managers have the incentive to create demand for their shares insofar as to increase the total capital under management.

Chen, Hong, Huang and Kubik (2004) investigated the effect of scale on performance in the active money management industry and found that fund returns, both before and after fees and expenses,

decline with lagged fund size, even after accounting for various performance benchmarks.

Bauer, Koedijk and Otten (2005) found no evidence of a statistically significant difference in returns between ethical and conventional mutual fund returns after controlling for common factors such as size, book-to-market and momentum. Second, ethical mutual funds display very different investment styles to conventional funds. For instance, ethical funds are typically less exposed to market return volatility than conventional funds.

In establishing appropriate measures of managerial skills and performance, Merikas, Merikas and Sorros (2005) used 78 active institutional managers with quarterly returns in Greek mutual funds from the period 1994 to 2001. Their finding was that the managerial performance as indicated by this information ratios is determined by investment style.

Pinnuck (2005) used a database of monthly portfolio holdings of Australian mutual funds to measure the monthly abnormal returns realized by mutual funds due to earnings information across all months in a typical year. He found the evidence of funds abnormal returns due to earnings news in both the pre-announcement period and over the announcement window. This suggested that earnings information explains approximately 25% of a mutual funds average monthly abnormal performance.

In response to the mutual fund scandals first uncovered in 2003, a broad range of reform initiatives has been undertaken resulting in significant changes in the manner in which funds, fund directors and their service providers conduct business. The SEC has enacted a number of rules, conducted studies and engaged in extensive inspection and enforcement activities. The NASD has taken action in the sales practice and revenue sharing areas (smith, 2006). This shows how the government of a country can influence mutual funds' performance.

Azeez and Yonezawa (2006) found that four different risk factors significantly influence expected returns during each of the sample periods including money supply, inflation, exchange rate and industrial production. Although, the number of priced factors and the signs of risk premiums are stable across each period, the absolute risk premiums increase during the bubble and post-bubble periods compared to the pre-bubble period. Furthermore, the variances of macroeconomic factors remain unchanged during the bubble period. The higher risk premiums during the bubble period should be due to the increased risk of a bubble-induced crash.

Abugri (2006) examined whether dynamics in key macroeconomic indicators such as exchange rates, interest rates, industrial production and money supply in four Latin American countries significantly explain market returns. Using a six-variable vector autoregressive model, this investigation found that the global factors consistently and significantly explain returns for all markets.

Closely related to the current research was that of Ramasamy and Yeung (2003) who evaluated mutual funds in an emerging market by looking at factors that matter to financial advisors. They used a sample of 75 financial advisors to identify the attributes, which they consider relatively important in a mutual fund. The research employed conjoint analysis and found that past performance, the size of funds and cost of transactions to be most important factors in mutual funds.

Also Wu, C. R, Chang and Wu, C. S (2008) carried out a research in a Taiwan stock exchange on a framework of assessable mutual funds' performance by evaluating mutual funds' performance in both qualitative and quantitative criteria. They used both analytical hierarchy process and Delphi method in designing an assessment method for evaluating mutual fund performance. Their finding was that the most important criteria of mutual funds' performance should be mutual funds style, followed by market investment environment.

As Kenya is a developing economy, it has unique characteristics different from those of developed nations. This study therefore explored on the evaluation of the factors that affects the performance of equity and blended unit trust in Kenya in order to establish whether the findings in developed nations can be replicated. Again, it reviewed the effect of all the factors in totality to fund performance in Kenya. For this reason, the research employed factor analysis.

2. Methods

In order to evaluate the extent of importance of factors affecting fund performance from managerial point of view, factor analysis was carried out using SPSS version 16 tool. The factors that are most useful in determining fund performance according to management opinions were identified using rotated component matrix. The identified factors were then run using a multiple regression of the form

$$p = \beta_0 + \beta_1 F_1 + \beta_2 F_2 + \beta_3 F_3 + \beta_4 F_4 + \beta_5 F_5 + \cdots \cdots B_n F_n \qquad (1)$$

P is the performance as measured using Jensen alpha

Where: F_1, $F_2 \cdots \cdots \cdots \cdots F_n$ are the individual factors identified using rotated component matrix,

$\beta 0$ is the fund performance not affected by any factor,

β_1 up to β_n are the sensitivity of individual factors to performance p,

The significance of each β's was tested to find the significance of each factor in influencing fund performance.

