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EFFECTS OF OPERATING EXPENSES ON PERFORMANCE OF UNIT TRUSTS IN KENYA

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Abstract

Increasing the investors wealth is the main objective of any rational investor. This objective is achieved when there is increase in share prices. The performance of unit trusts in Kenya however, has been poor compared to the counterparts in the rest of the world. The poor performance is a discouragement to individual and corporate investors in addition to affecting the realisation of financial stability according to the Kenya vision 2030. Empirical literature from developed and emerging markets posits that the operating expense of a fund explain the unit trust funds performance. There is limited empirical literature in Kenya explaining the effects of operating expenses on the performance of unit trust funds. The study therefore investigated the effects of operating expenses of a fund on the performance of unit trust funds in Kenya. The specific objective of the study was to determine the effect of operating expenses on performance of unit trust funds in Kenya. Positivism philosophy and explanatory research design and were adopted in the study. The study established that, operating expenses have a significant negative effect on performance in equity fund and money market fund and a significant positive effect on performance in bond fund and balanced fund. The study concluded that increase in operating expenses decreases performance. The recommendations of the study is that the regulator should come up with a threshold for operating expenses within which unit trusts can charge based on various funds.

Keywords: *operating expense, unit trust funds, unit trust performance*

1. INTRODUCTION

The desire for earnings in the future backs the motivation to invest and that the earning anticipated should be able to meet future cash needs [93]. Further, investors' motivation in investing anchors on the desire to increasing wealth and growing over time the initial investment. Investment returns compensate for the investment period, the inflation rate and the repayment uncertainty [125].

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An investment in unit trusts is an option for investors just like investing in shares and is prevalent amongst stockholders universally since it grants them a chance to receive earnings/proceeds [52]. Unit trusts offer investors a chance of earning yearly proceeds in the form of bonuses/dividends. It also serves as a basis for the long term and short-term build-up of wealth resembling a savings account [147],[4]. The objective of making investments in unit trust funds is earning dividend income or obtaining capital gains. Capital gains are realized when there is an increase in the price of a unit trust fund, or returns of a unit trust fund are positive during the holding period [52].

Empirical literature on performance of unit trust funds in developing, emerging and developed capital markets presents mixed results. Some funds in these markets reported underperformance while others reported over performance. [14], [120] and [148] reported weak performance or underperformance. [4], [60] and, [133] reported positive performance or outperformance of unit trust funds. This therefore shows that studies do not give a conclusive direction on the performance of unit trusts and investors are left in muddle. For enhanced decision making, investors should be well versed with performance of individual unit trusts as well as the fund characteristics that influence performance of the unit trusts [90]. This study assessed the effect of operating expenses on performance of unit trust funds in Kenya.

Overall operating expenses comprise of annual administration charges to the fund administrators as well as different costs for trustee, legal, custody, audit and depository services. While high annual fees for management may make funds operating business more viable, they too dissuade investments, especially when a comparison is made with other contending investment options [152]. Different scholars have varying opinions on the performance of unit trust funds and operating expenses. High costs have the effect of lowering the performance of a fund [26]. This argument is also supported by [50], [34] and [114]. On the contrary, [28], [36] and [57]. Support a position of no connection between the performance of unit trust funds and operating expenses.

Generally, when a fund total costs as measured by the total annual operating expenses is high, investor returns become correspondingly lower [152]. However, high operating expenses may result to high profits, and low operating costs may lead to lower performance since high expenditures are assumed to be consistent with the large portfolio risk hence arising to higher returns [68], 1989; [38]; [89]. [155] and [117], contradict this by arguing that mutual fund administrators are incapable of increasing portfolio returns through active management expenditure, i.e., activities of trading and analysis, market prediction efficiency etc, hence higher operating expenses results to lower yields.