3. Result

Much of the studies on unit trust funds' performance focused mainly on fund performance persistence and market timing skills of fund managers. Only few empirical researches expended their effort on factors other than market timing and performance persistence that affects fund performance. In order to find the extent of importance of these other factors, the research employed factor analysis. For this reason, likert type questionnaires with 20 possible factors were administered to fund managers. Principal components extraction method was used to reduce the number of factors by use of linear combinations of variables. This process comes up with few components or factors that account for almost all the variations and were used to replace the original factors. By use of scree plot as shown in Figure 1 below and elbow rule, the factor analysis reduced the number of factors to five components.
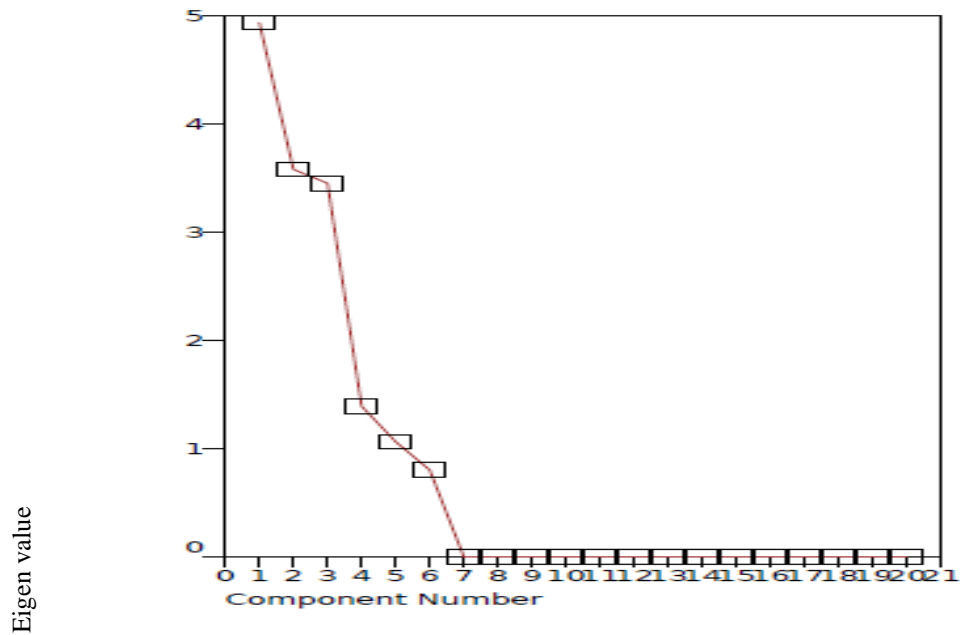
Figure 1. Factor Analysis Scree Plot

However, since the first five components jointly explains around 95% of the variance, so are enough to perform multiple regressions since including sixth factor does not change the regression result. These factors were as shown in Table 1 below:

Table 1. Total Variance Explained

Total Variance Explained									
Initial Eigen values			*Extraction Sums of Squared Loadings*			*Rotation Sums of Squared Loadings*			
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.94	32.42	32.42	4.94	32.42	32.42	4.03	26.50	26.50
2	3.58	23.51	55.94	3.58	23.51	55.94	2.81	18.42	44.93
3	3.45	22.67	78.61	3.45	22.67	78.61	3.10	20.34	65.27
4	1.39	9.14	87.75	1.39	9.14	87.75	2.64	17.32	82.59
5	1.06	6.98	94.73	1.06	6.98	94.73	1.26	8.27	90.86
6	.80	5.27	100.00						
7	.00	.00	100.00						
8	.00	.00	100.00						
9	.00	.00	100.00						
10	.00	.00	100.00						
11	.00	.00	100.00						

12	.00	.00	100.00
13	.00	.00	100.00
14	.00	.00	100.00
15	.00	.00	100.00
16	.00	.00	100.00
17	.00	.00	100.00
18	.00	.00	100.00
19	.00	.00	100.00
20	.00	.00	100.00

Source: Research data.

The Eigen value associated with each factor as shown in Table 1 above represent the variance explained by that particular component, that is, factor one explains 32.42% of the total variance while factor two explain 23.51%, factor three only 22.67% factor four only 9.141% and factor five only 6.98%.
Then general meaning of the five components were inferred from component rotation matrix as shown in Table 2 below:

Table 2. Component Rotation Matrix

	Component				
On a scale of 1-5, how do you compare the importance of the following factors in determining performance?	1	2	3	4	5
Size of mutual funds	-.12	-.15	.61	-.24	.32
Age of mutual funds	-.73	-.05	.19	.65	.26
Affiliations of mutual funds	-.35	.87	.23	.42	.15
Variety of products in the mutual funds	.97	.22	.01	-.03	-.10
Age qualifications and experience of funds managers	-.39	.18	.22	1.01	-.12
Fund managers tenure	.02	-.19	1.04	.51	.11
Funds expenses	-.45	-.43	.20	-.23	.00
Equity securities and related risks	.28	-.29	.30	-.36	-.83
Foreign investment risk	.66	-.25	.05	-.20	-.02
Tax risk	.22	.07	.64	.12	-.05
Inflation risk	.30	.33	-.65	-.21	.49
Legal environment risk	.59	.46	.22	.13	.20
Global issues	.43	.23	.53	-.10	.08
IT trading	.13	.97	-.24	-.06	.06
Interest rates	.29	-.03	-.01	-.02	.16