Based on an asset-weighted basis, expense ratios incurred by fund investors, on average have dropped substantially over the years. During the year 2000, investors in equity fund had a per cent expense ratio average of 0.99; that is, 99 cents for every $100 invested was the expense. By the year 2017, the average expense ratio had fallen to 0.59 per cent, a drop of 40 per cent. Ordinary hybrid mutual fund ratio of expense reduced from 0.89 per cent to 0.70 per cent in years 2000 to 2017, representing a reduction of 21 per cent. Additionally, bond mutual fund ratio of expense had fallen from 0.76 per cent to 0.48 per cent between the year 2000 and 2017, a 37 per cent decline [67]. Fund operating expense is a paramount component of any fund; on one hand, it provides revenue to the management of the funds. In addition, on the other hand, it deters investments by investors. Based on this background, the researcher seeks to establish operating expense effect on the performance of unit trusts in Kenya.

large funds present a wide spread for fixed expenses, more resources for research, better opportunities of investment that are not available to smaller funds in addition to negotiating improved ranges due to more prominent positions and trading capacities [16]. However, large funds experience particular difficulties in administration and persistence performance [10]; [58]. Funds with massive amounts experience deteriorating performance since investment avenues diminish [10]. Low operating expenses funds and small funds outdo in performance their corresponding in the category of bond fund [155]. Smaller funds focus on a small number of investment options, but when they become large, administrators need to continue finding better opportunities for investment; in effect, diseconomies of scale end up diluting the managerial skills [10].

Performance of unit trust fund is the overall evaluation of a fund based on a predetermined procedure and gauges its wellbeing in the market. Performance usually indicates the returns of an investment and provides confidence for further investments into the market by new investors or withdrawal from the market by existing investors [115]. Typically, investors select funds based on partial performance, although sensitivity may be due to variances of past performance. Many studies suggest that conventional investors react by directing more cash to better performing funds and not the same way to inadequately performing funds [1]. Performance in the market solely determines the survival of the fund, that is, a persistent increase in capital gains for growth funds and constant returns for value funds. [51]. [87] asserts evaluation of unit trust funds performance in terms of capital growth, periodical returns in the form of dividends, interest received, capital gains and Net Asset Value.

In Kenya, like other countries, many investors are dependent on unit trust funds as vehicles of investment [87]. The unit trust market is greatly unexploited in Kenya and research on their performance is significantly deficient [51]. Assortment measures of performance have been used all through the literature to assess the performance of the funds. The commonly used measures are; Jensen Alpha, Treynor ratio and Sharpe ratio, (Ali, 2012; [4]; [129]. Non-risk-adjusted measures such as fund return formulas, portfolio return formulas and Lower Partial Moment Capital Asset Pricing Model have also been used [4]; [129]. This study measured the performance of unit trust funds using Jensen Alpha. The ratio is the most used across literature in assessing risk-adjusted returns of unit trusts.

Examination on some of the unit trust funds shows that there is a trend of deteriorating performance. For example, Old Mutual equity fund generated a loss in 2015 and 2016 of Kenya shillings (Kshs) 74,982,000 and 227,225,000, respectively. Equity fund had a decrease in profits in the year 2016 of 16.3 per cent from the previous year 2015. The balanced fund had a loss of Kshs 27,552,000 in 2015 [111]. The Britam, equity fund had deteriorating profits from 2013 culminating into losses of Kshs 140,288,000 and 386,942,000 in the years 2016 and 2015 respectively [18]. Cooperative insurance company funds, among others, exhibit a similar trend which indicates a gap for investigation.

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In developed markets, for example, United States of America (USA), the growth of mutual fund has been noteworthy over the past several years with the global Gross Domestic Product (GDP) growing to 36 per cent by the year 2014 [67]. [118], asserts that the USA market established total cumulative capital inflows of approximately USD 10 trillion over the period 2000 - 2014. The largest mutual fund industry in the world with over USD17.8 trillion in assets and accounting for more than half of the $33.4 trillion of assets value is USA [66]; [46].