Exchange rates	.69	-.08	.41	-.26	.06
Money supply	.56	.04	.05	-.09	-.05
Investors risk profile	.00	.00	.00	.00	.00
Investor education	.00	.00	.00	.00	.00
Market capitalization	-.02	-.49	.00	-.56	-.13

Patterns are clearly visible from the above-rotated matrix. The first factor is heavily loaded with age of mutual fund, variety of product, foreign investment risk, legal environment risk, exchange rates and money supply and hence this factor could be named as foreign investment participation. The second factor is loaded heavily with affiliation of funds and online trading and hence named influence of online trading.

The third factor is heavily loaded with the size of fund, manager's tenure, tax risk, inflation and global issues hence termed as experience. The fourth factor is heavily loaded to age of mutual fund, size of mutual fund, fund manager's tenure and market capitalization and simply termed as age. Finally, the fifth factor is heavily loaded equity securities and related risk and simply termed as equity risk.

The above five factors were used as operational representative to calculate multiple regression. In order to test the normality of data distribution for all the factors, Lilliefors (Kolmogorov-Smirnov) test were carried out whose results were as shown in Table 3 below:

Table 3. Normality Test for the Factor

	Statistic	*P* value
Factor 1	0.185	0.662
Factor 2	0.226	0.343
Factor 3	0.198	0.553
Factor 4	0.214	0.427
Factor 5	0.407	0.000

Source: Research Data.

All the factors in Table 3 above have a *p* value of greater than 0.05 implying that they are normally distributed and fit for regression test except factor 5 which is not normal as its *p* value is below 0.05 and hence removed from the regression result. The regression result for the factors influencing equity performance were as shown in Table 4 below:

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Table 4. Significances of Factor in Influence Equity Fund Performance

	Estimate	Standard error	t value	Pr(>|t|)
Intercept (β_0)	-0.01	-0.010	-1.475	0.278
Factor 1 (β_1)	0.007	0.002	3.741	0.064
Factor 2 (β_2)	0.000	0.000	-0.343	0.764
Factor 3 (β_3)	-0.011	0.002	-5.481	0.031
Factor 4 (β_4)	0.007	0.001	5.341	0.033

Source: Research Data.

The above Table 4 gives the intercept and coefficient of factors 1, 2, 3 and 4 of the multiple regressions. The model can explain 95.15 % of the variation observed in data as shown by R2 of 0.9515. At a *p* value of 0.05, the estimated value of the intercept and coefficients for all the factors were not significant as all are above the *p* values except factor 3 and 4 which had a *p* value of 0.031 and 0.033 below a *p* value of less than 0.05. At 10% level, online trading also proved to be significant. This implies that the main factors affecting equity funds were experience, age and online trading. The significance of factors affecting the blended funds was also as shown in Table 5 below:

Table 5. Significances of Factors in Influencing Blended Fund Performance

	Estimate	Standard error	t value	Pr(>|t|)
Intercept (β_0)	-0.17	0.278	-0.614	0.601
Factor 1 (β_1)	0.003	0.078	0.044	0.968
Factor 2 (β_2)	0.001	0.024	0.696	0.557
Factor 3 (β_3)	0.002	0.08	0.175	0.877
Factor 4 (β_4)	0.014	0.052	0.247	0.827

Source: Research Data.

As can be seen from the Table 5 above, it is evident that all the factors have a *p* value greater than 0.05 and 0.1 implying that they are not significant in influencing the blended funds' performance.

4. Conclusion

The factors that affect fund performance in Kenya were classified into five categories namely foreign investment participation, experience, age, funds liquidity and equity risk. The main factors affecting equity funds performance were experience, age and online trading only while none of these factors were significant in influencing the blended funds' performance. The investors should therefore be keen on these factors while deliberating to invest on unit trust funds in Kenya.

However, Investors must be mindful of the following caveats while weighing up the empirical evidence:

First, the performance measures for the funds in Kenya may have been mainly affected by political factors. The choice of the period fell in 2007 when the country had a general elections followed by post-election violence in 2008. It also coincided with 2007/2008 financial crisis which was originated by US subprime mortgages and its contagion effect. This may have not given the true performance of the funds as compared to findings by others in other parts of the world.

Secondly, whether a particular fund outperformed the market or not could be attributed to a mere chance. This is because the market is assumed to be efficient implying that all the fund managers can access the same set of information. However, it may be argued that the fund size is likely to be the main factor in influencing the performance due to reduction in cost per unit of the fund due to economies of scale.

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