Africa, when combined with Asia pacific, accounts for 3 per cent of total world assets and is among the lowest in the world [66]. The unit trust industry in Kenya accounts for 0.80 per cent of Kenyans GDP [152]. In addition, the total assets amount to USD 558 million [25]. Since its inception, there are a total of 20 registered unit trusts firms [25]. Central to the stock market performance of any country is the listed firms' financial performance in the economy at large [86]. Nairobi Securities Exchange (NSE) listed firms performance has been meagre [106]. [88] posits that, some of the listed firms at the NSE are not only in unhealthy financial position but in addition, they have suffered financial decline and Capital Markets Authority (CMA) has delisted them. The fall, in return, affects the performance of unit trusts since NSE provides an investment platform for unit trust funds.

According to the Republic of Kenya, (2007), the vision 2030 financial services aims to raise savings and investment rates from 17 per cent to 30 per cent of Kenya's GDP and raise stock market capitalization from 50 per cent to 90 per cent of GDP. However, nine years later, the unit trust industry contributes 0.80 per cent of the Kenyans GDP [152]. The unit trusts in Kenya is mainly dominated by four core funds which include; money market, equity, bond and balanced funds [25]

The unit trust markets in many countries are driving their economies. The Kenyan unit trust market on the other hand has continued to experience poor performance with some funds reporting a stream of losses from one year to another [110], [111], [17], [18], Cooperative insurance company, 2015, 2016). Weak performance trends of unit trusts in Kenya are a discouragement to individual and corporate investors in addition to hindering the realization of vision 2030. Kenya's unit trust industry contributes an equivalent of 0.80 per cent of the country's GDP [152].

Countries that started unit trusts the same time with Kenya in early 2000 have grown substantially in terms of the amount invested. Such countries include Morocco, whose total value is USD 26.65 billion, Peru with an overall net worth of over USD 6.1 billion and Turkey, valued at more than USD 16 billion. Kenya, on the other hand, has a total value of USD 275.3 million [152] and a value of USD 558 million in 2017 [25]. The Kenyan case shows low growth. This can be attributed to poor performance in the sector and is a concern to the country, investors and other stakeholders. In addition, it reflects lack of understanding of the market by the investors or the fund managers are not doing enough to woo investors [8]. The dismal performance also leads to loss of confidence and erosion of investors' wealth in the unit trust [93].

Discrepancies in findings on the same subject, in consequence, stirred the present study. The current study not only explored the direct effect of operating expenses on performance of unit trust funds using panel data for thirteen years but, also investigated the moderation effect of inflation on the relationship between operating expenses and performance of unit trusts in Kenya.

2. LITERATURE REVIEW AND METHODOLOGY

2.1. CONCEPTUAL FRAMEWORK

The framework defines the researcher's conceptualization and interactions concerning the study variables. The conceptual framework graphical representation for this study is as in Figure 2.1.

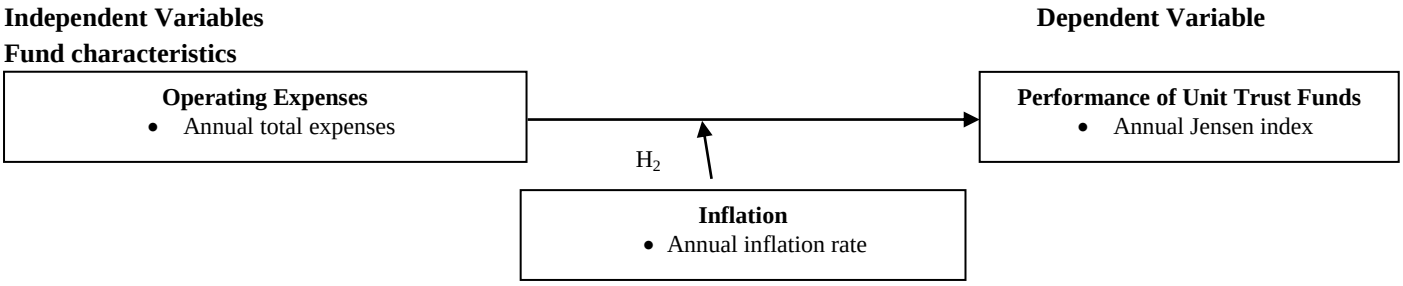

Figure 2.1 Conceptual Framework

Source: Researcher (2020)

2.2. Research Philosophy and Design

This research considers positivism philosophy to be the most appropriate because the study looks at the connection between operating expenses and performance of unit trusts in Kenya. A Non-experimental explanatory research design was adopted in this study. Explanatory research design establishes a causal association amongst variables [131]. It is a systematic inquiry wherein a researcher does not have direct control over the independent variables since their manifestations have already happened [127]. Explanatory design is ideal where a study endeavours to clarify how phenomena function by finding the fundamental elements that bring change and in which case there is no manipulation of the independent variable [74]. Non-experimental design is an orderly practical enquiry where there is no express authority over the explanatory variables by investigators since symptoms happened in the past [74].

2.3. Empirical Model

Analysis of the effects of operating expenses on the performance of unit trust funds employed a panel regression model since the data had both cross-sectional and time-series dimensions as put forward by [54]. Panel Data Analysis is more advantageous than time-series or cross-sectional

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alone since the researcher allowed to account for unobservable heterogeneity [103]. Equations 3.2a to 3.2d estimates the study variables for equity fund, money market fund, bond fund and balanced fund respectfully.

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \mu_i + u_{it}$ …… *(3.2a)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \mu_i + u_{it}$ …… *(3.2b)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \mu_i + u_{it}$ …… *(3.2c)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \mu_i + u_{it}$ …… *(3.2d)*

Where,

Fund Performance is the performance of each unit trust fund measured by Jensen Alpha model.

OE is the unit trust fund operating expense.

$\boldsymbol{\beta_0}$ is the constant term

$\boldsymbol{\beta_1}$ represents coefficients of the explanatory variables

i = represents firms (cross-sectional dimension) ranging from1 to 20

t = represents years (time series dimension) ranging from 2005 to 2017

μ_i = is Individual fund effect

u_{it} = Is idiosyncratic error term

2.3.1. Moderating Effect of Inflation on the Relationship between operating expense and Performance of Unit Trust Funds in Kenya.

The [145] test for the moderation effect of inflation on the relationship between fund characteristics and performance of unit trusts in Kenya was adopted in this research. The model proposes two main stages. First, inflation in a particular year is introduced in model 3.2a to 3.2d as a variable as shown in equation 3.3a to 3.3d for equity fund, money market fund, bond fund and balanced fund respectively below

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \mu_i + u_{it}$ … *(3.3a)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \mu_i + u_{it}$ … *(3.3b)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \mu_i + u_{it}$ … *(3.3c)*

Fund Performance $=\beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \mu_i + u_{it}$ … *(3.3d)*

Where IR_t in the inflation rate in year t.

Secondly, inflation is introduced as a moderator as shown in equation 3.4a to 3.4d for equity fund, money market fund, bond fund and balanced fund respectively below:

Fund Performance $= \beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \beta_3 [OE_{it} * InIR_t] + \mu_i + u_{it}$ …… *(3.4a)*

Fund Performance $= \beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \beta_3 [OE_{it} * InIR_t] + \mu_i + u_{it}$ …… *(3.4b)*

Fund Performance $= \beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \beta_3 [OE_{it} * InIR_t] + \mu_i + u_{it}$ …… *(3.4c)*

Fund Performance $= \beta_0 + \beta_1 OE_{it} + \beta_2 1nIR_t + \beta_3 [OE_{it} * InIR_t] + \mu_i + u_{it}$ …… *(3.4d)*

2.4. Target Population and data collection

The target population for this study was the 16 unit trusts in Kenya. These are the unit trusts that were registered by CMA by this period and data was available. This study adopted a census of all the 16 unit trusts and data was collected using a data extraction tool.

3. RESEARCH FINDINGS AND DISCUSSION

Table 4.1: Descriptive Statistics

Fund	Observation	Variables	Mean	Std. Dev.	Minimum	Maximum
Equity	99	performance	-15.9348	4.576758	-22.05	-4.28
		Operating Expense	6.723605	0.988355	3.109579	8.539001
		Inflation Rate	8.160109	3.233511	3.971667	16.23083
Money	107	performance	-23.69112	11.79204	-39.12	2.69
		Operating Expense	7.276687	0.7095546	5.189953	8.822979
		Inflation Rate	8.271214	3.293276	3.971667	16.23083

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	85	performance	-19.63447	4.804927	-27.1	-6.29
		Operating Expense	6.21221	0.6878334	4.277838	7.816175
Bond		Inflation Rate	8.091342	3.066169	3.971667	16.23083
	100	performance	-10.21065	10.98119	-37.92000	-1.229000
		Operating Expense	6.688298	0.7579331	4.964448	8.423958
Balanced		Inflation Rate	8.115689	3.124007	3.971667	16.23083

Source: Study data (2020)

As indicated in Table 4.1, The mean performance of equity fund is -15.93475 below what is predicted by CAPM with a standard deviation of 4.576758 and minimum and maximum values of -22.05000 and – 4.280000, respectively. The standard deviation indicates that the data is highly variable as depicted by minimum and maximum values since it includes both small and large unit trust funds over the period. The negative value of the Jensen alpha indicates that equity funds, on average, underperform the market. The negative values for minimum and maximum indicate that all equity funds were underperforming the market in the period of study. From the results, the mean operating expense for equity funds in each unit trust during the period of study is 6.723605. The standard deviation is 0.988355 indicating high variation among unit trusts operating equity fund as shown by the minimum and maximum values of 3.109579 and 8.539001, respectively. This variation is in line with the size of the fund. Table 4.1 further indicates that each unit trust firm operates an average equity fund of 8.201010.

On the money market fund, Table 4.1 The mean performance as -23.69112 below what is predicted by CAPM. The standard deviation is 11.79204, which shows data to be highly variable as depicted by minimum and maximum values of -39.12000 and 2.690000, respectively. The negative value of the Jensen alpha indicates that the money market fund, on average, is underperforming the market. The positive value indicates that some of the funds were over performing the market in the period of study. The results further show the mean operating expense for money market funds is 7.276687, with a standard deviation of 0.7095546, indicating a significant variation among money market funds mainly due to the size of the fund in each unit trust. The minimum and maximum values are consistent with the fund size meaning that small funds have less operating expense compared to large funds.

Furthermore, the summary statistics in Table 4.1 indicate that, on average, during the period of analysis, the rate of inflation was 8.271214 per cent. The standard deviation was 3.293276 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This situation is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

Also, Table 4.1 shows an observation of 85 funds with a mean performance of -19.63447 below what is predicted by CAPM on the bond fund. The standard deviation is 4.804927 showing that the performance is highly variable with minimum and maximum values of -27.10000 and -6.290000, respectively. The negative value of the Jensen alpha indicates that the bond fund, on average, underperforms the market. The negative values for minimum and maximum indicate that all bond funds were underperforming the market in the period of study. The average amount of operating expense, as shown in Table 4.1, is 6.21221 for any of the bond funds. The operating costs are highly variable among the bond funds, as demonstrated by a standard deviation of 0.6878334. The variation is accounted for by the minimum and maximum values of 4.277838 and 7.816175, respectively, which is in line with the fund size.

Furthermore, the summary statistics in Table 4.1 suggest that, on average, during the period of analysis, the rate of inflation was 8.091342 per cent. The standard deviation was 3.066169 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This scenario is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

The balanced fund on the other hand had 100 funds that were observed. As depicted by Table 4.1, it has a mean performance of -10.21065 below what is predicted by CAPM. The minimum and maximum values are -37.92000 and -1.229000, respectively. The negative value of the Jensen alpha indicates that the balanced fund has on average been underperforming the market. The negative values for minimum and maximum show that all balanced funds were underperforming the market in the period of study. The standard deviation of 10.98119 indicates a high variation in the performance of balanced funds within the period of study. From Table 4.1, balanced funds have a mean value on operating expense of 6.688298 with a standard deviation of 0.7579331, which indicates a high variation in line with the size of the fund. The minimum and maximum values are 4.964448 and 8.423958 respectively; showing small funds have smaller expenses. On fund size, Table 4.1 further indicates, on average, the fund size of the balanced fund to be 8.171414.

On the inflation rate, the summary statistics in Table 4.1 indicate that, on average, during the period of analysis, the inflation rate was 8.115689 per cent. The standard deviation was 3.124007 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This inflation rate is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

3.1. Hypothesis Testing

This section presents the study findings thematically based on the study objectives. It shows the effect of operating expenses, fund size, systematic risk and unsystematic risk on fund performance in Kenya. The model results were interpreted and discussed at a 95% significance level (α=0.05).

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Table 4.6: Effect of Fund Characteristics on Fund Performance

Fund	Variable	Coefficient	Std. Error	t-Statistic	Prob.
Equity	Constant	-1.41E+16	4.26E+16	-0.330191	0.7421
	Operating expense	-1.64E+09	5.22E+08	-3.147710	0.0023
Money market	Constant	51851601	14981681	3.461000	0.0008
	Operating expense	-0.790685	0.113326	-6.977072	0.0000
Bond	Constant	5020687.	4061819.	1.236069	0.2208
	Operating expense	0.637784	0.084647	7.534660	0.0000
Balanced	Constant	-3534459.	20990778	-0.168382	0.8667
	Operating expense	0.704129	0.205516	3.426143	0.0010

Source: Study Data (2020)

The p-values are less than the significance level of 0.05. Operating expenses have a significant negative relationship with performance in equity and money market funds but a significant positive relationship in bond and balanced funds.

3.2. Operating Expenses and Performance of Unit Trust Funds

The study objective sought to determine the effect of operating expenses on the performance of unit trust funds in Kenya. To establish this relationship, a null hypothesis (H_{01}) that operating expenses have no significant effect on the performance of unit trust funds in Kenya was tested. The estimates of model 3.2a to 3.2d for each category of the funds were considered. Table 4.6 indicates that the equity fund coefficient of operating expenses is -1.64E+09 with a p-value of 0.0023, which is less than the significance level of 0.05 and t statistic of -3.147710. Hence, the null hypothesis that operating expenses have no significant effect on performance of unit trust funds in Kenya was rejected on equity funds. Thus, an increase in operating expenses has a significant effect on performance of equity fund in Kenya.

In the money market fund, the coefficient of operating expenses is -0.790685 with a p-value of 0.0000 and a t- statistic of -6.977072. The p-value is less than 0.05; hence the null hypothesis that operating expenses has no statistically significant effect on performance of unit trust funds is rejected on money market fund in Kenya. On bond fund, the coefficient is 0.637784 with a p-value of 0.0010 and a t-statistic of 7.534660. Since the p-value is less than 0.05, the null hypothesis is rejected; hence operating expenses have a statistically significant effect on performance of bond fund in Kenya. The balanced fund, on the other hand, has a coefficient of 0.704129 and a corresponding p-value of 0.0000 and a t-statistic of 3.426143. The null hypothesis is rejected since the p-value is less than 0.05. Therefore operating expenses have a statistically significant effect on the performance of the balanced fund in Kenya.

These findings are inconsistent with empirical findings by [112], [95], [42],[109] that operating expenses have no effect on the performance of unit trust funds. The findings, however, agree with results by [60], [1], and [87], who argued that operating expenses affect the performance of unit trust funds. The coefficients of operating expenses in equity and money market funds are negative, implying that an increase in unit trust fund performance resulted from a reduction in operating expenses. However, the bond and balanced funds have a positive coefficient indicating that an increase in operating expenses led to increased performance of the unit trust funds.

3.2.1. Moderating Effect of Inflation on the Relationship between Operating Expenses and Performance of Unit Trust Funds

To test the study hypothesis that inflation does not have a moderating effect on the relationship between fund characteristics and performance of unit trust funds, the study adopted a two-step procedure as specified [145] moderation test. The first step was to test inflation as an explanatory variable. Therefore models 3.3a -3.3d were estimated. Table 4.7 reports model 3.3a – 3.3d estimates which report inflation as an independent variable.

Table 4.7: Inflation as an Independent Variable

Fund	Variable	Coefficient	Standard Errors	t-Statistic	P-value
Equity	Constant	-7.26E+16	6.16E+16	-1.178493	0.2416
	Operating expense	-1.59E+09	4.83E+08	-3.281483	0.0015
	Inflation rate	6.74E+15	5.73E+15	1.176464	0.2424
Money market	Constant	34809098	23445998	1.484650	0.1408
	Operating expense	-0.643888	0.107492	-5.990086	0.0000

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	Inflation rate	-580205.5	1993357.	-0.291070	0.7716
	Constant	7932359.	3388655.	2.340858	0.0218
	Operating expense	0.676969	0.078639	8.608589	0.0000
Bond	Inflation rate	-473258.3	179692.3	-2.633715	0.1002
	Constant	63626836	26668174	2.385872	0.0191
	Operating expense	0.858267	0.193952	4.425141	0.0000
Balanced	Inflation rate	-6778164.	1809088.	-3.746730	0.1603

Source: Study data (2020)

Table 4.7 indicates that the coefficient of inflation, which is of interest under model 3.3a -3.3d in the equity fund, is 6.74E+15 with a corresponding p-value of 0.2424, which is higher than the level of significance of 0.05 hence insignificant. In the money market fund, the coefficient is -580205.5, with a corresponding p-value of 0. 7716. The p-value is greater than 0.05 hence insignificant. The bond fund has a coefficient of -473258.3, with a p-value of 0.1002. The p-value is greater than 0.05; hence the coefficient is insignificant. On the other hand, the balanced fund has a coefficient of -6778164, with a p-value of 0.1603. The p-value is greater than 0.05; hence the coefficient is insignificant. The second step is to test inflation as a moderator. Models 3.4a – 3.4d were estimated and table 4.8 represents the results.

Table 4.8: Inflation as a Moderator on the Relationship between Fund Characteristics and Performance

Fund	Variable	Coefficient	Standard Errors	t-Statistic	P-value
	Constant	-1.59E+16	1.14E+17	-0.140278	0.8888
	Operating expense	-3.06E+09	2.24E+09	-1.369159	0.0174
	Inflation rate	-5.13E+13	1.28E+16	-0.004001	0.0368
Equity	Operating expense * Inflation rate	2.10E+08	3.06E+08	0.684500	0.0495
	Constant	30262369	42043321	0.719790	0.4734
	Operating expense	0.810693	1.010613	0.802180	0.0424
	Inflation rate	243866.9	5002663.	0.048747	0.0162
Money market	Operating expense * Inflation rate	-0.213063	0.149497	-1.425199	0.0157
	Constant	-3512189.	7365573.	-0.476839	0.6349
	Operating expense	0.723863	0.320102	2.261354	0.0267
	Inflation rate	875316.5	796057.4	1.099564	0.0275
Bond	Operating expense * Inflation rate	-0.006332	0.035269	-0.179539	0.0458
	Constant	-32501217	61125236	-0.531715	0.5963
	Operating expense	0.298777	0.662260	0.451147	0.0350
	Inflation rate	5154691.	7625258.	0.676002	0.0500
Balanced	Operating expense * Inflation rate	0.065732	0.080962	0.811888	0.0410

Source: Study data (2020)

Table 4.8 illustrates the introduction of inflation as a moderator. The coefficients of interest are those of the interaction terms. The coefficients of all the interaction terms for operating expenses in the equity fund are significant. In Table 4.7, the coefficient of inflation for the equity fund is insignificant. These scenarios are compared to the decision making criteria in Table 3.1. The null hypothesis that inflation has no moderating effect on the relationship between operating expense and the performance of unit trust funds in Kenya is rejected at the significance levels of 0.05 for the equity fund. For this reason, inflation has a moderating effect on the relationship between operating expense, fund size, systematic risk, unsystematic risk and performance of equity fund in Kenya.

The coefficients of interaction in money market fund indicate that operating expense is significant. Table 4.7 shows the co-efficient of inflation in the money market fund is insignificant. The scenario for the money market fund is compared to the decision criteria in Table 3.1. The null hypothesis that inflation has no moderating effect in the relationship between operating expense and performance of unit trust funds in Kenya is rejected. Hence inflation has a moderating effect on the relationship between operating expense, fund size, systematic risk, unsystematic risk and performance of money market fund in Kenya.

Bond fund coefficient of interaction in Table 4.8 shows operating expense is significant. The co-efficient of inflation in Table 4.7 in the bond fund is insignificant. Comparison is made on the bond

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fund scenarios to the decision-making criteria in Table 3.1. The study rejects the null hypothesis that inflation has no moderating effect in the relationship between operating expense and performance of unit trust funds in Kenya at the significance levels of 0.05. For this reason, inflation has a moderating effect on the relationship between operating expense and performance of the bond fund in Kenya.

On the other hand, a balanced fund has all coefficients of interaction significant, and the coefficient of inflation in Table 4.7 is insignificant. The balanced fund Scenarios are compared to the decision making criteria in Table 3.1. The null hypothesis that inflation has no moderating effect in the relationship between operating expense and performance of unit trust funds in Kenya is rejected at the significance levels of 0.05. For this reason, inflation has a moderating effect on the relationship between operating and performance of the balanced fund in Kenya. These findings are consistent with lemantile (2017), who observed a negative effect on performance and contradicts Mohammadreza and Esmaeel (2013), who observed a positive effect of inflation on performance.

4. SUMMARY, CONCLUSION

The background presented in the study culminated to the statement of the problem. The study formulated research objectives to address the Research problem. Panel data for the period 2005 to 2017 was used for analysis. Data was obtained from the financial statements of each unit trust, CBK, KNBS. The following is a summary of the findings. The study sought to establish the effect of operating expenses on the performance of unit trust funds. The study revealed that there was a statistically significant effect of operating expenses on the performance of all unit trust funds in all the funds. The findings also indicated a significant negative effect of operating expenses and performance of unit trust funds in equity and money market funds. Further, the study found a significant positive effect of operating expenses and performance of unit trust funds in bond fund and balanced fund. Lastly, the study sought to investigate the moderating effect of inflation on the relationship between operating expenses and the performance of unit trust funds. The study findings revealed that inflation significantly moderates the relationship between operating expenses and the performance of unit trust in all funds.

In view of the findings of the study, the study concludes that operating expenses have varied effects on the performance of unit trust funds in Kenya. Firstly, the study found out that operating expenses have a statistically significant effect on the performance of unit trust funds. The findings also indicated a negative and significant effect on performance in equity and money market funds but a positive and significant effect on performance in the bond and balanced funds. This negative effect means that performance of equity and money market unit trust funds will increase with decrease in operating expenses. The positive effect on the other hand indicates that performance of bond and balanced unit trusts will increase with increase in operating expenses. Finally, the study found out that inflation statistically moderates the relationship between operating expenses and performance of unit trust funds.

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